

## Thornton, Marisa

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**From:** Rosnick, Reid  
**Sent:** Tuesday, September 02, 2014 2:35 PM  
**To:** Thornton, Marisa  
**Subject:** FW: Ute Mountain - Managing Expectations

This is the first one.

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**From:** Edwards, Jonathan  
**Sent:** Thursday, July 31, 2014 8:27 PM  
**To:** Rosnick, Reid  
**Cc:** Perrin, Alan  
**Subject:** FW: Ute Mountain - Managing Expectations

Reid--- FYI. Some pressure to get something set up on Ute Mountain Ute follow-up. Can you connect with Jed as soon as you're back? (Welcome back, huh?) Thanks-- Jon

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**From:** Harrison, Jed  
**Sent:** Wednesday, July 30, 2014 5:31 PM  
**To:** Edwards, Jonathan  
**Subject:** RE: Ute Mountain - Managing Expectations

Thanks Jon. My general appt. just reminded me that I needed to check in . . . Mike suggested maybe we have a conversation . . . it'll be good to get feedback from the Ute Mtn/Utah/R8 meeting.

**Jed Harrison** SENIOR ADVISOR FOR TRIBAL AFFAIRS

U.S. ENVIRONMENTAL PROTECTION AGENCY  
OFFICE OF RADIATION & INDOOR AIR  
(702) 784 8218 MOBILE: (702) 494 7050



4220 S. MARYLAND PARKWAY  
BLDG. D, SUITE 800  
LAS VEGAS, NEVADA 89119

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**From:** Edwards, Jonathan  
**Sent:** Wednesday, July 30, 2014 11:35 AM  
**To:** Harrison, Jed  
**Subject:** RE: Ute Mountain - Managing Expectations

Reid has been out on annual leave so that, combined with our chaotic move, has meant that we haven't made much progress yet. Reid is in the office in a few days and we should be good to go then.... He is aware of this activity and knows that he needs to get rolling. I talked to Mike yesterday during my general and let him know that little has been done yet for the reasons I mentioned earlier and he seemed to be OK with that, for now. ---Jon

Mr. Reid Rosnick and Tony Nesky  
Radiation Protection Division  
U.S. Environmental Protection Agency  
Headquarters  
Ariel Rios Building  
Mail Code: 6608J  
1200 Pennsylvania Avenue, N. W.  
Washington, D.C. 20460

Via email to [rosnick.reid@epa.gov](mailto:rosnick.reid@epa.gov), [nesky.tony@epa.gov](mailto:nesky.tony@epa.gov)

Re: Request for 120-Day Extension of Comment Period and Request for Hearing: Docket ID No. EPA-HQ- OAR-2008-0218. Comments on Proposed Rule: Revisions to National Emission Standards for Radon Emissions From Operating Mill Tailings (40 C.F.R. Part 61 Subpart W). 79 Fed. Reg. 25388, May 2, 2014.

Dear Mr. Rosnick and Nesky,

On behalf of Uranium Watch, Eastern Navajo Dine Against Uranium Mining, Laguna Acoma Coalition for a Safe Environment, Bluewater Valley Downstream Alliance, Nuclear Information and Resource Service, Earthworks, Western Colorado Congress, Nebraska Chapter of the Sierra Club, Grand Valley Peace and Justice, Western Nebraska Resource Council, Arizona Mining Reform Coalition, the Multicultural Alliance for a Safe Environment, and Tallahassee Area Community, Inc, we urge you to extend the public comment period deadline for an additional 120 days beyond the current deadline of July 31<sup>st</sup>, 2014 for the proposed rulemaking affecting 40 CFR Part 61, subpart W.

Given the complexity of this rule, and our desire to understand its implications to communities affected by radon emissions, we believe more time is needed to formulate meaningful comments to EPA and help maximize additional public participation, which should also include hearings in affected areas.

Thanks for your consideration. If you have concerns, questions, or comments, please direct them to the following email addresses.

Sincerely,

The undersigned

Lee J Alter, Tallahassee Community, Inc  
[alterconsult@starband.net](mailto:alterconsult@starband.net)

Pete Dronkers, Earthworks:  
[pdronkers@earthworksaction.org](mailto:pdronkers@earthworksaction.org)

Susan Gordon, Multicultural Alliance for a safe Environment:  
[susangordon@earthlink.net](mailto:susangordon@earthlink.net)

Sarah Fields, Uranium Watch:  
[sarah@uraniumwatch.org](mailto:sarah@uraniumwatch.org)

Diane D'Arrigo, Nuclear Information and Resource Service:  
[dianed@nirs.org](mailto:dianed@nirs.org)

Jonathan Perry, Eastern Navajo Dine Against Uranium Mining:  
[jonperry@yahoo.com](mailto:jonperry@yahoo.com)

Jonnie Head, Bluewater Valley Downstream Alliance:  
[head.jonnie@gmail.com](mailto:head.jonnie@gmail.com)

Christine Lowery, Laguna Acoma Coalition for a Safe Environment:  
[ctlowery@earthlink.net](mailto:ctlowery@earthlink.net)

Rein Van West, Western Colorado Congress:  
[arcticwild@gmail.com](mailto:arcticwild@gmail.com)

Buffalo Bruce, Western Nebraska Resource Council and Nebraska Chapter, Sierra Club:  
[buffalobruce1@gmail.com](mailto:buffalobruce1@gmail.com)

Janet Johnson, Grand Valley Peace and Justice:  
[mjohnson@acsol.net](mailto:mjohnson@acsol.net)

Roger Featherstone, Arizona Mining Reform Coalition:  
[roger@azminingreform.org](mailto:roger@azminingreform.org)

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**From:** Harrison, Jed  
**Sent:** Wednesday, July 30, 2014 10:33 AM  
**To:** Edwards, Jonathan  
**Subject:** FW: Ute Mountain - Managing Expectations

Just checking in on this . . . .

**Jed Harrison** SENIOR ADVISOR FOR TRIBAL AFFAIRS

U.S. ENVIRONMENTAL PROTECTION AGENCY  
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(702) 784 8218 MOBILE: (702) 494 7050



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**From:** Harrison, Jed  
**Sent:** Monday, July 21, 2014 7:46 AM  
**To:** Edwards, Jonathan  
**Subject:** RE: Ute Mountain - Managing Expectations

That'll work.

**Jed Harrison** SENIOR ADVISOR FOR TRIBAL AFFAIRS

U.S. ENVIRONMENTAL PROTECTION AGENCY  
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(702) 784 8218 MOBILE: (702) 494 7050



4220 S. MARYLAND PARKWAY  
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LAS VEGAS, NEVADA 89119

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**From:** Edwards, Jonathan  
**Sent:** Thursday, July 17, 2014 8:09 PM  
**To:** Harrison, Jed  
**Cc:** Perrin, Alan; Rosnick, Reid; Cherepy, Andrea  
**Subject:** Re: Ute Mountain - Managing Expectations

Jed- thanks for the note and voicemail earlier. Let Alan and me talk with Reid and get back with you. -Jon

Sent from my iPhone

On Jul 17, 2014, at 10:08 AM, "Harrison, Jed" <[Harrison.Jed@epa.gov](mailto:Harrison.Jed@epa.gov)> wrote:

Hi Guys-

In my general yesterday, Mike asked me to coordinate with you all to discuss how we'll move forward on the Ute Mountain consultation.

I think we all hope that the upcoming meeting between the tribe, Region & State, as well as the comment period extension will allow our conversations to focus more directly on the rule revision. Regardless, we should talk about how we'd like to move forward. I'm more than willing to converse with Scott Clow on this, but don't want to create a "too many cooks" type situation.

Jed

<image001.gif>

## Thornton, Marisa

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**From:** Rosnick, Reid  
**Sent:** Tuesday, September 02, 2014 2:35 PM  
**To:** Thornton, Marisa  
**Subject:** FW: Word SOW and PR for SRA Task Order  
**Attachments:** sow-meeting support for rulemakings.docx

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**From:** Nesky, Anthony  
**Sent:** Wednesday, July 30, 2014 6:17 PM  
**To:** Dalton, Deborah  
**Cc:** Miller, Beth  
**Subject:** RE: Word SOW and PR for SRA Task Order

Dear Deb:

A Word version of the SOW is attached. I'll ask Beth to cut a PR. Thanks for your help!

Tony Nesky  
Center for Radiation Information and Outreach  
Tel: 202-343-9597  
[nesky.tony@epa.gov](mailto:nesky.tony@epa.gov)

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**From:** Dalton, Deborah  
**Sent:** Wednesday, July 30, 2014 6:02 PM  
**To:** Nesky, Anthony  
**Subject:** RE: New Task Order for SRA

Can you send me a Word copy of the SOW? I need to put in some updated standard contract language that we have been advised to include in section III. Plus there is a blank page 4 that we need to delete.

Thanks.

I noticed that what was two hearings one in DC and one in Denver is now just in Denver? Are you anticipating modifying in the future for other hearings?

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**Deborah Dalton**  
Conflict Prevention and Resolution Center  
U.S. Environmental Protection Agency  
"Making Agreement Easier" | (202) 564-2913  
intranet.epa.gov/adr or [www.epa.gov/adr](http://www.epa.gov/adr)

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**From:** Nesky, Anthony  
**Sent:** Thursday, July 10, 2014 12:34 PM  
**To:** Dalton, Deborah  
**Cc:** Miller, Beth; Herrenbruck, Glenna  
**Subject:** New Task Order for SRA

Dear Deb:

Attached is a package for a work order for SRA under the new contract: SOW, IGCE, Task Order Certification, I and COTR nomination. Please let me know if you have any questions or need anything else from me.

Thanks for all your help with this!

Tony Nesky  
Center for Radiation Information and Outreach  
Tel: 202-343-9597  
[nesky.tony@epa.gov](mailto:nesky.tony@epa.gov)

**TASK ORDER #**  
**Contract EP-W14-020**  
**URANIUM RULEMAKING EFFORTS – FACILITATION AND**  
**MEETING SUPPORT SERVICES**

**ABSTRACT:** This task order provides meeting support (court reporting, meeting arrangements, registration and other on-site support) for uranium rulemaking efforts from the Office of Air and Radiation. The outcome of this project will be complete and accurate transcripts of the hearings. This task order is funded by OAR.

**I. BACKGROUND**

EPA will be holding one hearing in support of a rulemaking efforts for *Subpart W of National Emission Standards for Hazardous Air Pollutants*.

Subpart W of the National Emission Standards for Hazardous Air Pollutants a radon emission standard for operating uranium mill tailings. In accordance with the Clean Air Act Amendments of 1990, EPA has reviewed the standard and determined that revisions are necessary to cover current industry practices. EPA will issue a Notice of Proposed Rulemaking with a proposed revision to the standard, and solicit, accept, and review formal comments. EPA will conduct public hearings on the proposed rule in accordance with the *Administrative Procedures Act*.

**II. SCOPE OF WORK**

1. Work Plan
  - a. The contractor shall submit a work plan to the Contracting Officer (CO), Project Officer (PO) and Task Order Project Officer (TOPO) in accordance with the requirements of this contract. The work plan shall document procedures for substitution of personnel labor categories due to temporary or permanent absence or reassignment.
  - b. The contractor shall be responsible for oversight of deliverables under this task order and shall be responsible for transmission of reports and invoices as required by the contract. In months when no work is performed, the contractor will not be required to submit a monthly report.
  
2. Specific Requirements for *Subpart W of National Emission Standards for Hazardous Pollutants*

EPA anticipates holding a public hearing over two days, September 3 and September 4 in Denver, CO. Hearing sessions will take place from 9:00 to 12:00 and 1:00 PM to 6:00 PM each day.

## A. Provision of a Court Reporter and Official Transcript

At each of the four sessions of the public hearing in Denver the contractor will provide a court reporter who is licensed/certified in accordance with the requirements of the state/municipality in which the hearing takes place. The court reporter will bring to the hearing sites all equipment needed to generate an official transcript.

### i. Court reporter duties during the hearings

The EPA hearing officer will announce the beginning of each hearing session. After this announcement, the contractor shall transcribe all verbal remarks verbatim into the transcript. The hearing officer will invite individual speakers to approach the microphone. The contractor shall include the name of each person who has been formally recognized by the hearing officer and who then makes verbal remarks. The EPA hearing officer will announce the end of each hearing session. After this announcement, the contractor shall cease transcribing verbal remarks. The contractor is responsible for notifying the hearing officer of any difficulties that may arise throughout the hearings, requiring adjustments to the meeting room layout or the need to take breaks. The contractor may also ask clarifying questions during testimony to ensure accuracy of the transcript.

### ii. Preparation in advance of the hearing.

Some of the testimony during the hearings may be highly technical in nature. The court reporters used in each hearing will have to become familiar with the technical terms, jargon, and terms-of-art used in the EPA Radiation Protection Program and Subpart W of National Emission Standards for Hazardous Pollutants. Prior to the hearing, the court reporter should become familiar with the terms on the following websites:

- Subpart W website:  
<http://www.epa.gov/radiation/neshaps/subpartw/index.html>
- Subpart W Rulemaking Activity  
<http://www.epa.gov/radiation/neshaps/subpartw/rulemaking-activity.html>
- Fact Sheet on the Proposed Rulemaking  
<http://www.epa.gov/radiation/docs/neshaps/subpart-w/epa402f13052.pdf>

- Notice of Proposed Rulemaking from the Federal Register  
<http://www.gpo.gov/fdsys/pkg/FR-2014-05-02/pdf/2014-09728.pdf>
- Technically Enhanced, Naturally Occurring Materials (TENORM) website  
<http://www.epa.gov/radiation/tenorm/about.html>

Optionally, the court reporter may find the following glossary helpful:

<http://www.bt.cdc.gov/radiation/glossary.asp>

The court reporter is encouraged to contact the TOPO with any questions prior to the hearing sessions.

iii. Milestones and Deliverables:

The CONTRACTOR will deliver 5 hard copies, as well as one searchable PDF file and one searchable Word file of a draft transcript of each meeting. The contractor will deliver will deliver 5 hard copies, as well as one searchable PDF file and one searchable Word file of the final transcript from each meeting within 5 days of obtaining approval from EPA. The final transcript shall be accurate and free of misspelled words.

B. Logistical support: The contractor will be responsible for logistical support at each hearing. Logistical support includes:

- Maintenance of the registration website for the public. The contractor will maintain the “Eventbrite” registration website previously developed. A list of a registered persons is due to the TOPO no later than COB, Friday August 29, 2014. The TOPO should be designated as point of contact on the website, and should be able to view the registration list prior to the due date, as citizens register to participate. Required information on the registration website includes full name, the agency or party being represented, email address, mailing address, and telephone number of each participant.
- Publication of two notices about the Denver hearing in the Denver Post, approximately 30 and 10 days before the date of the first hearing. The government will furnish the text for the notices.
- Provision of two staff members: one to direct participants to the hearing room, and second to check registration of audience members, and assign a number to new speakers. Both staff members may be assigned additional logistical duties.
- Each person testifying at the hearing will be allotted 5 minutes to speak. The contractor will bring to each hearing session a timing light so that citizens giving testimony can see how much time is remaining. The timer should have green, yellow, and red lights that will be visible to the speaker.

### C. Public Hearing Location and Schedule:

US EPA, Region 8  
1595 Wynkoop Street  
Denver, CO 80202-1129  
303-312-6312

#### Schedule –

Wednesday, September 3, 2014 from 9 AM until 12 PM. and again from 1 PM. until 6 PM.

Thursday, September 4, 2014 from 9 AM until 12 PM. and again from 1 PM. until 6 PM.

The contractor staff shall arrive at the hearing location no later than 8:00 AM on the day of the hearing to coordinate with the TOPO and the EPA hearing officer. Meal breaks are built into the schedule described herein. Additional breaks may be granted at the hearing officer's discretion.

Driving directions and other location information is available at:

<http://www2.epa.gov/region8/directions-and-visitor-information-us-epa-region-8>

3. The contractor shall provide information for EPA's ADR and contract tracking systems. Dispute resolution professionals working under this Task Order shall complete EPA ADR evaluation system questionnaires and provide information necessary to administer questionnaires to participants in ADR processes (e.g. contact information for parties). The contractor shall contribute to or conduct all parts of an evaluation of the case according to EPA case or meeting evaluation protocols.

### III. WORK APPROACH

The contractor shall approach this task in accordance with terms of the contract.

#### A. ADR and Public Participation Best Practices:

The Contractor shall approach this task in accordance with terms of the basic contract and according to the established norms and ethical standards of ADR professionals.

Based on EPA's evaluation of a large number of ADR cases, the Agency has determined that the following practices are significantly related to positive substantive, relational, and procedural outcomes from ADR cases. The contractor shall ensure that this direction is provided to ADR professionals providing services under this task order:

- Prior to the mediation or facilitation and throughout the process, the ADR professional shall inquire about whether individual participants have the time, financial, and logistical resources necessary to participate effectively in the process and -- where resources are inadequate -- assist them in identifying appropriate resources or in making necessary adjustments to the process to accommodate resource constraints.

- The ADR professional shall assist the participants in identifying the issues that are important to resolving any controversy and solutions that will address the needs shared by the participants.
- The ADR professional shall conduct the process to promote active engagement from all participants.
- The ADR professional shall explore with the participants appropriate ways to incorporate high quality and relevant information resources necessary to resolve the issues.
- To support productive dialogue and effective implementation of any agreements reached by the participants, the ADR professional shall ensure that participants have appropriate authority to make commitments on behalf of their organizations.

#### B. Ethical Codes of Conduct:

The Contractor shall ensure that ADR professionals serving as neutral third parties under this contract receive information about and perform in accordance with ethical codes applicable to the practice of dispute resolution professionals. Relevant examples of ethical codes include those adopted by:

- the American Arbitration Association, American Bar Association, Association for Conflict Resolution:  
([http://www.acrnet.org/uploadedFiles/Practitioner/ModelStandardsOfConductForMediatorsfinal05\(1\)\(1\).pdf](http://www.acrnet.org/uploadedFiles/Practitioner/ModelStandardsOfConductForMediatorsfinal05(1)(1).pdf))
- the International Association of Facilitators: (<http://www.iaf-world.org/aboutiaf/CodeofEthics.aspx>)
- the International Association for Public Participation:  
(<http://iap2.affiniscape.com/displaycommon.cfm?an=1&subarticlenbr=8>)

#### C. Confidentiality

The contractor shall perform in accordance with generally acceptable norms and ethical procedures of the mediation profession. Information provided to the ADR professional by any of the parties, communications between parties and the ADR professional, and notes and dispute resolution work product generated by the ADR professional during work pursuant to this TO shall be maintained as confidential by the ADR professional pursuant to the provisions of the ADR Act of 1996 (Public Law 104-320; 5 USC 571 *et al*) and applicable federal, state and judicial requirements.

All parties to this task order acknowledge that the confidentiality provisions of the Administrative Dispute Resolution Act, 5 U.S.C. Section 574 shall govern the contractor's alternative dispute resolution activities under this task order.

#### D. Contractor Representation

In gathering information or performing tasks with parties outside the EPA, the contractor will identify him/herself as a contractor to EPA, not an EPA employee.

The Contractor shall provide input or make recommendations based on the information gathered, however, decisions on all substantive issues will be made by EPA. **THE CONTRACTOR SHALL NOT INTERPRET EPA POLICY ON BEHALF OF EPA NOR MAKE DECISIONS ON ITEMS OF POLICY, REGULATION OR STATUTE. THE CONTRACTOR SHALL NOT TAKE A STAND ON THE MERITS OF SUBSTANTIVE ITEMS UNDER DISCUSSION.**

E. Status Notifications:

**THE CONTRACTOR SHALL NOTIFY THE EPA PROJECT OFFICER AND PROGRAM OFFICE CONTACT WHEN 75% OF THE FUNDS PROVIDED HAVE BEEN EXPENDED OR WHEN FUNDING FOR LESS THAN 6 WEEKS WORK REMAINS.** The Contractor shall also notify the TOPO when 75% of the funds have been used on any single case assignment. Notifications shall be in writing and cc to the Project Officer.

#### **IV. REPORTS AND DELIVERABLES**

The contractor shall provide EPA all reports in accordance with the contract.

The contractor shall provide a work plan within the schedule provided in the contract and set out below.

Copies of all reports, meeting notices, agenda, summaries and any other written deliverables shall be sent to the PO and the TOPO listed below. If oral briefings are scheduled for EPA staff, the PO shall be notified in time to attend.

All reports shall be provided in draft form. Upon receipt of comment from the EPA PO and TOPO, the contractor shall revise the report and distribute final copies as stated in the Scope of Work.

Schedule		
ITEM	Due NLT	Type
Monthly Progress Report	15th of each month	Deliverable
Work Plan	10 days after issuance of TO	Deliverable
Draft Transcript	5 days after meeting	Transmittal
Final Transcript	5 days after receipt of comments	Deliverable

Task Order Project Officer:  
Tony Nesky 202.343.9597

Supervisor of TOPO:  
Glenna Herrenbruck, 202.343.9849

**VI. PERIOD OF PERFORMANCE**

The period of performance of this task order shall be until June 30, 2015 unless modified.

## Thornton, Marisa

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**From:** Rosnick, Reid  
**Sent:** Tuesday, September 02, 2014 2:35 PM  
**To:** Thornton, Marisa  
**Subject:** FW: Registration Notification for Subpart W Public Hearings  
**Attachments:** 1408042493-322566107-registration.pdf

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**From:** Eventbrite [mailto:orders@eventbrite.com]  
**Sent:** Wednesday, July 30, 2014 6:00 PM  
**To:** Nesky, Anthony  
**Subject:** Registration Notification for Subpart W Public Hearings



Find events My Tickets

Good news! A registration for [Subpart W Public Hearings](#) just came through. Below, you'll find a copy of the registration confirmation email for:

**Darrell Liles**  
[dliles@senesusa.com](mailto:dliles@senesusa.com)  
Order #322566107

Cheers!  
Eventbrite

P.S. You can turn off this notification anytime on your [email preferences page](#).

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Hi Darrell, this is your registration confirmation for  
[Subpart W Public Hearings](#)

Organized by [U.S. Environmental Protection Agency](#)

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## Registration summary



**Mobile Summary**

or



**Paper Summary**

Open the email attachment  
or [download here](#)



## Message from [U.S. Environmental Protection Agency](#)

You are registered to attend the Subpart W Public Hearing.  
Please read the following before attending:

### BUILDING LOCATION

The EPA Region 8 office is at 1595 Wynkoop Street, Denver, CO80202-1129. The building is located along the 16th Street Mall in downtown Denver, adjacent to Union Station and across from the Tattered Cover bookstore. The building opens at 8 AM Monday-Friday.

### PARKING

The City of Denver provides information on parking here:  
<http://www.denvergov.org/tabid/437781/Default.aspx>><http://www.denvergov.org/tabid/437781/Default.aspx>

### DRIVING DIRECTIONS

If coming from Denver International Airport--  
Follow the "Airport Exit" signs to proceed south and west on Pena Boulevard for about 9 miles. Keep following the natural turn to the right as Pena Blvd. turns into Interstate 70 West, heading toward downtown. Follow I-70 West for 10 miles before exiting onto I-25 South. Two miles after turning south on I-25, take the Speer Avenue South exit and make a left towards downtown and the Pepsi Center. Upon crossing the Interstate, you will see the Pepsi Center on your right. Stay left and make a left at the stop light on Wewatta Street (there is a lefthand turn lane provided). Head across a small bridge and go straight until you reach 15th Street. Make a right on 15th Street, and your first left on Wynkoop Street. The EPA building is on the left, with the building entrance off of 16th Street.

If coming from the north, south or west--

Take Interstate 25 to the Speer Boulevard South exit and follow the directions two paragraphs above.

### SECURITY REQUIREMENTS

Visitors to EPA's regional office must show identification and pass through security screening at the building entrance. The EPA Region 8 office building is a Level-4-security building, similar to what you experience at the airport. All visitors need to bring a government-issued photo ID (i.e., a driver's license). You will be asked to show this ID as you enter the lobby.

Please arrive at the building 30 minutes before any talks or events you have scheduled. Our security screening process is similar to screening at the airport: you will be asked to walk through a magnetometer (removing metal objects from your pockets), and your coats, bags etc. will be x-rayed. We regret that we do not have facilities to check coats or bags. You will be provided with a visitor badge after you pass through security. Please wear this at all times while you are in the building.

Video, as well as photos of any kind, are not allowed. Also, NO weapons of any kind are allowed in the building. This includes mace, knives, guns, etc. You will not be permitted in the building if you have any of these items. For a complete list of restricted items and additional information, please visit the EPA Region 8 website at:

<http://www2.epa.gov/region8/directions-and-visitor-information-us-epa-region-8>

#### TO GET TO THE HEARING ROOM

After going through security, please proceed to the 2nd Floor Conference Center via the elevator. Conference Center attendees are not allowed above the 2nd floor without having an EPA escort. Outside of the meeting room, there will be a registration table where you will check-in and receive a temporary badge that must be worn at all times while in the building. Any visitor exiting the building during breaks or lunch will be required to pass through security screening upon return each time. At the conclusion of the conference, please return to the registration table to be checked out and turn in your temporary visitor badge.

#### SPEAKERS

Speakers will be allotted 5 minutes to make his or her presentation. Speakers will be assigned a speaker number upon arriving, and will be called in sequential order to give his or her presentation. Submission of written remarks is not required, but will be gladly accepted. All remarks and submissions become part of the official public record.

Please print and bring your ticket with you.

**Have a question? Contact the organizer at [nesky.tony@epa.gov](mailto:nesky.tony@epa.gov)**



## Order Summary

**July 30, 2014**

Order #: 322566107

Name	Type	Quantity
Darrell Liles	Subpart W Public Hearings - September 4, 2014, 1:00 PM - 5:00 PM MDT Capacity: 60 persons	1

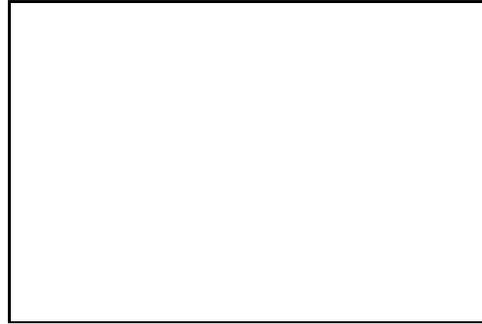
This order is subject to Eventbrite [Terms of Service](#), [Privacy Policy](#), and [Cookie Policy](#)



## About this event



EPA Region 8 Office  
1595 Wynkoop Street  
Denver, CO 80202-1129



## Registration Information

Contact Address

**8310 South Valley Highway Suite 135 Englewood CO 80112**

Who are you representing?

**SENES Consultants**

Do you wish to speak at one of the sessions?

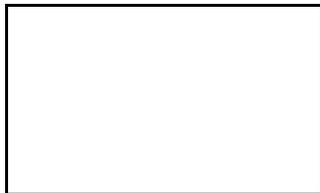
**Yes**

At which of the following sessions would you like to speak? You may select only one.

**September 4 1:00 PM - 4:00 PM MDT**

What time do you intend to arrive to speak?

**2 PM**



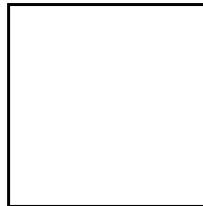
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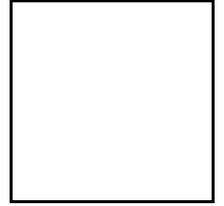
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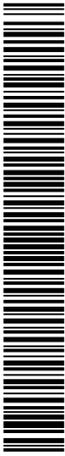
This email was sent to [dliles@senesusa.com](mailto:dliles@senesusa.com).

Eventbrite | 155 5th St, 7th Floor | San Francisco, CA 94103

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Please print and bring with you to the event

 322566107407726699001	Event <h1>Subpart W Public Hearings</h1>		
	Date+Time	Location EPA Region 8 Office 1595 Wynkoop Street Denver, CO 80202-1129	Payment Status Free Order
	Order Info Order #322566107. Ordered by Darrell Liles on July 30, 2014 2:57 PM		
	Type Subpart W Public Hearings - September 4, 2014, 1:00 PM - 5:00 PM MDT Capacity: 60 persons		

You are registered to attend the Subpart W Public Hearing.  
Please read the following before attending:

#### BUILDING LOCATION

The EPA Region 8 office is at 1595 Wynkoop Street, Denver, CO80202-1129. The building is located along the 16th Street Mall in downtown Denver, adjacent to Union Station and across from the Tattered Cover bookstore. The building opens at 8 AM Monday-Friday.

#### PARKING

The City of Denver provides information on parking here: <http://www.denvergov.org/tabid/437781/Default.aspx>  
<http://www.denvergov.org/tabid/437781/Default.aspx>

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#### TO GET TO THE HEARING ROOM

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Speakers will be allotted 5 minutes to make his or her presentation. Speakers will be assigned a speaker number upon arriving, and will be called in sequential order to give his or her presentation. Submission of written remarks is not required, but will be gladly accepted. All remarks and submissions become part of the official public record.

Please print and bring your ticket with you.



322566107407726699001

Eventbrite

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## Thornton, Marisa

---

**From:** Rosnick, Reid  
**Sent:** Tuesday, September 02, 2014 2:35 PM  
**To:** Thornton, Marisa  
**Subject:** FW: Could you send me the link for EZ Lite? I think there may be an SRA Invoice for the Subpart W work

---

**From:** Nesky, Anthony  
**Sent:** Wednesday, July 30, 2014 4:46 PM  
**To:** Miller, Beth  
**Subject:** RE: Could you send me the link for EZ Lite? I think there may be an SRA Invoice for the Subpart W work

Thanks. I checked and there was no invoice.

Tony Nesky  
Center for Radiation Information and Outreach  
Tel: 202-343-9597  
[nesky.tony@epa.gov](mailto:nesky.tony@epa.gov)

---

**From:** Miller, Beth  
**Sent:** Monday, July 28, 2014 1:46 PM  
**To:** Nesky, Anthony  
**Subject:** RE: Could you send me the link for EZ Lite? I think there may be an SRA Invoice for the Subpart W work

[Here you go](https://ocfosystem1.epa.gov/fmc2_prv/easylite.welcome) Please use the Electronic Approval System (EASYLITE - [https://ocfosystem1.epa.gov/fmc2\\_prv/easylite.welcome](https://ocfosystem1.epa.gov/fmc2_prv/easylite.welcome))



Please consider the environment before printing this e-mail.

*Beth Miller*  
**202-343-9223**

---

**From:** Nesky, Anthony  
**Sent:** Monday, July 28, 2014 1:40 PM  
**To:** Miller, Beth  
**Subject:** Could you send me the link for EZ Lite? I think there may be an SRA Invoice for the Subpart W work

Dear Beth:

Would you happen to have the link for EZ Lite invoices. I think I may have an invoice from SRA for the Subpart W work.

Tony Nesky  
Center for Radiation Information and Outreach

Tel: 202-343-9597  
[nesky.tony@epa.gov](mailto:nesky.tony@epa.gov)

## Thornton, Marisa

---

**From:** Rosnick, Reid  
**Sent:** Tuesday, September 02, 2014 2:36 PM  
**To:** Thornton, Marisa  
**Subject:** FW: Registration Notification for Subpart W Public Hearings  
**Attachments:** 1408042493-322369131-registration.pdf

---

**From:** Eventbrite [mailto:orders@eventbrite.com]  
**Sent:** Wednesday, July 30, 2014 10:36 AM  
**To:** Nesky, Anthony  
**Subject:** Registration Notification for Subpart W Public Hearings



Find events My Tickets

Good news! A registration for [Subpart W Public Hearings](#) just came through. Below, you'll find a copy of the registration confirmation email for:

**Thomas Johnson**  
[tj@colostate.edu](mailto:tj@colostate.edu)  
Order #322369131

Cheers!  
Eventbrite

P.S. You can turn off this notification anytime on your [email preferences page](#).

---

Hi Thomas , this is your registration confirmation for  
[Subpart W Public Hearings](#)

Organized by [U.S. Environmental Protection Agency](#)

---

## Registration summary



**Mobile Summary**

or



**Paper Summary**

Open the email attachment  
or [download here](#)



## Message from [U.S. Environmental Protection Agency](#)

You are registered to attend the Subpart W Public Hearing.  
Please read the following before attending:

### BUILDING LOCATION

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Please print and bring your ticket with you.

**Have a question? Contact the organizer at [nesky.tony@epa.gov](mailto:nesky.tony@epa.gov)**



## Order Summary

**July 30, 2014**

Order #: 322369131

Name	Type	Quantity
Thomas Johnson	Subpart W Public Hearings - September 3, 2014, 9:00 AM - 12:00 PM MDT Capacity: 100 persons	1

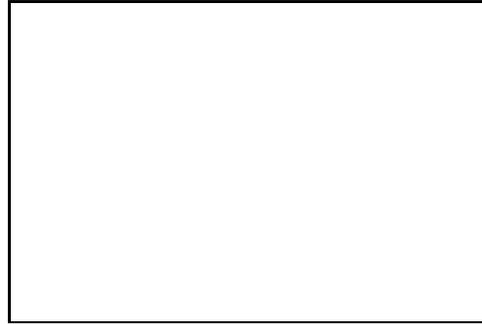
This order is subject to Eventbrite [Terms of Service](#), [Privacy Policy](#), and [Cookie Policy](#)



## About this event



EPA Region 8 Office  
1595 Wynkoop Street  
Denver, CO 80202-1129



## Registration Information

Contact Address

**CSU/ERHS 1618 Campus Delivery Fort Collins CO**

Who are you representing?

**Self**

Do you wish to speak at one of the sessions?

**Yes**

At which of the following sessions would you like to speak? You may select only one.

**September 3 9:00 AM - 12:00 PM MDT**

What time do you intend to arrive to speak?

**0830**



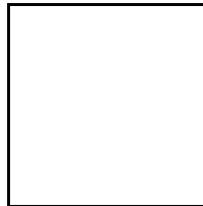
## Your Account

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Find local events that match your passions.

[See events](#)



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[ABOUT](#)

[HELP](#)

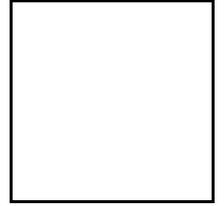
[MY  
ACCOUNT](#)

[CONTACT  
US](#)

[PRIVACY](#)

[TERMS](#)

[BLOG](#)



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This email was sent to [tj@colostate.edu](mailto:tj@colostate.edu).

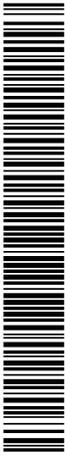
Eventbrite | 155 5th St, 7th Floor | San Francisco, CA 94103

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—  
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Please print and bring with you to the event

 322369131407474721001	Event <h1 style="text-align: center;">Subpart W Public Hearings</h1> 		
	Date+Time	Location EPA Region 8 Office 1595 Wynkoop Street Denver, CO 80202-1129	Payment Status Free Order
	Order Info Order #322369131. Ordered by Thomas Johnson on July 30, 2014 7:33 AM		
Type Subpart W Public Hearings - September 3, 2014, 9:00 AM - 12:00 PM MDT Capacity: 100 persons			

You are registered to attend the Subpart W Public Hearing. Please read the following before attending:

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322369131407474721001



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[www.eventbrite.com](http://www.eventbrite.com)

## Thornton, Marisa

---

**From:** Rosnick, Reid  
**Sent:** Tuesday, September 02, 2014 2:37 PM  
**To:** Thornton, Marisa  
**Subject:** FW: Please use this text for the ad instead of the file I sent you.

---

**From:** Nesky, Anthony  
**Sent:** Monday, July 28, 2014 4:40 PM  
**To:** Apostolico, Mary  
**Cc:** Miller, Beth  
**Subject:** Please use this text for the ad instead of the file I sent you.

Dear Mary:

There was an error in the text I sent you in the file. Please use the text below for the Denver Post ad--

EPA TO CONDUCT PUBLIC HEARING ON PROPOSED REVISION OF NESHAP SUBPART W. The U.S. Environmental Protection Agency (EPA) recently proposed revisions to National Emission Standards for Radon Emissions for Operating Uranium Mill Tailings," Subpart W of 40 CFR Part 61. The proposed rule was published on May 2, 2014 (85 FR 25388). EPA will hold a public hearing to allow the public to comment on the proposed revisions. The hearing will be held September 3 and 4, 2014 at the EPA Region 8 Office, 1595 Wynkoop Street, Denver, CO 80202-1129. Sessions will be held both days from 9AM-12 PM and from 1PM to 5PM. Register by August 22, 2014. Attendance at the hearing is not necessary to comment on this proposed rule. EPA also welcomes written comments. To register for the hearing, provide written comments, or obtain additional information, see <http://www.epa.gov/radiation/neshaps/subpartw/rulemaking-activity.html>. For questions, contact Anthony Nesky of EPA at 202-343-9597.

Tony Nesky  
Center for Radiation Information and Outreach  
Tel: 202-343-9597  
[nesky.tony@epa.gov](mailto:nesky.tony@epa.gov)

---

**From:** Nesky, Anthony  
**Sent:** Monday, July 28, 2014 4:08 PM  
**To:** 'Apostolico, Mary'  
**Cc:** Miller, Beth  
**Subject:** Ad for the Legal and Public Notice Section of the Denver Post Classifieds

Dear Mary:

The registration website for the Subpart W hearings is up and running well. Please convey my thanks for Lee-Ann for her hard work and patience with the many changes.

Attached is the text for a notice about the hearings to be published in the Denver Post. I was thinking that the best place for it would be under the "Legal and Public Notice" section, but I am open to suggestions.

I would like to the ad to run Sunday, August 3, at the very minimum. If it is OK to purchase ads that run after August 4, please do so—run it August 10 and 17 as well. f there are not enough funds for each for three, please run it August 4 and August 17.

Tony Nesky  
Center for Radiation Information and Outreach  
Tel: 202-343-9597  
[nesky.tony@epa.gov](mailto:nesky.tony@epa.gov)

## Thornton, Marisa

---

**From:** Rosnick, Reid  
**Sent:** Tuesday, September 02, 2014 2:36 PM  
**To:** Thornton, Marisa  
**Subject:** FW: Quick Edit to Subpart W page

---

**From:** Nesky, Anthony  
**Sent:** Tuesday, July 29, 2014 9:36 AM  
**To:** Thornton, Marisa  
**Cc:** Romero, Carmen  
**Subject:** Quick Edit to Subpart W page

<http://www.epa.gov/radiation/neshaps/subpartw/rulemaking-activity.html#hearing>

When you click on this, the jump (#hearing) goes to the Requests to Public Hearing. Please move the jump so that when you click it takes you to:

## **PUBLIC HEARING, SEPTEMBER 3 and 4, 2014, DENVER, COLORADO**

Thanks!

Tony Nesky  
Center for Radiation Information and Outreach  
Tel: 202-343-9597  
[nesky.tony@epa.gov](mailto:nesky.tony@epa.gov)

## Thornton, Marisa

---

**From:** Rosnick, Reid  
**Sent:** Tuesday, September 02, 2014 2:36 PM  
**To:** Thornton, Marisa  
**Subject:** FW: Missing Link on the Subpart W page

**Importance:** High

---

**From:** Nesky, Anthony  
**Sent:** Tuesday, July 29, 2014 9:51 AM  
**To:** Thornton, Marisa  
**Cc:** Herrenbruck, Glenna  
**Subject:** Missing Link on the Subpart W page  
**Importance:** High

Dear Marisa:

There is a missing link on the Subpart W page,  
<http://www.epa.gov/radiation/neshaps/subpartw/rulemaking-activity.html#hearing>

Please change this section of the page so that it is like this—

## Download the Proposed Rule and Submit Comments on Line

- Notice of Proposed Rulemaking from the [Federal Register](#).
- [Fact Sheet on the Proposed Rule](#) ( 2 pp, 52 K, [About PDF](#))
- [Submit comments](#) on line at Regulations.gov (Comments may also be submitted by mail, see the Notice of Proposed Rulemaking for instructions)

**Note:** If the above link does not work, copy and paste the following web address into your browser.

<http://www.regulations.gov/#!documentDetail:D=EPA-HQ-OAR-2008-0218-0001>

Tony Nesky  
Center for Radiation Information and Outreach  
Tel: 202-343-9597  
[nesky.tony@epa.gov](mailto:nesky.tony@epa.gov)

## Thornton, Marisa

---

**From:** Rosnick, Reid  
**Sent:** Tuesday, September 02, 2014 2:36 PM  
**To:** Thornton, Marisa  
**Subject:** FW: Oops--one more thing on Subpart W page

---

**From:** Thornton, Marisa  
**Sent:** Tuesday, July 29, 2014 11:20 AM  
**To:** Nesky, Anthony  
**Subject:** RE: Oops--one more thing on Subpart W page

done

---

**From:** Nesky, Anthony  
**Sent:** Tuesday, July 29, 2014 11:18 AM  
**To:** Thornton, Marisa  
**Subject:** RE: Oops--one more thing on Subpart W page

Can you force a return so that the link appears on a single line? That will make it easier for people to cut and paste. (I know, picky, picky, picky....)

Tony Nesky  
Center for Radiation Information and Outreach  
Tel: 202-343-9597  
[nesky.tony@epa.gov](mailto:nesky.tony@epa.gov)

---

**From:** Thornton, Marisa  
**Sent:** Tuesday, July 29, 2014 11:14 AM  
**To:** Nesky, Anthony  
**Subject:** RE: Oops--one more thing on Subpart W page

Ok...done...let me know when you're ready to go live

---

**From:** Nesky, Anthony  
**Sent:** Tuesday, July 29, 2014 11:07 AM  
**To:** Thornton, Marisa  
**Subject:** RE: Oops--one more thing on Subpart W page

Oh, duh...thanks!

When we give the instructions to cut and paste the link into the browser, please do NOT make URL a live link—make it plain text like this:

**Note:** If the above link does not work, copy and paste the following web address into your browser.

<http://www.regulations.gov/#!documentDetail;D=EPA-HQ-OAR-2008-0218-0001>

The whole problem is that embedded hyperlinks to Regulations.gov don't work in IE!! Don't ask me why, and don't ask me my opinion of IE!

Please call me at 703-329-6272 if you have any questions.

Thanks!

Tony Nesky  
Center for Radiation Information and Outreach  
Tel: 202-343-9597  
[nesky.tony@epa.gov](mailto:nesky.tony@epa.gov)

---

**From:** Thornton, Marisa  
**Sent:** Tuesday, July 29, 2014 10:46 AM  
**To:** Nesky, Anthony  
**Subject:** RE: Oops--one more thing on Subpart W page

Can you refresh...I added everything you sent

---

**From:** Nesky, Anthony  
**Sent:** Tuesday, July 29, 2014 10:44 AM  
**To:** Thornton, Marisa  
**Subject:** RE: Oops--one more thing on Subpart W page

Thanks. I later sent you a message about some missing links. We can go live after that update.

Tony Nesky  
Center for Radiation Information and Outreach  
Tel: 202-343-9597  
[nesky.tony@epa.gov](mailto:nesky.tony@epa.gov)

---

**From:** Thornton, Marisa  
**Sent:** Tuesday, July 29, 2014 10:37 AM  
**To:** Nesky, Anthony  
**Subject:** RE: Oops--one more thing on Subpart W page

Done ... let me know you're your ready to go live  
<http://epastage.epa.gov/staging1/rpd/neshaps/subpartw/rulemaking-activity.html>

---

**From:** Nesky, Anthony  
**Sent:** Tuesday, July 29, 2014 9:56 AM  
**To:** Thornton, Marisa  
**Subject:** Oops--one more thing on Subpart W page

Dear Marisa:

Here's one last change to

<http://www.epa.gov/radiation/neshaps/subpartw/rulemaking-activity.html>

Under On this Page:

Please add a New graphic next to Public Hearing

Thanks!

Tony Nesky  
Center for Radiation Information and Outreach  
Tel: 202-343-9597  
[nesky.tony@epa.gov](mailto:nesky.tony@epa.gov)

## Thornton, Marisa

---

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**Sent:** Tuesday, September 02, 2014 2:36 PM  
**To:** Thornton, Marisa  
**Subject:** FW: Oops--one more thing on Subpart W page

---

**From:** Nesky, Anthony  
**Sent:** Tuesday, July 29, 2014 11:22 AM  
**To:** Thornton, Marisa  
**Subject:** RE: Oops--one more thing on Subpart W page

Thanks! We can go live now!

Tony Nesky  
Center for Radiation Information and Outreach  
Tel: 202-343-9597  
[nesky.tony@epa.gov](mailto:nesky.tony@epa.gov)

---

**From:** Thornton, Marisa  
**Sent:** Tuesday, July 29, 2014 11:20 AM  
**To:** Nesky, Anthony  
**Subject:** RE: Oops--one more thing on Subpart W page

done

---

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**Sent:** Tuesday, July 29, 2014 11:18 AM  
**To:** Thornton, Marisa  
**Subject:** RE: Oops--one more thing on Subpart W page

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Center for Radiation Information and Outreach  
Tel: 202-343-9597  
[nesky.tony@epa.gov](mailto:nesky.tony@epa.gov)

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**Sent:** Tuesday, July 29, 2014 11:14 AM  
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**Sent:** Tuesday, July 29, 2014 11:07 AM

**To:** Thornton, Marisa  
**Subject:** RE: Oops--one more thing on Subpart W page

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Tel: 202-343-9597  
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---

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**Sent:** Tuesday, July 29, 2014 10:46 AM  
**To:** Nesky, Anthony  
**Subject:** RE: Oops--one more thing on Subpart W page

Can you refresh...I added everything you sent

---

**From:** Nesky, Anthony  
**Sent:** Tuesday, July 29, 2014 10:44 AM  
**To:** Thornton, Marisa  
**Subject:** RE: Oops--one more thing on Subpart W page

Thanks. I later sent you a message about some missing links. We can go live after that update.

Tony Nesky  
Center for Radiation Information and Outreach  
Tel: 202-343-9597  
[nesky.tony@epa.gov](mailto:nesky.tony@epa.gov)

---

**From:** Thornton, Marisa  
**Sent:** Tuesday, July 29, 2014 10:37 AM  
**To:** Nesky, Anthony  
**Subject:** RE: Oops--one more thing on Subpart W page

Done ... let me know you're your ready to go live  
<http://epastage.epa.gov/staging1/rpd/neshaps/subpartw/rulemaking-activity.html>

---

**From:** Nesky, Anthony  
**Sent:** Tuesday, July 29, 2014 9:56 AM

**To:** Thornton, Marisa

**Subject:** Oops--one more thing on Subpart W page

Dear Marisa:

Here's one last change to

<http://www.epa.gov/radiation/neshaps/subpartw/rulemaking-activity.html>

Under On this Page:

Please add a New graphic next to Public Hearing

Thanks!

Tony Nesky  
Center for Radiation Information and Outreach  
Tel: 202-343-9597  
[nesky.tony@epa.gov](mailto:nesky.tony@epa.gov)

## Thornton, Marisa

---

**From:** Rosnick, Reid  
**Sent:** Tuesday, September 02, 2014 2:36 PM  
**To:** Thornton, Marisa  
**Subject:** FW: Oops--one more thing on Subpart W page

---

**From:** Thornton, Marisa  
**Sent:** Tuesday, July 29, 2014 11:27 AM  
**To:** Nesky, Anthony  
**Subject:** RE: Oops--one more thing on Subpart W page

Done

---

**From:** Nesky, Anthony  
**Sent:** Tuesday, July 29, 2014 11:22 AM  
**To:** Thornton, Marisa  
**Subject:** RE: Oops--one more thing on Subpart W page

Thanks! We can go live now!

Tony Nesky  
Center for Radiation Information and Outreach  
Tel: 202-343-9597  
[nesky.tony@epa.gov](mailto:nesky.tony@epa.gov)

---

**From:** Thornton, Marisa  
**Sent:** Tuesday, July 29, 2014 11:20 AM  
**To:** Nesky, Anthony  
**Subject:** RE: Oops--one more thing on Subpart W page

done

---

**From:** Nesky, Anthony  
**Sent:** Tuesday, July 29, 2014 11:18 AM  
**To:** Thornton, Marisa  
**Subject:** RE: Oops--one more thing on Subpart W page

Can you force a return so that the link appears on a single line? That will make it easier for people to cut and paste. (I know, picky, picky, picky....)

Tony Nesky  
Center for Radiation Information and Outreach  
Tel: 202-343-9597  
[nesky.tony@epa.gov](mailto:nesky.tony@epa.gov)

---

**From:** Thornton, Marisa  
**Sent:** Tuesday, July 29, 2014 11:14 AM

**To:** Nesky, Anthony  
**Subject:** RE: Oops--one more thing on Subpart W page

Ok...done...let me know when you're ready to go live

---

**From:** Nesky, Anthony  
**Sent:** Tuesday, July 29, 2014 11:07 AM  
**To:** Thornton, Marisa  
**Subject:** RE: Oops--one more thing on Subpart W page

Oh, duh...thanks!

When we give the instructions to cut and paste the link into the browser, please do NOT make URL a live link—make it plain text like this:

**Note:** If the above link does not work, copy and paste the following web address into your browser.

<http://www.regulations.gov/#!documentDetail;D=EPA-HQ-OAR-2008-0218-0001>

The whole problem is that embedded hyperlinks to Regulations.gov don't work in IE!! Don't ask me why, and don't ask me my opinion of IE!

Please call me at 703-329-6272 if you have any questions.

Thanks!

Tony Nesky  
Center for Radiation Information and Outreach  
Tel: 202-343-9597  
[nesky.tony@epa.gov](mailto:nesky.tony@epa.gov)

---

**From:** Thornton, Marisa  
**Sent:** Tuesday, July 29, 2014 10:46 AM  
**To:** Nesky, Anthony  
**Subject:** RE: Oops--one more thing on Subpart W page

Can you refresh...I added everything you sent

---

**From:** Nesky, Anthony  
**Sent:** Tuesday, July 29, 2014 10:44 AM  
**To:** Thornton, Marisa  
**Subject:** RE: Oops--one more thing on Subpart W page

Thanks. I later sent you a message about some missing links. We can go live after that update.

Tony Nesky  
Center for Radiation Information and Outreach  
Tel: 202-343-9597  
[nesky.tony@epa.gov](mailto:nesky.tony@epa.gov)

---

**From:** Thornton, Marisa  
**Sent:** Tuesday, July 29, 2014 10:37 AM

**To:** Nesky, Anthony

**Subject:** RE: Oops--one more thing on Subpart W page

Done ... let me know you're your ready to go live

<http://epastage.epa.gov/staging1/rpd/neshaps/subpartw/rulemaking-activity.html>

---

**From:** Nesky, Anthony

**Sent:** Tuesday, July 29, 2014 9:56 AM

**To:** Thornton, Marisa

**Subject:** Oops--one more thing on Subpart W page

Dear Marisa:

Here's one last change to

<http://www.epa.gov/radiation/neshaps/subpartw/rulemaking-activity.html>

Under On this Page:

Please add a New graphic next to Public Hearing

Thanks!

Tony Nesky

Center for Radiation Information and Outreach

Tel: 202-343-9597

[nesky.tony@epa.gov](mailto:nesky.tony@epa.gov)

## Thornton, Marisa

---

**From:** Rosnick, Reid  
**Sent:** Tuesday, September 02, 2014 2:37 PM  
**To:** Thornton, Marisa  
**Subject:** FW: Ad for the Legal and Public Notice Section of the Denver Post Classifieds  
**Attachments:** PUBLIC HEARING NOTICE7-25.docx

---

**From:** Nesky, Anthony  
**Sent:** Monday, July 28, 2014 4:08 PM  
**To:** Apostolico, Mary  
**Cc:** Miller, Beth  
**Subject:** Ad for the Legal and Public Notice Section of the Denver Post Classifieds

Dear Mary:

The registration website for the Subpart W hearings is up and running well. Please convey my thanks for Lee-Ann for her hard work and patience with the many changes.

Attached is the text for a notice about the hearings to be published in the Denver Post. I was thinking that the best place for it would be under the "Legal and Public Notice" section, but I am open to suggestions.

I would like to the ad to run Sunday, August 3, at the very minimum. If it is OK to purchase ads that run after August 4, please do so—run it August 10 and 17 as well. f there are not enough funds for each for three, please run it August 4 and August 17.

Tony Nesky  
Center for Radiation Information and Outreach  
Tel: 202-343-9597  
[nesky.tony@epa.gov](mailto:nesky.tony@epa.gov)

EPA TO CONDUCT PUBLIC HEARING ON PROPOSED REVISION OF NESHAP SUBPART W. The U.S. Environmental Protection Agency (EPA) recently proposed revisions to National Emission Standards for Radon Emissions for Operating Uranium Mill Tailings,” Subpart W of 40 CFR Part 61. The proposed rule was published on May 2, 2014 (85 FR 25388). EPA will hold a public hearing to allow the public to comment on the proposed revisions. The hearing will be held September 3 and 4, 2014 at the EPA Region 8 Office, 1595 Wynkoop Street, Denver, CO 80202-1129. Sessions will be held both days from 9AM-12 PM and from 1PM to 5PM. Register by August 22, 2014. Attendance at the hearing is not necessary to comment on this proposed rulemaking. EPA also welcomes written comments. To register for the hearing, provide written comments, or obtain additional information, see <http://www.epa.gov/radiation/neshaps/subpartw/rulemaking-activity.html>. For questions, contact Anthony Nesky of EPA at 202-343-9597.

## Thornton, Marisa

---

**From:** Rosnick, Reid  
**Sent:** Tuesday, September 02, 2014 2:40 PM  
**To:** Thornton, Marisa  
**Subject:** FW: I think we are ready to launch the registration website

---

**From:** Rosnick, Reid  
**Sent:** Friday, July 25, 2014 2:40 PM  
**To:** Nesky, Anthony  
**Subject:** RE: I think we are ready to launch the registration website

I think we're good to go!

---

**From:** Nesky, Anthony  
**Sent:** Friday, July 25, 2014 2:34 PM  
**To:** Rosnick, Reid  
**Subject:** I think we are ready to launch the registration website  
**Importance:** High

Dear Reid:

Whitney sent me her remarks on the website this morning and the contractor has updated it. I think we are ready to launch. Would you like to review it one more time? If so here it is,

Website:

<https://www.eventbrite.com/e/subpart-w-public-hearings-registration-1408042493>

Password: SRA (We'll drop the password when we go live.)

Tony Nesky  
Center for Radiation Information and Outreach  
Tel: 202-343-9597  
[nesky.tony@epa.gov](mailto:nesky.tony@epa.gov)

## Thornton, Marisa

---

**From:** Rosnick, Reid  
**Sent:** Tuesday, September 02, 2014 2:40 PM  
**To:** Thornton, Marisa  
**Subject:** FW: I think we are ready to launch the registration website

---

**From:** Nesky, Anthony  
**Sent:** Friday, July 25, 2014 2:41 PM  
**To:** Rosnick, Reid  
**Subject:** RE: I think we are ready to launch the registration website

Thanks. Have a great vacation!

Tony Nesky  
Center for Radiation Information and Outreach  
Tel: 202-343-9597  
[nesky.tony@epa.gov](mailto:nesky.tony@epa.gov)

---

**From:** Rosnick, Reid  
**Sent:** Friday, July 25, 2014 2:40 PM  
**To:** Nesky, Anthony  
**Subject:** RE: I think we are ready to launch the registration website

I think we're good to go!

---

**From:** Nesky, Anthony  
**Sent:** Friday, July 25, 2014 2:34 PM  
**To:** Rosnick, Reid  
**Subject:** I think we are ready to launch the registration website  
**Importance:** High

Dear Reid:

Whitney sent me her remarks on the website this morning and the contractor has updated it. I think we are ready to launch. Would you like to review it one more time? If so here it is,

Website:

<https://www.eventbrite.com/e/subpart-w-public-hearings-registration-1408042493>

Password: SRA (We'll drop the password when we go live.)

Tony Nesky  
Center for Radiation Information and Outreach  
Tel: 202-343-9597  
[nesky.tony@epa.gov](mailto:nesky.tony@epa.gov)

## Thornton, Marisa

---

**From:** Rosnick, Reid  
**Sent:** Tuesday, September 02, 2014 2:40 PM  
**To:** Thornton, Marisa  
**Subject:** FW: BID Reference

---

**From:** Nesky, Anthony  
**Sent:** Friday, July 25, 2014 2:58 PM  
**To:** Rosnick, Reid  
**Subject:** RE: BID Reference

Go have a nice vacation, and don't look back!!!

Tony Nesky  
Center for Radiation Information and Outreach  
Tel: 202-343-9597  
[nesky.tony@epa.gov](mailto:nesky.tony@epa.gov)

---

**From:** Rosnick, Reid  
**Sent:** Friday, July 25, 2014 2:57 PM  
**To:** Nesky, Anthony  
**Subject:** RE: BID Reference

Yes, Thanks!

---

**From:** Nesky, Anthony  
**Sent:** Friday, July 25, 2014 2:56 PM  
**To:** Rosnick, Reid  
**Subject:** RE: BID Reference

Yes, it makes sense. We do not have FR 50 5190 on the website. Should I just go ahead and add the erratum, then publish the reference page?

Tony Nesky  
Center for Radiation Information and Outreach  
Tel: 202-343-9597  
[nesky.tony@epa.gov](mailto:nesky.tony@epa.gov)

---

**From:** Rosnick, Reid  
**Sent:** Friday, July 25, 2014 2:47 PM  
**To:** Nesky, Anthony  
**Subject:** FW: BID Reference

Tony,

This is the response I got from Abe regarding our missing BID reference. Does this make sense?

Reid

---

**From:** Abe Zeitoun [<mailto:azeitoun@scainc.com>]

**Sent:** Friday, July 25, 2014 2:45 PM

**To:** Rosnick, Reid

**Cc:** 'Steve Marschke'

**Subject:** RE: BID Reference

Hi Reid,

Here is response and recommendation

Actually this inaccurate reference has been around since "History and Basis of NESHAPS and Subpart W", issued on September 25, 2008.

We believe the correct reference is:

FR (Federal Register) 1985a. EPA promulgated final standards for Elemental Phosphorus Plants, DOE-Facilities, and NRC-Licensed Facilities, Volume 50, p. 5190, February 6, 1985.

Steve Marschke was able to find all of FR Volume 50, except for the first half of February.

Nonetheless, EPA/520-1-89-005 "EIS NESHAPS for Radionuclides BID," Volume 1 (page 1-2) states:

On February 6, 1985, National Emission Standards for Hazardous Air Pollutants (NESHAPS) were promulgated for radionuclide emissions from DOE facilities, NRC-licensed DOE Federal facilities, and elemental phosphorus plants (5190). Two additional radionuclide NESHAPS, covering radon emissions from underground uranium mines and licensed uranium mill tailings, were promulgated on April 17, 1985 (50 FR 15385) and September 24, 1986 (51 FR 34056), respectively.

---

Also, "FR (*Federal Register*) 1985b. EPA established a work practice standard for Underground Uranium Mines, Volume 50, p. 15385, April 17, 1985." states:

clearly not a hazardous air pollutant.  
\* The Agency promulgated final standards for DOE facilities, NRC licensed and non-DOE Federal facilities and elemental phosphorous plant January 17, 1985 (50 CFR 5190, Feb 6, 1985), although it is noted that the Agency intends to pursue its pending appeal of this portion of the District Court's order. A complete history of events leading to this action is contained in the Federal Register announcing the final standards.

Therefore we recommend that you substitute the wrong reference with this one....and you then will have a solid document.

We are here if need additional assistance.

*Abe Zeitoun*

*The information contained in this e-mail message and any attached files are confidential information. If you have received this e-mail in error, please notify the sender immediately by reply e-mail and delete all copies. If you are not the intended recipient, any use, reliance, dissemination, disclosure, or copying of this e-mail or any part of this e-mail or attached files is unauthorized.*

---

**From:** Rosnick, Reid [<mailto:Rosnick.Reid@epa.gov>]  
**Sent:** Friday, July 25, 2014 8:46 AM  
**To:** [azeitoun@scainc.com](mailto:azeitoun@scainc.com)  
**Cc:** Nesky, Anthony; Miller, Beth  
**Subject:** BID Reference

Hello Abe,

I hope you are well. I have a question. We have been collecting the references in the Background Information Document for Subpart W that you produced. We realized that all the references needed to be placed into the docket for the rulemaking and are in the process of doing so. However, one of the references listed in the document:

FR (Federal Register) 1985a. [EPA promulgated final standards for Elemental Phosphorus Plants, DOE-Facilities, and NRC-Licensed Facilities](#), Volume 50, p. 7280, February 8, 1985. (8 pp, 4.02 MB) [About PDF](#)

When checked, this is actually a proposed rule for language to regulate underground uranium mines under NESHAP Subpart B. So, we don't know what to do with this reference, we're not sure where it is referenced in the document, or whether it was referencing uranium mining or phosphorus plants. I'm not giving you much information to go on, but could you please have a look at the document/reference and give us your opinion on the matter? Thanks, Abe.

Reid

---

Reid J. Rosnick  
US Environmental Protection Agency  
Radiation Protection Division  
202.343.9563  
[rosnick.reid@epa.gov](mailto:rosnick.reid@epa.gov)

## Thornton, Marisa

---

**From:** Rosnick, Reid  
**Sent:** Tuesday, September 02, 2014 2:40 PM  
**To:** Thornton, Marisa  
**Subject:** FW: BID Reference

---

**From:** Rosnick, Reid  
**Sent:** Friday, July 25, 2014 2:57 PM  
**To:** Nesky, Anthony  
**Subject:** RE: BID Reference

Yes, Thanks!

---

**From:** Nesky, Anthony  
**Sent:** Friday, July 25, 2014 2:56 PM  
**To:** Rosnick, Reid  
**Subject:** RE: BID Reference

Yes, it makes sense. We do not have FR 50 5190 on the website. Should I just go ahead and add the erratum, then publish the reference page?

Tony Nesky  
Center for Radiation Information and Outreach  
Tel: 202-343-9597  
[nesky.tony@epa.gov](mailto:nesky.tony@epa.gov)

---

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**Sent:** Friday, July 25, 2014 2:47 PM  
**To:** Nesky, Anthony  
**Subject:** FW: BID Reference

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Reid

---

**From:** Abe Zeitoun [<mailto:azeitoun@scainc.com>]  
**Sent:** Friday, July 25, 2014 2:45 PM  
**To:** Rosnick, Reid  
**Cc:** 'Steve Marschke'  
**Subject:** RE: BID Reference

Hi Reid,

Here is response and recommendation

Actually this inaccurate reference has been around since "History and Basis of NESHAPS and Subpart W", issued on September 25, 2008.

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---

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clearly not a hazardous air pollutant.  
\* The Agency promulgated final standards for DOE facilities, NRC licensed and non-DOE Federal facilities and elemental phosphorous plant January 17, 1985 (50 CFR 5190, Feb 6, 1985), although it is noted that the Agency intends to pursue its pending appeal of this portion of the District Court's order. A complete history of events leading to this action is contained in the Federal Register announcing the final standards.

Therefore we recommend that you substitute the wrong reference with this one....and you then will have a solid document.

We are here if need additional assistance.

*Abe Zeitoun*

*The information contained in this e-mail message and any attached files are confidential information. If you have received this e-mail in error, please notify the sender immediately by reply e-mail and delete all copies. If you are not the intended recipient, any use, reliance, dissemination, disclosure, or copying of this e-mail or any part of this e-mail or attached files is unauthorized.*

---

**From:** Rosnick, Reid [<mailto:Rosnick.Reid@epa.gov>]  
**Sent:** Friday, July 25, 2014 8:46 AM  
**To:** [azeitoun@scainc.com](mailto:azeitoun@scainc.com)  
**Cc:** Nesky, Anthony; Miller, Beth  
**Subject:** BID Reference

Hello Abe,

I hope you are well. I have a question. We have been collecting the references in the Background Information Document for Subpart W that you produced. We realized that all the references needed to be placed into the docket for the rulemaking and are in the process of doing so. However, one of the references listed in the document:

FR (Federal Register) 1985a. [EPA promulgated final standards for Elemental Phosphorus Plants, DOE-Facilities, and NRC-Licensed Facilities](#), Volume 50, p. 7280, February 8, 1985. (8 pp, 4.02 MB) [About PDF](#)

When checked, this is actually a proposed rule for language to regulate underground uranium mines under NESHAP Subpart B. So, we don't know what to do with this reference, we're not sure where it is referenced in the document, or whether it was referencing uranium mining or phosphorus plants. I'm not giving you much information to go on, but could you please have a look at the document/reference and give us your opinion on the matter? Thanks, Abe.

Reid

---

Reid J. Rosnick  
US Environmental Protection Agency  
Radiation Protection Division  
202.343.9563  
[rosnick.reid@epa.gov](mailto:rosnick.reid@epa.gov)

## Thornton, Marisa

---

**From:** Rosnick, Reid  
**Sent:** Tuesday, September 02, 2014 2:39 PM  
**To:** Thornton, Marisa  
**Subject:** FW: Final Edits on Registration Website: please update and leave password up so that I can check it once more

---

**From:** Tracy, Lee-Ann [mailto:Lee-Ann\_Tracy@sra.com]  
**Sent:** Friday, July 25, 2014 2:58 PM  
**To:** Nesky, Anthony  
**Cc:** Apostolico, Mary  
**Subject:** RE: Final Edits on Registration Website: please update and leave password up so that I can check it once more

Site is ready for the general public (i.e., password removed).

URL to register: <https://www.eventbrite.com/e/subpart-w-public-hearings-registration-1408042493>

Thanks,  
Lee-Ann

---

**From:** Tracy, Lee-Ann  
**Sent:** Friday, July 25, 2014 2:50 PM  
**To:** 'Nesky, Anthony'  
**Subject:** RE: Final Edits on Registration Website: please update and leave password up so that I can check it once more

I've already deleted the test registration and will do so again after I test it one more time. If you want to have folks test after it has gone live, I can always delete any registration upon your request. I'll send you an e-mail when the site is ready (i.e., change made and not password protected).

Thanks,  
Lee-Ann

---

**From:** Nesky, Anthony [mailto:Nesky.Tony@epa.gov]  
**Sent:** Friday, July 25, 2014 2:48 PM  
**To:** Tracy, Lee-Ann  
**Subject:** RE: Final Edits on Registration Website: please update and leave password up so that I can check it once more

Dear Lee-Ann:

I have ONE last change (which I missed) and then we are ready to go live. Under "Event Information", please change:

"You are welcome to attend multiple sessions, but each person may only present testimony at one session" to

You are welcome to attend multiple sessions, but each person may only speak at one session.

Upon making this change, you may remove the password, as long as you are satisfied that the website is working properly. I have been getting copies of your test registrations. Oh, and given we are space-limited, please delete all the test registrations that are currently in there.

Thanks a million!

.Tony Nesky  
Center for Radiation Information and Outreach  
Tel: 202-343-9597  
[nesky.tony@epa.gov](mailto:nesky.tony@epa.gov)

---

**From:** Tracy, Lee-Ann [[mailto:Lee-Ann\\_Tracy@sra.com](mailto:Lee-Ann_Tracy@sra.com)]  
**Sent:** Friday, July 25, 2014 2:21 PM  
**To:** Nesky, Anthony  
**Cc:** Miller, Beth; Apostolico, Mary  
**Subject:** RE: Final Edits on Registration Website: please update and leave password up so that I can check it once more

Took me a bit longer than I had hoped. I made all changes and revised some of the fonts that I thought were too large.

One thing to note, a person can select one ticket on the first page (e.g., Sept. 3 at 9-12) and then select a different date to speak on the order form. If this occurs, we may need to contact the person to confirm the date.

Let me know if you have any additional changes or if I missed anything.

Thanks,  
Lee-Ann

---

**From:** Nesky, Anthony [<mailto:Nesky.Tony@epa.gov>]  
**Sent:** Friday, July 25, 2014 12:26 PM  
**To:** Tracy, Lee-Ann  
**Cc:** Miller, Beth; Apostolico, Mary  
**Subject:** Final Edits on Registration Website: please update and leave password up so that I can check it once more  
**Importance:** High

Dear Lee-Ann:

Well, it looks like it was providential that you were in meetings yesterday. Region 8 just got back to me with a few updates to the Registration Information. All edits from all parties are now in the attached document. Please feel free to give me a call if you have any questions.

Please incorporate the edits into the registration website, but leave the password up so I can check it just one more time. I'll then contact you to ask you to make the site public.

Thanks for all your great work on this!

Tony Nesky  
Center for Radiation Information and Outreach  
Tel: 202-343-9597  
[nesky.tony@epa.gov](mailto:nesky.tony@epa.gov)

## Thornton, Marisa

---

**From:** Rosnick, Reid  
**Sent:** Tuesday, September 02, 2014 2:39 PM  
**To:** Thornton, Marisa  
**Subject:** FW: Changes to Subpart W page and RPD home page on the staging server

---

**From:** Thornton, Marisa  
**Sent:** Monday, July 28, 2014 1:18 PM  
**To:** Nesky, Anthony  
**Subject:** RE: Changes to Subpart W page and RPD home page on the staging server

Your changes are live now –  
<http://epa.gov/radiation>  
<http://www.epa.gov/radiation/neshaps/subpartw/rulemaking-activity.html>

---

**From:** Nesky, Anthony  
**Sent:** Monday, July 28, 2014 1:11 PM  
**To:** Thornton, Marisa  
**Subject:** RE: Changes to Subpart W page and RPD home page on the staging server

Oops...one more thing on the Subpart W page . **Requests for a Public Hearing** is now a subsection of **PUBLIC HEARING, SEPTEMBER 3 and 4, 2014, DENVER, COLORADO.** **Is it possible to remove the bold from it, or otherwise format it so that is a subsection?**

Tony Nesky  
Center for Radiation Information and Outreach  
Tel: 202-343-9597  
[nesky.tony@epa.gov](mailto:nesky.tony@epa.gov)

---

**From:** Thornton, Marisa  
**Sent:** Monday, July 28, 2014 1:06 PM  
**To:** Nesky, Anthony  
**Subject:** RE: Changes to Subpart W page and RPD home page on the staging server

To the live server?

---

**From:** Nesky, Anthony  
**Sent:** Monday, July 28, 2014 1:05 PM  
**To:** Thornton, Marisa  
**Subject:** RE: Changes to Subpart W page and RPD home page on the staging server

Thanks. I have just one little change on <http://epastage.epa.gov/staging1/rpd/neshaps/subpartw/rulemaking-activity.html>

Under the section, **PUBLIC HEARING, SEPTEMBER 3 and 4, 2014, DENVER, COLORADO,** please add a period at the end of the last sentence.

Register by August 22, 2014.

Then go ahead and publish this page and the updated home page to the server. Thanks!

Tony Nesky  
Center for Radiation Information and Outreach  
Tel: 202-343-9597  
[nesky.tony@epa.gov](mailto:nesky.tony@epa.gov)

---

**From:** Thornton, Marisa  
**Sent:** Monday, July 28, 2014 11:52 AM  
**To:** Nesky, Anthony; Romero, Carmen  
**Cc:** Herrenbruck, Glenna  
**Subject:** RE: Changes to Subpart W page and RPD home page on the staging server

Done - <http://epastage.epa.gov/staging1/rpd/>

---

**From:** Nesky, Anthony  
**Sent:** Friday, July 25, 2014 3:10 PM  
**To:** Thornton, Marisa; Romero, Carmen  
**Cc:** Herrenbruck, Glenna  
**Subject:** RE: Changes to Subpart W page and RPD home page on the staging server  
**Importance:** High

Dear Carmen and Marisa:

Thanks for your help. Please publish this page to the server: <http://epastage.epa.gov/staging1/rpd/neshaps/subpartw/rulemaking-activity.html>

The updated text on the test server home page, <http://epastage.epa.gov/staging1/rpd/>, also looks good, but you inadvertently dropped the bullet on Brian's ANPR.

Regulations Under Review

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  - **Public Hearing, September 3 and 4, 2014, Denver, Colorado.** EPA will hold a [public hearing](#) at its Region 8 offices in Denver to allow the public to make oral presentations of data, views or arguments about the proposed revisions to Subpart W.

Tony Nesky  
Center for Radiation Information and Outreach  
Tel: 202-343-9597  
[nesky.tony@epa.gov](mailto:nesky.tony@epa.gov)

## Thornton, Marisa

---

**From:** Rosnick, Reid  
**Sent:** Tuesday, September 02, 2014 2:38 PM  
**To:** Thornton, Marisa  
**Subject:** FW: Registration is now open for Subpart W Public Hearings, Sep.3-4, 2014, Region 8 Offices in Denver

---

**From:** Nesky, Anthony  
**Sent:** Monday, July 28, 2014 1:26 PM  
**To:** Diaz, Angelique; Trulove-Cranor, Whitney; Rosnick, Reid; Stahle, Susan  
**Cc:** Herrenbruck, Glenna; McMichael, Nate; Wieder, Jessica; Perrin, Alan; Peake, Tom; Ferguson, Rafaela  
**Subject:** FYI: Registration is now open for Subpart W Public Hearings, Sep.3-4, 2014, Region 8 Offices in Denver

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**To:** Aquino, Marcos; BANDROWSKI, MIKE; Barnette, Jack; Barry, Michael; Brozowski, George; Button, Rich; Compher, Michael; Debonis, Michael; Dettling, Diane; Diaz, Angelique; Dye, Robert; Febbo, carol; Generette, Lloyd; Giardina, Paul; Graham, Richard; Harriet Croke; Honnellio, Anthony; Hooper, Charles A.; Knutson, Lingard; Koehler, Larainne; Murphy, Michael; Povevko, Oleg; Richards, Jon M.; Rinck, Todd; Rosenblum, Shelly; Schulingkamp, Cristina; Snowbarger, Robert; Terry, Robert; Mahler, Tom; Tyson, MaryPat; Wagner, Christine; Waldon, MARGARET; Wood, Periann; Zhen, Davis  
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**Subject:** Registration for NESHAP Subpart W Public Hearings  
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Rafie

Rafaela Ferguson  
Special Assistant/Regional Coordinator  
Radiation Protection Division  
Office of Radiation and Indoor Air  
Tel: 202-343-9362  
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Fax: 202-343-2304

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**To:** Thornton, Marisa  
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**Importance:** High

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**From:** Brozowski, George  
**Sent:** Monday, July 28, 2014 1:44 PM  
**To:** Nesky, Anthony  
**Subject:** FW: Registration for NESHAP Subpart W Public Hearings  
**Importance:** High

Good afternoon and I have registered for this event. Will there be a call-in number to listen? Thanks and take care!

George P. Brozowski | 214-665-8541 | 214-755-1530 cell

---

**From:** Ferguson, Rafaela  
**Sent:** Monday, July 28, 2014 12:37 PM  
**To:** Aquino, Marcos; BANDROWSKI, MIKE; Barnette, Jack; Barry, Michael; Brozowski, George; Button, Rich; Compher, Michael; Debonis, Michael; Dettling, Diane; Diaz, Angelique; Dye, Robert; Febbo, carol; Generette, Lloyd; Giardina, Paul; Graham, Richard; Harriet Croke; Honnellio, Anthony; Hooper, Charles A.; Knutson, Lingard; Koehler, Larainne; Murphy, Michael; Povetko, Oleg; Richards, Jon M.; Rinck, Todd; Rosenblum, Shelly; Schulingkamp, Cristina; Snowbarger, Robert; Terry, Robert; Mahler, Tom; Tyson, MaryPat; Wagner, Christine; Waldon, MARGARET; Wood, Periann; Zhen, Davis  
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**Sent:** Tuesday, September 02, 2014 2:37 PM  
**To:** Thornton, Marisa  
**Subject:** FW: Registration for NESHAP Subpart W Public Hearings

---

**From:** Nesky, Anthony  
**Sent:** Monday, July 28, 2014 3:29 PM  
**To:** Brozowski, George  
**Subject:** RE: Registration for NESHAP Subpart W Public Hearings

Actually, this is a formal public hearing to take comments from the public, and there will be no call-in number.

Tony Nesky  
Center for Radiation Information and Outreach  
Tel: 202-343-9597  
[nesky.tony@epa.gov](mailto:nesky.tony@epa.gov)

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**Sent:** Tuesday, September 02, 2014 2:37 PM  
**To:** Thornton, Marisa  
**Subject:** FW: Registration for NESHAP Subpart W Public Hearings

---

**From:** Brozowski, George  
**Sent:** Monday, July 28, 2014 3:30 PM  
**To:** Nesky, Anthony  
**Subject:** RE: Registration for NESHAP Subpart W Public Hearings

Good afternoon and thanks for the update. If you can, please delete my name from the invite. Take care!

George P. Brozowski | 214-665-8541 | 214-755-1530 cell

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**Sent:** Monday, July 28, 2014 2:29 PM  
**To:** Brozowski, George  
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**Importance:** High

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## Thornton, Marisa

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**From:** Rosnick, Reid  
**Sent:** Tuesday, September 02, 2014 2:41 PM  
**To:** Thornton, Marisa  
**Subject:** FW: Registration Notification for Subpart W Public Hearings  
**Attachments:** 1408042493-320802441-registration.pdf

---

**From:** Eventbrite [mailto:orders@eventbrite.com]  
**Sent:** Friday, July 25, 2014 2:07 PM  
**To:** Nesky, Anthony  
**Subject:** Registration Notification for Subpart W Public Hearings



Find events My Tickets

Good news! A registration for [Subpart W Public Hearings](#) just came through. Below, you'll find a copy of the registration confirmation email for:

**Lee-Ann tracy**  
[lee-ann\\_tracy@sra.com](mailto:lee-ann_tracy@sra.com)  
**Order #320802441**

Cheers!  
Eventbrite

P.S. You can turn off this notification anytime on your [email preferences page](#).

---

Hi Lee-Ann, this is your registration confirmation for  
**Subpart W Public Hearings**

Organized by [U.S. Environmental Protection Agency](#)

---

## Registration summary



### Mobile Summary



...or...



### Paper Summary

Open the email attachment or [download here](#)

## Message from U.S. Environmental Protection Agency

You are registered to attend the Subpart W Public Hearing.  
Please read the following before attending:

#### BUILDING LOCATION

The EPA Region 8 office is at 1595 Wynkoop Street, Denver, CO80202-1129. The building is located along the 16th Street Mall in downtown Denver, adjacent to Union Station and across from the Tattered Cover bookstore. The building opens at 8 AM Monday-Friday.

#### PARKING

The City of Denver provides information on parking here:  
<http://www.denvergov.org/tabid/437781/Default.aspx>><http://www.denvergov.org/tabid/437781/Default.aspx>

#### DRIVING DIRECTIONS

If coming from Denver International Airport--  
Follow the "Airport Exit" signs to proceed south and west on Pena Boulevard for about 9 miles. Keep following the natural turn to the right as Pena Blvd. turns into Interstate 70 West, heading toward downtown. Follow I-70 West for 10 miles before exiting onto I-25 South. Two miles after turning south on I-25, take the Speer Avenue South exit and make a left towards downtown and the Pepsi Center. Upon crossing the Interstate, you will see the Pepsi Center on your right. Stay left and make a left at the stop light on Wewatta Street (there is a lefthand turn lane provided). Head across a small bridge and go straight until you reach 15th Street. Make a right on 15th Street, and your first left on Wynkoop Street. The EPA building is on the left, with the building entrance off of 16th Street.

If coming from the north, south or west--

Take Interstate 25 to the Speer Boulevard South exit and follow the directions two paragraphs above.

#### SECURITY REQUIREMENTS

Visitors to EPA's regional office must show identification and pass through security screening at the building entrance. The EPA Region 8 office building is a Level-4-security building, similar to what you experience at the airport. All visitors need to bring a government-issued photo ID (i.e., a driver's license). You will be asked to show this ID as you enter the lobby.

Please arrive at the building 30 minutes before any talks or events you have scheduled. Our security screening process is similar to screening at the airport: you will be asked to walk through a magnetometer (removing metal objects from your pockets), and your coats, bags etc. will be x-rayed. We regret that we do not have facilities to check coats or bags. You will be provided with a visitor badge after you pass through security. Please wear this at all times while you are in the building.

Video, as well as photos of any kind, are not allowed. Also, NO weapons of any kind are allowed in the building. This includes mace, knives, guns, etc. You will not be permitted in the building if you have any of these items. For a complete list of restricted items and additional information, please visit the EPA Region 8 website at:

<http://www2.epa.gov/region8/directions-and-visitor-information-us-epa-region-8>

#### TO GET TO THE HEARING ROOM

After going through security, please proceed to the 2nd Floor Conference Center via the elevator. Conference Center attendees are not allowed above the 2nd floor without having an EPA escort. Outside of the meeting room, there will be a registration table where you will check-in and receive a temporary badge that must be worn at all times while in the building. Any visitor exiting the building during breaks or lunch will be required to pass through security screening upon return each time. At the conclusion of the conference, please return to the registration table to be checked out and turn in your temporary visitor badge.

#### SPEAKERS

Speakers will be allotted 5 minutes to make his or her presentation. Speakers will be assigned a speaker number upon arriving, and will be called in sequential order to give his or her presentation. Submission of written remarks is not required, but will be gladly accepted. All remarks and submissions become part of the official public record.

Please print and bring your ticket with you.

**Have a question? Contact the organizer at [nesky.tony@epa.gov](mailto:nesky.tony@epa.gov)**

## Order Summary

**July 25, 2014**

Order #: 320802441

Name	Type	Quantity
Lee-Ann tracy	Subpart W Public Hearings - September 4, 2014, 1:00 PM - 5:00 PM MDT Capacity: 60 persons	1

This order is subject to Eventbrite [Terms of Service](#), [Privacy Policy](#), and [Cookie Policy](#)

## About this event



EPA Region 8 Office  
1595 Wynkoop Street  
Denver, CO 80202-1129



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## Registration Information

Contact Address

**erte**

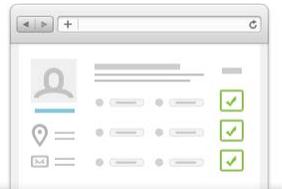
Who are you representing?

**ga**

Do you wish to speak at one of the sessions?

**No**

---



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This email was sent to [lee-ann\\_tracy@sra.com](mailto:lee-ann_tracy@sra.com).

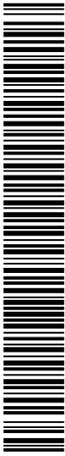
Eventbrite | 155 5th St, 7th Floor | San Francisco, CA 94103

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Please print and bring with you to the event

 320802441405512753001	Event		  Payment Status <b>Free Order</b>
	<h1>Subpart W Public Hearings</h1>		
	Date+Time	Location	
	EPA Region 8 Office 1595 Wynkoop Street Denver, CO 80202-1129		
Order Info			
Order #320802441. Ordered by Lee-Ann tracy on July 25, 2014 11:06 AM			
Type			
Subpart W Public Hearings - September 4, 2014, 1:00 PM - 5:00 PM MDT Capacity: 60 persons			

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320802441405512753001



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[www.eventbrite.com](http://www.eventbrite.com)

## Thornton, Marisa

---

**From:** Rosnick, Reid  
**Sent:** Tuesday, September 02, 2014 2:43 PM  
**To:** Thornton, Marisa  
**Subject:** FW: Changes to Subpart W page and RPD home page on the staging server

---

**From:** Thornton, Marisa  
**Sent:** Friday, July 25, 2014 7:33 AM  
**To:** Nesky, Anthony; Romero, Carmen  
**Cc:** Herrenbruck, Glenna  
**Subject:** RE: Changes to Subpart W page and RPD home page on the staging server

Done!

---

**From:** Nesky, Anthony  
**Sent:** Thursday, July 24, 2014 5:24 PM  
**To:** Thornton, Marisa; Romero, Carmen  
**Cc:** Herrenbruck, Glenna  
**Subject:** Changes to Subpart W page and RPD home page on the staging server

Dear Carmen and Marisa:

Here are the changes to the Subpart W page and RPD home page that Sue Stahle and I were talking about the other. Please make changes on the staging server; we are not ready to publish.

On <http://epastage.epa.gov/staging1/rpd/neshaps/subpartw/rulemaking-activity.html>

Please replace the "Requests for a Public Hearing" section with the text below.

1. **PUBLIC HEARING, SEPTEMBER 3 and 4, 2014, DENVER, COLORADO.** EPA will hold a public hearing to allow the public to make oral presentations of data, views or arguments about the proposed revisions to Subpart W. The public hearing will be held September 3 and 4, 2014, at the EPA Region 8 Office, 1595 Wynkoop Street, Denver, CO 80202-1129. Sessions will be held both days from 9:00 am to 12:00 pm and from 1:00 pm to 5:00 pm. Capacity is limited; advance registration is required to help accommodate those who wish to attend or speak. Register by August 22, 2014

[CLICK TO REGISTER FOR THE PUBLIC HEARING.](#)

Note: Participation or attendance at the public hearing is not necessary to comment on this proposed rulemaking. EPA also welcomes [written comments](#).

Requests for a Public Hearing

- [Memo to Docket on Telephone Request for Public Hearing \(PDF\)](#) (1 pp, 196 KB [About PDF](#))
- [Letter from Uranium Watch \(PDF\)](#) (1 pp, 42.9 KB [About PDF](#))

On <http://epastage.epa.gov/staging1/rpd/>

Under “Regulations Under Review,” please replace the first entry “Notice of Proposed Rulemaking,” with the following.

- **Notice of Proposed Rulemaking.** [National Emission Standards for Hazardous Air Pollutants \(NESHAPs\)-Radon from Operating Uranium Mill Tailings](#) EPA has released a Notice of Proposed Rulemaking that would revise “National Emission Standards for Radon Emissions from Operating Mill Tailings,” Subpart W of 40 CFR Part 61.
  - **Comment period extended to October 29, 2014.** The public is invited to submit comments on the proposed rulemaking for NESHAP Subpart W. Comments are due October 29, 2014.
  - **Public Hearing, September 3 and 4, 2014, Denver, Colorado.** EPA will hold a [public hearing](#) at its Region 8 offices in Denver to allow the public to make oral presentations of data, views or arguments about the proposed revisions to Subpart W.

Tony Nesky  
Center for Radiation Information and Outreach  
Tel: 202-343-9597  
[nesky.tony@epa.gov](mailto:nesky.tony@epa.gov)

## Thornton, Marisa

---

**From:** Rosnick, Reid  
**Sent:** Tuesday, September 02, 2014 2:43 PM  
**To:** Thornton, Marisa  
**Subject:** FW: Changes to Subpart W page and RPD home page on the staging server

---

**From:** Thornton, Marisa  
**Sent:** Friday, July 25, 2014 7:33 AM  
**To:** Nesky, Anthony; Romero, Carmen  
**Cc:** Herrenbruck, Glenna  
**Subject:** RE: Changes to Subpart W page and RPD home page on the staging server

Done!

---

**From:** Nesky, Anthony  
**Sent:** Thursday, July 24, 2014 5:24 PM  
**To:** Thornton, Marisa; Romero, Carmen  
**Cc:** Herrenbruck, Glenna  
**Subject:** Changes to Subpart W page and RPD home page on the staging server

Dear Carmen and Marisa:

Here are the changes to the Subpart W page and RPD home page that Sue Stahle and I were talking about the other. Please make changes on the staging server; we are not ready to publish.

On <http://epastage.epa.gov/staging1/rpd/neshaps/subpartw/rulemaking-activity.html>

Please replace the “Requests for a Public Hearing” section with the text below.

1. **PUBLIC HEARING, SEPTEMBER 3 and 4, 2014, DENVER, COLORADO.** EPA will hold a public hearing to allow the public to make oral presentations of data, views or arguments about the proposed revisions to Subpart W. The public hearing will be held September 3 and 4, 2014, at the EPA Region 8 Office, 1595 Wynkoop Street, Denver, CO 80202-1129. Sessions will be held both days from 9:00 am to 12:00 pm and from 1:00 pm to 5:00 pm. Capacity is limited; advance registration is required to help accommodate those who wish to attend or speak. Register by August 22, 2014

[CLICK TO REGISTER FOR THE PUBLIC HEARING.](#)

Note: Participation or attendance at the public hearing is not necessary to comment on this proposed rulemaking. EPA also welcomes [written comments](#).

Requests for a Public Hearing

- [Memo to Docket on Telephone Request for Public Hearing \(PDF\)](#) (1 pp, 196 KB [About PDF](#))
- [Letter from Uranium Watch \(PDF\)](#) (1 pp, 42.9 KB [About PDF](#))

On <http://epastage.epa.gov/staging1/rpd/>

Under “Regulations Under Review,” please replace the first entry “Notice of Proposed Rulemaking,” with the following.

- **Notice of Proposed Rulemaking.** [National Emission Standards for Hazardous Air Pollutants \(NESHAPs\)-Radon from Operating Uranium Mill Tailings](#) EPA has released a Notice of Proposed Rulemaking that would revise “National Emission Standards for Radon Emissions from Operating Mill Tailings,” Subpart W of 40 CFR Part 61.
  - **Comment period extended to October 29, 2014.** The public is invited to submit comments on the proposed rulemaking for NESHAP Subpart W. Comments are due October 29, 2014.
  - **Public Hearing, September 3 and 4, 2014, Denver, Colorado.** EPA will hold a [public hearing](#) at its Region 8 offices in Denver to allow the public to make oral presentations of data, views or arguments about the proposed revisions to Subpart W.

Tony Nesky  
Center for Radiation Information and Outreach  
Tel: 202-343-9597  
[nesky.tony@epa.gov](mailto:nesky.tony@epa.gov)

## Thornton, Marisa

---

**From:** Rosnick, Reid  
**Sent:** Tuesday, September 02, 2014 2:42 PM  
**To:** Thornton, Marisa  
**Subject:** FW: BID Reference

---

**From:** Rosnick, Reid  
**Sent:** Friday, July 25, 2014 8:46 AM  
**To:** azeitoun@scainc.com  
**Cc:** Nesky, Anthony; Miller, Beth  
**Subject:** BID Reference

Hello Abe,

I hope you are well. I have a question. We have been collecting the references in the Background Information Document for Subpart W that you produced. We realized that all the references needed to be placed into the docket for the rulemaking and are in the process of doing so. However, one of the references listed in the document:

FR (Federal Register) 1985a. [EPA promulgated final standards for Elemental Phosphorus Plants, DOE-Facilities, and NRC-Licensed Facilities](#), Volume 50, p. 7280, February 8, 1985. (8 pp, 4.02 MB) [About PDF](#)

When checked, this is actually a proposed rule for language to regulate underground uranium mines under NESHAP Subpart B. So, we don't know what to do with this reference, we're not sure where it is referenced in the document, or whether it was referencing uranium mining or phosphorus plants. I'm not giving you much information to go on, but could you please have a look at the document/reference and give us your opinion on the matter? Thanks, Abe.

Reid

---

Reid J. Rosnick  
US Environmental Protection Agency  
Radiation Protection Division  
202.343.9563  
[rosnick.reid@epa.gov](mailto:rosnick.reid@epa.gov)

## Thornton, Marisa

---

**From:** Rosnick, Reid  
**Sent:** Tuesday, September 02, 2014 2:42 PM  
**To:** Thornton, Marisa  
**Subject:** FW: BID Reference

---

**From:** azeitoun [mailto:azeitoun@scainc.com]  
**Sent:** Friday, July 25, 2014 8:55 AM  
**To:** Rosnick, Reid  
**Cc:** Nesky, Anthony; Miller, Beth  
**Subject:** RE: BID Reference

Reid,

I will get you an answer ASAP....

*Abe Zeitoun*

Abe Zeitoun, PhD  
 [\(703\) 893-6600 Ext. 225](tel:(703)893-6600)  
 [\(571\) 282-2852](tel:(571)282-2852) (Direct Line)



*The information contained in this e-mail message and any attached files are confidential information. If you have received this e-mail in error, please notify the sender immediately by reply e-mail and delete all copies. If you are not the intended recipient, any use, reliance, dissemination, disclosure, or copying of this e-mail or any part of this e-mail or attached files is unauthorized.*

---

**From:** Rosnick, Reid [mailto:Rosnick.Reid@epa.gov]  
**Sent:** Friday, July 25, 2014 8:46 AM  
**To:** [azeitoun@scainc.com](mailto:azeitoun@scainc.com)  
**Cc:** Nesky, Anthony; Miller, Beth  
**Subject:** BID Reference

Hello Abe,

I hope you are well. I have a question. We have been collecting the references in the Background Information Document for Subpart W that you produced. We realized that all the references needed to be placed into the docket for the rulemaking and are in the process of doing so. However, one of the references listed in the document:

FR (Federal Register) 1985a. [EPA promulgated final standards for Elemental Phosphorus Plants, DOE-Facilities, and NRC-Licensed Facilities](#), Volume 50, p. 7280, February 8, 1985. (8 pp, 4.02 MB) [About PDF](#)

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Reid

---

Reid J. Rosnick  
US Environmental Protection Agency  
Radiation Protection Division  
202.343.9563  
[rosnick.reid@epa.gov](mailto:rosnick.reid@epa.gov)

## Thornton, Marisa

---

**From:** Rosnick, Reid  
**Sent:** Tuesday, September 02, 2014 2:42 PM  
**To:** Thornton, Marisa  
**Subject:** FW: Subpart W

---

**From:** Ginsberg, Marilyn  
**Sent:** Friday, July 25, 2014 10:39 AM  
**To:** Rosnick, Reid  
**Subject:** RE: Subpart W

Hi Reid,  
Thanks (and belated congratulations). -- M

---

**From:** Rosnick, Reid  
**Sent:** Friday, July 25, 2014 6:40 AM  
**To:** Ginsberg, Marilyn  
**Subject:** RE: Subpart W

Hi Marilyn,

Subpart W (attached) was published on May 2, 2014. This week we extended the comment period by 90 days, to October 29.

Reid

---

**From:** Ginsberg, Marilyn  
**Sent:** Thursday, July 24, 2014 5:00 PM  
**To:** Rosnick, Reid  
**Subject:** Subpart W

Hi Reid,  
Can you give me an approximate time line for when this will be published?  
Thanks, Marilyn

## Thornton, Marisa

---

**From:** Rosnick, Reid  
**Sent:** Tuesday, September 02, 2014 2:42 PM  
**To:** Thornton, Marisa  
**Subject:** FW: Please test the registration website again

---

**From:** Trulove-Cranor, Whitney  
**Sent:** Friday, July 25, 2014 11:43 AM  
**To:** Nesky, Anthony; Diaz, Angelique  
**Cc:** Rosnick, Reid  
**Subject:** RE: Please test the registration website again

So sorry for the delay, I am knee deep in prep for the 111(d) hearings next week. I'm so glad you included info about our building...we have updated our website recently will specific info about hearings so take a look at this new info.

<http://www2.epa.gov/region8/directions-and-visitor-information-us-epa-region-8>

You might also want to say that doors open at 8 a.m. just so people don't arrive too early.

We are learning tons about holding hearings in our building. Next week will be a true test.

Regarding capacity of rooms....I think the first day you have Bison/bitterroot which holds 100 and the next day you have Rocky Mtn/Sagebrush which holds 60. But after next week, I will know for sure how many chairs we can get in there with the room set-up hearing style.

Whitney

---

**From:** Nesky, Anthony  
**Sent:** Wednesday, July 23, 2014 3:06 PM  
**To:** Diaz, Angelique; Trulove-Cranor, Whitney  
**Cc:** Rosnick, Reid  
**Subject:** RE: Please test the registration website again

Dear Angelique and Whitney:

Did you have any feedback about the registration website? Does it meet your needs?

FYI, Sue Stahle had a few edits to the "About Hearings and Comments" sidebar.

Tony Nesky  
Center for Radiation Information and Outreach  
Tel: 202-343-9597  
[nesky.tony@epa.gov](mailto:nesky.tony@epa.gov)

---

**From:** Nesky, Anthony  
**Sent:** Monday, July 21, 2014 6:38 PM  
**To:** Diaz, Angelique; Trulove-Cranor, Whitney

**Cc:** Rosnick, Reid

**Subject:** Please test the registration website again

**Importance:** High

Dear Angelique and Whitney:

OK, let's try testing the registration website again. We are now asking for affiliation, special needs, and whether a person intends to speak at one of the sessions. . Please check it out to make sure it meets your needs. I just registered, and my ticket and registration receipt are attached. Feel free to test the registration yourselves! I'd appreciate your feedback today if possible, so that we can launch the site tomorrow.

The registration website is at:

<https://www.eventbrite.com/e/subpart-w-hearings-registration-1408042493>

Password: SRA

Please note that the password requirement will be removed when we make the site public.

Tony Nesky  
Center for Radiation Information and Outreach  
Tel: 202-343-9597  
[nesky.tony@epa.gov](mailto:nesky.tony@epa.gov)

## Thornton, Marisa

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**Sent:** Tuesday, September 02, 2014 2:42 PM  
**To:** Thornton, Marisa  
**Subject:** FW: Please test the registration website again

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**Sent:** Friday, July 25, 2014 11:43 AM  
**To:** Nesky, Anthony; Diaz, Angelique  
**Cc:** Rosnick, Reid  
**Subject:** RE: Please test the registration website again

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**Sent:** Monday, July 21, 2014 6:38 PM  
**To:** Diaz, Angelique; Trulove-Cranor, Whitney

**Cc:** Rosnick, Reid

**Subject:** Please test the registration website again

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Tel: 202-343-9597  
[nesky.tony@epa.gov](mailto:nesky.tony@epa.gov)

## Thornton, Marisa

---

**From:** Rosnick, Reid  
**Sent:** Tuesday, September 02, 2014 2:41 PM  
**To:** Thornton, Marisa  
**Subject:** FW: Please test the registration website again

---

**From:** Nesky, Anthony  
**Sent:** Friday, July 25, 2014 11:47 AM  
**To:** Trulove-Cranor, Whitney  
**Subject:** RE: Please test the registration website again

Thanks for getting back to me. I found the email with the capacity numbers that Angelique sent. Reid and I just about had cardiac arrest about the "Real ID" law, but were relieved to learn from the EPA Region 8 website that it is not being implemented there until next year!

I'll be thinking of you and your hearings next week. Good luck!

Tony Nesky  
Center for Radiation Information and Outreach  
Tel: 202-343-9597  
[nesky.tony@epa.gov](mailto:nesky.tony@epa.gov)

---

**From:** Trulove-Cranor, Whitney  
**Sent:** Friday, July 25, 2014 11:43 AM  
**To:** Nesky, Anthony; Diaz, Angelique  
**Cc:** Rosnick, Reid  
**Subject:** RE: Please test the registration website again

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Whitney

---

**From:** Nesky, Anthony  
**Sent:** Wednesday, July 23, 2014 3:06 PM  
**To:** Diaz, Angelique; Trulove-Cranor, Whitney

**Cc:** Rosnick, Reid

**Subject:** RE: Please test the registration website again

Dear Angelique and Whitney:

Did you have any feedback about the registration website? Does it meet your needs?

FYI, Sue Stahle had a few edits to the "About Hearings and Comments" sidebar.

Tony Nesky  
Center for Radiation Information and Outreach  
Tel: 202-343-9597  
[nesky.tony@epa.gov](mailto:nesky.tony@epa.gov)

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**From:** Nesky, Anthony  
**Sent:** Monday, July 21, 2014 6:38 PM  
**To:** Diaz, Angelique; Trulove-Cranor, Whitney  
**Cc:** Rosnick, Reid  
**Subject:** Please test the registration website again  
**Importance:** High

Dear Angelique and Whitney:

OK, let's try testing the registration website again. We are now asking for affiliation, special needs, and whether a person intends to speak at one of the sessions. . Please check it out to make sure it meets your needs. I just registered, and my ticket and registration receipt are attached. Feel free to test the registration yourselves! Id appreciate your feedback today if possible, so that we can launch the site tomorrow.

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Password: SRA

Please note that the password requirement will be removed when we make the site public.

Tony Nesky  
Center for Radiation Information and Outreach  
Tel: 202-343-9597  
[nesky.tony@epa.gov](mailto:nesky.tony@epa.gov)

## Thornton, Marisa

---

**From:** Rosnick, Reid  
**Sent:** Tuesday, September 02, 2014 2:43 PM  
**To:** Thornton, Marisa  
**Subject:** FW: Registration website: Edits with Capacity Numbers attached.  
**Attachments:** TEXT FROM THE REGISTRATION WEBSITE+CAPACITYNos.docx

---

**From:** Nesky, Anthony  
**Sent:** Thursday, July 24, 2014 5:57 PM  
**To:** Tracy, Lee-Ann  
**Cc:** Miller, Beth  
**Subject:** Registration website: Edits with Capacity Numbers attached.

Dear Lee-Ann:

Here is a the complete set of edits for the registration website. Please make the changes, but leave the password up so we can check it one last time. I'll be in the office tomorrow, so feel free to give me a call if you have any questions.

Tony Nesky  
Center for Radiation Information and Outreach  
Tel: 202-343-9597  
[nesky.tony@epa.gov](mailto:nesky.tony@epa.gov)

---

**From:** Tracy, Lee-Ann [[mailto:Lee-Ann\\_Tracy@sra.com](mailto:Lee-Ann_Tracy@sra.com)]  
**Sent:** Thursday, July 24, 2014 1:30 PM  
**To:** Nesky, Anthony  
**Subject:** RE: Some edits to the registration website: I still owe you one piece of information

Got your e-mail. I might not be able to get to this until tomorrow morning, but it looks like you need to get me more info anyway.

Thanks,  
Lee-Ann

---

**From:** Nesky, Anthony [<mailto:Nesky.Tony@epa.gov>]  
**Sent:** Thursday, July 24, 2014 12:58 PM  
**To:** Tracy, Lee-Ann  
**Subject:** Some edits to the registration website: I still owe you one piece of information

Dear Lee-Ann:

Attached are edits to the webpage. There is one global change you should be aware of: the correct term is "public hearing," not just hearing. Please make sure that this is reflected throughout the website.

I am still trying to confirm the room capacity numbers from Region 8; I want to make sure they are right before we publish. Also, in the interest of transparency, we are going to publish the capacity of the hearing room on the website.

I'm sending you the text of the edits in case you want to get started. I won't need to see the revised website until after I get you the capacity numbers. At that point, please revise the website, and leave the password up so I can check one last time. We'll then go live with it.

I am working from home today. If you have questions, please call me at 703-329-6272.

Tony Nesky  
Center for Radiation Information and Outreach  
Tel: 202-343-9597  
[nesky.tony@epa.gov](mailto:nesky.tony@epa.gov)

---

**From:** Tracy, Lee-Ann [[mailto:Lee-Ann\\_Tracy@sra.com](mailto:Lee-Ann_Tracy@sra.com)]  
**Sent:** Thursday, July 24, 2014 8:57 AM  
**To:** Nesky, Anthony  
**Subject:** RE: Did you want the registration site to go live?

I'll be in a bunch of meetings today, so I may not be able to respond right away, but I'll respond as quickly as I can.

Thanks,  
Lee-Ann

---

**From:** Nesky, Anthony [<mailto:Nesky.Tony@epa.gov>]  
**Sent:** Wednesday, July 23, 2014 10:26 PM  
**To:** Tracy, Lee-Ann  
**Subject:** RE: Did you want the registration site to go live?

I'll send you a few changes to the sidebar, and then we should be ready to go.

---

**From:** Tracy, Lee-Ann <[Lee-Ann\\_Tracy@sra.com](mailto:Lee-Ann_Tracy@sra.com)>  
**Sent:** Wednesday, July 23, 2014 6:28 PM  
**To:** Nesky, Anthony  
**Cc:** Apostolico, Mary  
**Subject:** Did you want the registration site to go live?

I was waiting for approval of the final changes. I just need to remove the password protection and it will be ready for the general public.

Thanks,  
Lee-Ann Tracy  
SRA International, Inc.  
3434 Washington Boulevard  
Arlington, VA 22201  
703.284.5056

Please consider the environment before printing this email or any attachments.

This electronic message transmission contains information from SRA International, Inc. which may be confidential, privileged or proprietary. The information is intended for the use of the individual or entity named above. If you are not the intended recipient, be aware that any disclosure, copying, distribution, or use of the contents of this information is strictly prohibited. If you have received this electronic information in error, please notify us immediately by telephone at 866-584-2143.

## TEXT FROM THE REGISTRATION WEBSITE

### HOME PAGE

Subpart W Public Hearings

U.S. Environmental Protection Agency

Subpart W Public Hearings - September 3, 2014, 9:00 AM - 12:00 PM MDT  
Capacity: 100 persons

Subpart W Public Hearings - September 3, 2014, 1:00 PM - 5:00 PM MDT  
Capacity: 100 persons

Subpart W Public Hearings - September 4, 2014, 9:00 AM - 12:00 PM MDT  
Capacity: 60 persons

Subpart W Public Hearings - September 4, 2014, 1:00 PM - 5:00 PM MDT  
Capacity: 60 persons

*Note: Registration for each session will be closed after its capacity is reached.*

### EVENT DETAILS

Subpart W of 40 CFR Part 61, entitled, "National Emission Standards for Radon Emissions from Operating Uranium Mill Tailings" (Subpart W), sets limits on radon emissions from tailings at operating uranium mills. EPA recently proposed revisions to Subpart W, which were published on May 2, 2014 (85 FR 25388).

The proposed rule would require the use of generally available control technology (GACT) to limit radon emissions from tailings at all uranium recovery facilities. Specific control technologies would be required at conventional tailings impoundments, evaporation ponds and heap leach piles. The proposed rule and background information can be found at:

<http://www.epa.gov/radiation/neshaps/subpartw/rulemaking-activity.html>

The public is invited to provide oral presentations of data, views or arguments on the proposed rule at public hearings on September 3 and 4, 2014, at the EPA Region 8 Headquarters in Denver, CO. Two sessions will be held on each day:

September 3

Session 1: 9:00 AM – 12:00 PM MDT

Capacity: 100 persons

Session 2: 1:00 PM – 5:00 PM MDT

Capacity: 100 persons

September 4

Session 3: 9:00 AM – 12:00 PM MDT

Capacity: 60 persons

Session 4: 1:00 PM – 5:00 PM MDT

Capacity: 60 persons

You are welcome to attend multiple sessions, but each person may only present testimony at one session. Capacity is limited; advance registration is required to help accommodate those who wish to attend or speak. Register by August 22, 2014. For questions, contact Anthony Nesky of EPA at 202-343-9597.

Have questions about Subpart W Public Hearings? Contact U.S. Environmental Protection Agency

SIDEBAR:

ORGANIZER

U.S. Environmental Protection Agency

About Public Hearings and Comments

Remarks made during the public hearing will be transcribed and entered into the public docket. Each speaker will be allotted 5 minutes to make his or her presentation.

All remarks and submissions become part of the official public record.

Attendance at the public hearing is not necessary to comment on this proposed rule. EPA also welcomes written comments. Instructions on how to submit written comments can be found at:

<http://www.epa.gov/radiation/neshaps/subpartw/rulemaking-activity.html>

{SRA: Please strike the last paragraph--}

~~No one method for submission of comments is "better" than another. EPA will review and respond to all substantive comments in the rulemaking docket, whether they were submitted in writing or verbally during this hearing.~~

REGISTRATION INFORMATION

{SRA: *There is only one edit in the "Speakers" section*}

SPEAKERS *{This is our text: we need your edits here.}*

Speakers will be allotted 5 minutes to make his or her presentation. Speakers will be assigned a speaker number upon arriving, and will be called in sequential order to give his or her presentation. Submission of written remarks is not required, but will be gladly accepted. All remarks and submissions become part of the official public record.

Please print and bring your ticket with you.

## Thornton, Marisa

---

**From:** Rosnick, Reid  
**Sent:** Tuesday, September 02, 2014 2:43 PM  
**To:** Thornton, Marisa  
**Subject:** FW: Changes to Subpart W page and RPD home page on the staging server

---

**From:** Nesky, Anthony  
**Sent:** Thursday, July 24, 2014 5:24 PM  
**To:** Thornton, Marisa; Romero, Carmen  
**Cc:** Herrenbruck, Glenna  
**Subject:** Changes to Subpart W page and RPD home page on the staging server

Dear Carmen and Marisa:

Here are the changes to the Subpart W page and RPD home page that Sue Stahle and I were talking about the other. Please make changes on the staging server; we are not ready to publish.

On <http://epastage.epa.gov/staging1/rpd/neshaps/subpartw/rulemaking-activity.html>

Please replace the “Requests for a Public Hearing” section with the text below.

1. **PUBLIC HEARING, SEPTEMBER 3 and 4, 2014, DENVER, COLORADO.** EPA will hold a public hearing to allow the public to make oral presentations of data, views or arguments about the proposed revisions to Subpart W. The public hearing will be held September 3 and 4, 2014, at the EPA Region 8 Office, 1595 Wynkoop Street, Denver, CO 80202-1129. Sessions will be held both days from 9:00 am to 12:00 pm and from 1:00 pm to 5:00 pm. Capacity is limited; advance registration is required to help accommodate those who wish to attend or speak. Register by August 22, 2014

[CLICK TO REGISTER FOR THE PUBLIC HEARING.](#)

Note: Participation or attendance at the public hearing is not necessary to comment on this proposed rulemaking. EPA also welcomes [written comments](#).

Requests for a Public Hearing

- [Memo to Docket on Telephone Request for Public Hearing \(PDF\)](#) (1 pp, 196 KB [About PDF](#))
- [Letter from Uranium Watch \(PDF\)](#) (1 pp, 42.9 KB [About PDF](#))

On <http://epastage.epa.gov/staging1/rpd/>

Under “Regulations Under Review,” please replace the first entry “Notice of Proposed Rulemaking,” with the following.

- **Notice of Proposed Rulemaking.** [National Emission Standards for Hazardous Air Pollutants \(NESHAPs\)- Radon from Operating Uranium Mill Tailings](#) EPA has released a Notice of Proposed Rulemaking that would revise “National Emission Standards for Radon Emissions from Operating Mill Tailings,” Subpart W of 40 CFR Part 61.

- **Comment period extended to October 29, 2014.** The public is invited to submit comments on the proposed rulemaking for NESHAP Subpart W. Comments are due October 29, 2014.
- **Public Hearing, September 3 and 4, 2014, Denver, Colorado.** EPA will hold a [public hearing](#) at its Region 8 offices in Denver to allow the public to make oral presentations of data, views or arguments about the proposed revisions to Subpart W.

Tony Nesky  
Center for Radiation Information and Outreach  
Tel: 202-343-9597  
[nesky.tony@epa.gov](mailto:nesky.tony@epa.gov)

## Thornton, Marisa

---

**From:** Rosnick, Reid  
**Sent:** Tuesday, September 02, 2014 2:43 PM  
**To:** Thornton, Marisa  
**Subject:** FW: Some edits to the registration website: I still owe you one piece of information  
**Attachments:** TEXT FROM THE REGISTRATION WEBSITE (ss 072414).docx

---

**From:** Nesky, Anthony  
**Sent:** Thursday, July 24, 2014 12:58 PM  
**To:** Tracy, Lee-Ann  
**Subject:** Some edits to the registration website: I still owe you one piece of information

Dear Lee-Ann:

Attached are edits to the webpage. There is one global change you should be aware of: the correct term is "public hearing," not just hearing. Please make sure that this is reflected throughout the website.

I am still trying to confirm the room capacity numbers from Region 8; I want to make sure they are right before we publish. Also, in the interest of transparency, we are going to publish the capacity of the hearing room on the website.

I'm sending you the text of the edits in case you want to get started. I won't need to see the revised website until after I get you the capacity numbers. At that point, please revise the website, and leave the password up so I can check one last time. We'll then go live with it.

I am working from home today. If you have questions, please call me at 703-329-6272.

Tony Nesky  
Center for Radiation Information and Outreach  
Tel: 202-343-9597  
[nesky.tony@epa.gov](mailto:nesky.tony@epa.gov)

---

**From:** Tracy, Lee-Ann [[mailto:Lee-Ann\\_Tracy@sra.com](mailto:Lee-Ann_Tracy@sra.com)]  
**Sent:** Thursday, July 24, 2014 8:57 AM  
**To:** Nesky, Anthony  
**Subject:** RE: Did you want the registration site to go live?

I'll be in a bunch of meetings today, so I may not be able to respond right away, but I'll respond as quickly as I can.

Thanks,  
Lee-Ann

---

**From:** Nesky, Anthony [<mailto:Nesky.Tony@epa.gov>]  
**Sent:** Wednesday, July 23, 2014 10:26 PM  
**To:** Tracy, Lee-Ann  
**Subject:** RE: Did you want the registration site to go live?

I'll send you a few changes to the sidebar, and then we should be ready to go.

---

**From:** Tracy, Lee-Ann <[Lee-Ann\\_Tracy@sra.com](mailto:Lee-Ann_Tracy@sra.com)>  
**Sent:** Wednesday, July 23, 2014 6:28 PM  
**To:** Nesky, Anthony  
**Cc:** Apostolico, Mary  
**Subject:** Did you want the registration site to go live?

I was waiting for approval of the final changes. I just need to remove the password protection and it will be ready for the general public.

Thanks,  
Lee-Ann Tracy  
SRA International, Inc.  
3434 Washington Boulevard  
Arlington, VA 22201  
703.284.5056

Please consider the environment before printing this email or any attachments.

This electronic message transmission contains information from SRA International, Inc. which may be confidential, privileged or proprietary. The information is intended for the use of the individual or entity named above. If you are not the intended recipient, be aware that any disclosure, copying, distribution, or use of the contents of this information is strictly prohibited. If you have received this electronic information in error, please notify us immediately by telephone at 866-584-2143.

## TEXT FROM THE REGISTRATION WEBSITE

### HOME PAGE

Subpart W Public Hearings

U.S. Environmental Protection Agency

Subpart W Public Hearings - September 3, 2014, 9:00 AM - 12:00 PM MDT  
Capacity:

Subpart W Public Hearings - September 3, 2014, 1:00 PM - 5:00 PM MDT  
Capacity:

Subpart W Public Hearings - September 4, 2014, 9:00 AM - 12:00 PM MDT  
Capacity:

Subpart W Public Hearings - September 4, 2014, 1:00 PM - 5:00 PM MDT  
Capacity:

*Note: Registration for each session will be closed after its capacity is reached.*

### EVENT DETAILS

Subpart W of 40 CFR Part 61, entitled, "National Emission Standards for Radon Emissions from Operating Uranium Mill Tailings" (Subpart W), sets limits on radon emissions from tailings at operating uranium mills. EPA recently proposed revisions to Subpart W, which were published on May 2, 2014 (85 FR 25388).

The proposed rule would require the use of generally available control technology (GACT) to limit radon emissions from tailings at all uranium recovery facilities. Specific control technologies would be required at conventional tailings impoundments, evaporation ponds and heap leach piles. The proposed rule and background information can be found at:

<http://www.epa.gov/radiation/neshaps/subpartw/rulemaking-activity.html>

The public is invited to provide oral presentations of data, views or arguments on the proposed rule at public hearings on September 3 and 4, 2014, at the EPA Region 8 Headquarters in Denver, CO. Two sessions will be held on each day:

September 3

Session 1: 9:00 AM – 12:00 PM MDT

Capacity:

Session 2: 1:00 PM – 5:00 PM MDT

Capacity:

September 4

Session 3: 9:00 AM – 12:00 PM MDT

Capacity:

Session 4: 1:00 PM – 5:00 PM MDT

Capacity:

You are welcome to attend multiple sessions, but each person may only present testimony at one session. Capacity is limited; advance registration is required to help accommodate those who wish to attend or speak. Register by August 22, 2014. For questions, contact Anthony Nesky of EPA at 202-343-9597.

Have questions about Subpart W Public Hearings? Contact U.S. Environmental Protection Agency

SIDEBAR:

ORGANIZER

U.S. Environmental Protection Agency

About Public Hearings and Comments

Remarks made during the public hearing will be transcribed and entered into the public docket. Each speaker will be allotted 5 minutes to make his or her presentation.

All remarks and submissions become part of the official public record.

Attendance at the public hearing is not necessary to comment on this proposed rule. EPA also welcomes written comments. Instructions on how to submit written comments can be found at:

<http://www.epa.gov/radiation/neshaps/subpartw/rulemaking-activity.html>

{SRA: Please strike the last paragraph--}

~~No one method for submission of comments is "better" than another. EPA will review and respond to all substantive comments in the rulemaking docket, whether they were submitted in writing or verbally during this hearing.~~

REGISTRATION INFORMATION

{SRA: *There is only one edit in the "Speakers" section*}

SPEAKERS *{This is our text: we need your edits here.}*

Speakers will be allotted 5 minutes to make his or her presentation. Speakers will be assigned a speaker number upon arriving, and will be called in sequential order to give his or her presentation. Submission of written remarks is not required, but will be gladly accepted. All remarks and submissions become part of the official public record.

Please print and bring your ticket with you.

## Thornton, Marisa

---

**From:** Rosnick, Reid  
**Sent:** Tuesday, September 02, 2014 2:44 PM  
**To:** Thornton, Marisa  
**Subject:** FW: Updates to Subpart W Reference page

---

**From:** Thornton, Marisa  
**Sent:** Wednesday, July 23, 2014 2:43 PM  
**To:** Nesky, Anthony  
**Subject:** RE: Updates to Subpart W Reference page

Done - <http://epastage.epa.gov/staging1/rpd/neshaps/subpartw/eiareferences.html>

---

**From:** Nesky, Anthony  
**Sent:** Tuesday, July 22, 2014 3:18 PM  
**To:** Thornton, Marisa  
**Subject:** RE: Updates to Subpart W Reference page

Files attached this time.

Tony Nesky  
Center for Radiation Information and Outreach  
Tel: 202-343-9597  
[nesky.tony@epa.gov](mailto:nesky.tony@epa.gov)

---

**From:** Nesky, Anthony  
**Sent:** Tuesday, July 22, 2014 3:09 PM  
**To:** Thornton, Marisa  
**Subject:** Updates to Subpart W Reference page

Dear Marisa:

We have some updates to:

<http://epastage.epa.gov/staging1/rpd/neshaps/subpartw/eiareferences.html>

FR (Federal Register) 1985a. [EPA promulgated final standards for Elemental Phosphorus Plants, DOE-Facilities, and NRC-Licensed Facilities](#), Volume 50, p. 7280, February 8, 1985. (8 pp, 4.02 MB) [About PDF](#).

**Please replace the above reference with:**

FR (Federal Register) 1985a. EPA promulgated final standards for Elemental Phosphorus Plants, DOE-Facilities, and NRC-Licensed Facilities, Volume 50, p. 7280, February 8, 1985. {ERRATUM: The correct reference is: FR (Federal Register) 1983. EPA promulgated proposed standards for Elemental Phosphorus Plants, DOE-Facilities, and NRC-Licensed Facilities, Volume 48, p. 15706, April 6, 1983.

**Please link the title in the ERRATUM to the attached file, FR15076.pdf**

**Metadata:**

- **Title:** Standards for Radionuclides
- **Author:** EPA/OAR/Office of Radiation and Indoor Air
- **Subject:** Standards for Elemental Phosphorous Plants, NRC, and DOE facilities
- **Keywords:** "FR15076" "EPA" "radionuclide standards" "Phosphorous Plants" "NRC facilities" "DOE Facilities"

BDC (Behre Dolbear & Company) 2011. "Scoping Study of the Strathmore Resources (US), LTD, Church Rock Deposit, McKinley County, New Mexico," April 4, 2011. (*Reference unavailable after the company retracted it.*)

FR (Federal Register) 1979. EPA determination that radionuclides constitute a hazardous air pollutant within the meaning of section 112(a)(1), Volume 44, p. 78738, December 27, 1979.

**Please link to the attached file, FR78738.**

Metadata:

- **Title:** Determination that radionuclides are a hazardous air pollutant
- **Author:** EPA/OAR/Office of Radiation and Indoor Air
- **Subject:** carcinogenicity of radionuclides in air
- **Keywords:** "FR78738" "EPA" "radionuclides" "hazardous air pollutant"

SC&A (S. Cohen and Associates) 2010. "[Risk Assessment Revision for 40 CFR Part 61 Subpart W – Radon Emissions from Operating Mill Tailings, Task 5 – Radon Emission from Evaporation Ponds.](#)" Contract Number EP-D-10-042, Work Assignment No. 1-04, Task 5, SC&A, Inc., Vienna, Virginia, November 2010. (80 pp, 2.02 MB) [About PDF](#)

**On this reference above, please replace the embedded hyperlink with this one:**

<http://www.epa.gov/radiation/docs/neshaps/subpart-w/riskassessmentrevision.pdf>

- VDEQ (Virginia Department of Environmental Quality) 2000. "Landfill Cost Estimate Form." (*Note: this form has been superseded by an updated VDEQ form.*)

Tony Nesky  
 Center for Radiation Information and Outreach  
 Tel: 202-343-9597  
[nesky.tony@epa.gov](mailto:nesky.tony@epa.gov)

## Thornton, Marisa

---

**From:** Rosnick, Reid  
**Sent:** Tuesday, September 02, 2014 2:44 PM  
**To:** Thornton, Marisa  
**Subject:** FW: Please test the registration website again

---

**From:** Nesky, Anthony  
**Sent:** Wednesday, July 23, 2014 5:06 PM  
**To:** Diaz, Angelique; Trulove-Cranor, Whitney  
**Cc:** Rosnick, Reid  
**Subject:** RE: Please test the registration website again

Dear Anquelique and Whitney:

Did you have any feedback about the registration website? Does it meet your needs?

FYI, Sue Stahle had a few edits to the "About Hearings and Comments" sidebar.

Tony Nesky  
Center for Radiation Information and Outreach  
Tel: 202-343-9597  
[nesky.tony@epa.gov](mailto:nesky.tony@epa.gov)

---

**From:** Nesky, Anthony  
**Sent:** Monday, July 21, 2014 6:38 PM  
**To:** Diaz, Angelique; Trulove-Cranor, Whitney  
**Cc:** Rosnick, Reid  
**Subject:** Please test the registration website again  
**Importance:** High

Dear Angelique and Whitney:

OK, let's try testing the registration website again. We are now asking for affiliation, special needs, and whether a person intends to speak at one of the sessions. . Please check it out to make sure it meets your needs. I just registered, and my ticket and registration receipt are attached. Feel free to test the registration yourselves! Id appreciate your feedback today if possible, so that we can launch the site tomorrow.

The registration website is at:

<https://www.eventbrite.com/e/subpart-w-hearings-registration-1408042493>

Password: SRA

Please note that the password requirement will be removed when we make the site public.

Tony Nesky  
Center for Radiation Information and Outreach  
Tel: 202-343-9597  
[nesky.tony@epa.gov](mailto:nesky.tony@epa.gov)

## Thornton, Marisa

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**From:** Rosnick, Reid  
**Sent:** Tuesday, September 02, 2014 2:44 PM  
**To:** Thornton, Marisa  
**Subject:** FW: Please test the registration website again

---

**From:** Diaz, Angelique  
**Sent:** Wednesday, July 23, 2014 6:15 PM  
**To:** Nesky, Anthony; Trulove-Cranor, Whitney  
**Cc:** Rosnick, Reid  
**Subject:** RE: Please test the registration website again

Looks fine to me. I'll be out of the office until 7/30.

-Angelique

Angelique D. Diaz, Ph.D.  
Environmental Engineer  
Air Program, USEPA/Region 8  
1595 Wynkoop Street (8P-AR)  
Denver, CO 80202-1129  
Office: 303.312.6344  
Fax: 303.312.6064  
[diaz.angelique@epa.gov](mailto:diaz.angelique@epa.gov)

---

**From:** Nesky, Anthony  
**Sent:** Wednesday, July 23, 2014 3:06 PM  
**To:** Diaz, Angelique; Trulove-Cranor, Whitney  
**Cc:** Rosnick, Reid  
**Subject:** RE: Please test the registration website again

Dear Anquelique and Whitney:

Did you have any feedback about the registration website? Does it meet your needs?

FYI, Sue Stahle had a few edits to the "About Hearings and Comments" sidebar.

Tony Nesky  
Center for Radiation Information and Outreach  
Tel: 202-343-9597  
[nesky.tony@epa.gov](mailto:nesky.tony@epa.gov)

---

**From:** Nesky, Anthony  
**Sent:** Monday, July 21, 2014 6:38 PM  
**To:** Diaz, Angelique; Trulove-Cranor, Whitney  
**Cc:** Rosnick, Reid

**Subject:** Please test the registration website again

**Importance:** High

Dear Angelique and Whitney:

OK, let's try testing the registration website again. We are now asking for affiliation, special needs, and whether a person intends to speak at one of the sessions. . Please check it out to make sure it meets your needs. I just registered, and my ticket and registration receipt are attached. Feel free to test the registration yourselves! I'd appreciate your feedback today if possible, so that we can launch the site tomorrow.

The registration website is at:

<https://www.eventbrite.com/e/subpart-w-hearings-registration-1408042493>

Password: SRA

Please note that the password requirement will be removed when we make the site public.

Tony Nesky  
Center for Radiation Information and Outreach  
Tel: 202-343-9597  
[nesky.tony@epa.gov](mailto:nesky.tony@epa.gov)

## Thornton, Marisa

---

**From:** Rosnick, Reid  
**Sent:** Tuesday, September 02, 2014 2:43 PM  
**To:** Thornton, Marisa  
**Subject:** FW: Did you have any comments on the registration website?

---

**From:** Nesky, Anthony  
**Sent:** Thursday, July 24, 2014 11:20 AM  
**To:** Trulove-Cranor, Whitney  
**Cc:** Rosnick, Reid  
**Subject:** Did you have any comments on the registration website?

Dear Whitney:

I would like to finalize the registration website for the Subpart W hearings. Did you have any comments on it? Does it meet your needs?

Also, could you please confirm the capacity for each session—I want to ensure that we get it right!

Tony Nesky  
Center for Radiation Information and Outreach  
Tel: 202-343-9597  
[nesky.tony@epa.gov](mailto:nesky.tony@epa.gov)

## Thornton, Marisa

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**From:** Rosnick, Reid  
**Sent:** Tuesday, September 02, 2014 2:45 PM  
**To:** Thornton, Marisa  
**Subject:** FW: Review of text about hearings  
**Attachments:** TEXT FROM THE REGISTRATION WEBSITE.docx

**Importance:** High

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**From:** Nesky, Anthony  
**Sent:** Wednesday, July 23, 2014 10:51 AM  
**To:** Stahle, Susan  
**Subject:** RE: Review of text about hearings  
**Importance:** High

Dear Sue:

The text from the registration website is in the attached Word file. Thanks for your edits and feedback—I greatly appreciate your help!

Tony Nesky  
Center for Radiation Information and Outreach  
Tel: 202-343-9597  
[nesky.tony@epa.gov](mailto:nesky.tony@epa.gov)

---

**From:** Stahle, Susan  
**Sent:** Wednesday, July 23, 2014 9:13 AM  
**To:** Nesky, Anthony  
**Cc:** Rosnick, Reid  
**Subject:** RE: Review of text about hearings

Edits below on #1 and #2.

For #3 – can you send me a way to edit the text? I see some changes I'd like to suggest on the registration website. For example, please strike this text from the sidebar:

“No one method for submission of comments is “better” than another. EPA will review and respond to all substantive comments in the rulemaking docket, whether they were submitted in writing or verbally during this hearing.”

Also – let's call it a “public hearing” as opposed to a “hearing” since the two words/phrases have different meanings. Thanks.

Susan Stahle  
Attorney-Advisor  
Air and Radiation Law Office  
Office of General Counsel

U.S. Environmental Protection Agency  
202-564-1272 (ph)  
202-564-5603 (fax)  
[stahle.susan@epa.gov](mailto:stahle.susan@epa.gov)

---

**From:** Nesky, Anthony  
**Sent:** Tuesday, July 22, 2014 2:48 PM  
**To:** Stahle, Susan  
**Cc:** Rosnick, Reid  
**Subject:** Review of text about hearings  
**Importance:** High

Dear Sue:

Thanks for your offer to review the text announcing the public hearings. Here's the text we were planning to put on the website:

1. ON THE SUBPART W PAGE:

**PUBLIC HEARING, SEPTEMBER 3 and 4, 2014, DENVER, COLORADO.** EPA will hold a public hearing to allow the public to **make oral presentations of data, views or arguments** ~~present verbal comments~~ on the proposed revisions to Subpart W. The **public** hearing will be held September 3 and 4, 2014, at the EPA Region 8 Office, 1595 Wynkoop Street, Denver, CO 80202-1129. Sessions will be held both days from **9:00 am to 12:00 pm** and from **1:00 pm to 5:00 pm**. ~~The purpose of the public hearing is to allow members of the public to have their verbal comments entered into the official record. EPA will not respond to remarks during the hearing, but will respond to all substantive comments after the comment period closes on October 29, 2014.~~

~~Please sign up if you wish to attend. Those wishing to speak~~ **make a presentation at the public hearing must register** ~~are strongly encouraged to sign up by August 22, 2014.~~ [CLICK TO SIGN UP REGISTER FOR THE PUBLIC HEARING.](#)

Note: **Participation or attendance** at the **public** hearing is not necessary to comment on this proposed rulemaking. EPA also welcomes [written comments](#).

Requests for a Public Hearing

- [Memo to Docket on Telephone Request for Public Hearing \(PDF\)](#) (1 pp, 196 KB [About PDF](#))
- [Letter from Uranium Watch \(PDF\)](#) (1 pp, 42.9 KB [About PDF](#))

2, On the RPD Home Page:

**Notice of Proposed Rulemaking.** [National Emission Standards for Hazardous Air Pollutants \(NESHAPs\)- Radon from Operating Uranium Mill Tailings](#) EPA has released a Notice of Proposed Rulemaking that would revise "National Emission Standards for Radon Emissions from Operating Mill Tailings," Subpart W of 40 CFR Part 61.

- **Comment period extended to October 29, 2014.** The public is invited to submit comments on the proposed rulemaking for NESHAP Subpart W. Comments are due October 29, 2014.

- **Public Hearing, September 3 and 4, 2014, Denver, Colorado.** EPA will hold a [public hearing](#) at its Region 8 offices in Denver to allow the public to **make oral presentations of data, views or arguments** ~~give verbal comments~~ on the proposed revisions to Subpart W.

### 3. ON THE REGISTRATION SITE ITSELF

You should probably take a look at the registration page. Please note the sidebar: About Hearings and Comments, and the Registration Information. To view all the text, please go ahead and test register as a speaker.

Website:

<https://www.eventbrite.com/e/subpart-w-hearings-registration-1408042493>

Password: SRA (Note: password will be removed when the site goes live.)

I'm working from home because of the office move. You can reach me at 703-403-7014.

Tony Nesky  
Center for Radiation Information and Outreach  
Tel: 202-343-9597  
[nesky.tony@epa.gov](mailto:nesky.tony@epa.gov)

## TEXT FROM THE REGISTRATION WEBSITE

### EVENT DETAILS

"National Emission Standards for Radon Emissions from Operating Uranium Mill Tailings," Subpart W of 40 CFR Part 61 sets limits on radon emissions from tailings at operating uranium mills. In accordance with the Clean Air Act Amendments of 1990, EPA formed a workgroup to review the standard and is proposing revisions to the rule.

The proposed rule would require the use of generally available control technology (GACT) to limit radon emissions from tailings at all uranium recovery facilities. Specific control technologies would be required at conventional tailings impoundments, evaporation ponds and heap leach piles. The proposed rule and background information can be found at:

<http://www.epa.gov/radiation/neshaps/subpartw/rulemaking-activity.html>

The public is invited to provide verbal comments on the proposed rulemaking at public hearings on September 3 and 4, 2014 at the EPA Region 8 Headquarters in Denver, CO. Two sessions will be held on each day:

September 3

Session 1: 9:00 AM – 12:00 PM MDT

Session 2: 1:00 PM – 5:00 PM MDT

September 4

Session 3: 9:00 AM – 12:00 PM MDT

Session 4: 1:00 PM – 5:00 PM MDT

You are welcome to attend multiple sessions, but each person may only present testimony at one session. Speakers are strongly encouraged to register by August 22, 2014. For questions, contact Anthony Nesky of EPA at 202-343-9597.

Have questions about Subpart W Hearings? Contact U.S. Environmental Protection Agency

SIDEBAR:  
ORGANIZER  
U.S. Environmental Protection Agency

#### About Public Hearings and Comments

Remarks made during the public hearing will be transcribed and entered into the public docket. Each speaker will be allotted 5 minutes to present verbal remarks.

All remarks and submissions become part of the official public record.

Attendance at the hearing is not necessary to comment on this proposed rulemaking. EPA also welcomes written comments. Instructions on how to submit written comments can be found at:

<http://www.epa.gov/radiation/neshaps/subpartw/rulemaking-activity.html>

~~No one method for submission of comments is "better" than another. EPA will review and respond to all substantive comments in the rulemaking docket, whether they were submitted in writing or verbally during this hearing.~~

#### BUILDING LOCATION

The EPA Region 8 office is at 1595 Wynkoop Street, Denver, CO80202-1129. The building is located along the 16th Street Mall in downtown Denver, adjacent to Union Station and across from the Tattered Cover bookstore.

#### PARKING

The City of Denver provides information on parking here:

<http://www.denvergov.org/tabid/437781/Default.aspx>

## DRIVING DIRECTIONS

If coming from Denver International Airport--

Follow the "Airport Exit" signs to proceed south and west on Pena Boulevard for about 9 miles. Keep following the natural turn to the right as Pena Blvd. turns into Interstate 70 West, heading toward downtown. Follow I-70 West for 10 miles before exiting onto I-25 South. Two miles after turning south on I-25, take the Speer Avenue South exit and make a left towards downtown and the Pepsi Center. Upon crossing the Interstate, you will see the Pepsi Center on your right. Stay left and make a left at the stop light on Wewatta Street (there is a lefthand turn lane provided). Head across a small bridge and go straight until you reach 15th Street. Make a right on 15th Street, and your first left on Wynkoop Street. The EPA building is on the left, with the building entrance off of 16th Street.

If coming from the north, south or west--

Take Interstate 25 to the Speer Boulevard South exit and follow the directions two paragraphs above.

## REGISTRATION INFORMATION

SECURITY REQUIREMENTS *{Note this is verbatim from EPA Region 8 website.}*

Visitors to EPA's regional office must show identification and pass through security screening at the building entrance. The EPA Region 8 office building is a Level-4-security building, similar to what you experience at the airport. All visitors need to bring a government-issued photo ID (i.e., a driver's license). You will be asked to show this ID as you enter the lobby.

Please arrive at the building 15 minutes before any talks or events you have scheduled. Our security screening process is similar to screening at the airport: you will be asked to walk through a magnetometer (removing metal objects from your pockets), and your coats, bags etc. will be x-rayed. We regret that we do not have facilities to check coats or bags. You will be provided with a visitor badge after you pass through security. Please wear this at all times while you are in the building.

Video, as well as photos of any kind, are not allowed. Also, NO weapons of any kind are allowed in the building. This includes mace, knives, guns, etc. You will not be permitted in the building if you have any of these items.

TO GET TO THE HEARING ROOM *{Note this is verbatim from EPA Region 8 website.}*

After going through security, please proceed to the 2nd Floor Conference Center via the elevator. Conference Center attendees are not allowed above the 2nd floor without having an EPA escort. Outside of the meeting room, there will be a registration table where you will check-in and receive a temporary badge that must be worn at all times while in the building. Any visitor exiting the building during breaks or lunch will be required to pass through security screening upon return each time. At the conclusion of the conference, please return to the registration table to be checked out and turn in your temporary visitor badge.

SPEAKERS *{This is our text: we need your edits here.}*

Speakers will be allotted 5 minutes to testify at the hearing. Speakers will be assigned a speaker number upon arriving, and will be called to give their testimony: Submission of written remarks is not required, but will be gladly accepted. All remarks and submissions become part of the official public record.

Please print and bring your ticket with you.

## Thornton, Marisa

---

**From:** Rosnick, Reid  
**Sent:** Tuesday, September 02, 2014 2:46 PM  
**To:** Thornton, Marisa  
**Subject:** FW: Updates to Subpart W Reference page

---

**From:** Nesky, Anthony  
**Sent:** Tuesday, July 22, 2014 3:09 PM  
**To:** Thornton, Marisa  
**Subject:** Updates to Subpart W Reference page

Dear Marisa:

We have some updates to:

<http://epastage.epa.gov/staging1/rpd/neshaps/subpartw/eiareferences.html>

FR (Federal Register) 1985a. [EPA promulgated final standards for Elemental Phosphorus Plants, DOE-Facilities, and NRC-Licensed Facilities](#), Volume 50, p. 7280, February 8, 1985. (8 pp, 4.02 MB) [About PDF](#).

**Please replace the above reference with:**

FR (Federal Register) 1985a. EPA promulgated final standards for Elemental Phosphorus Plants, DOE-Facilities, and NRC-Licensed Facilities, Volume 50, p. 7280, February 8, 1985. {ERRATUM: The correct reference is: FR (Federal Register) 1983. EPA promulgated proposed standards for Elemental Phosphorus Plants, DOE-Facilities, and NRC-Licensed Facilities, Volume 48, p. 15706, April 6, 1983.

**Please link the title in the ERRATUM to the attached file, FR15076.pdf**

**Metadata:**

- **Title:** Standards for Radionuclides
- **Author:** EPA/OAR/Office of Radiation and Indoor Air
- **Subject:** Standards for Elemental Phosphorous Plants, NRC, and DOE facilities
- **Keywords:** "FR15076" "EPA" "radionuclide standards" "Phosphorous Plants" "NRC facilities" "DOE Facilities"

BDC (Behre Dolbear & Company) 2011. "Scoping Study of the Strathmore Resources (US), LTD, Church Rock Deposit, McKinley County, New Mexico," April 4, 2011. (*Reference unavailable after the company retracted it.*)

FR (Federal Register) 1979. EPA determination that radionuclides constitute a hazardous air pollutant within the meaning of section 112(a)(1), Volume 44, p. 78738, December 27, 1979.

**Please link to the attached file, FR78738.**

**Metadata:**

- **Title:** Determination that radionuclides are a hazardous air pollutant
- **Author:** EPA/OAR/Office of Radiation and Indoor Air
- **Subject:** carcinogenicity of radionuclides in air
- **Keywords:** "FR78738" "EPA" "radionuclides" "hazardous air pollutant"

SC&A (S. Cohen and Associates) 2010. "[Risk Assessment Revision for 40 CFR Part 61 Subpart W – Radon Emissions from Operating Mill Tailings, Task 5 – Radon Emission from Evaporation Ponds.](#)" Contract Number EP-D-10-042, Work Assignment No. 1-04, Task 5, SC&A, Inc., Vienna, Virginia, November 2010.(80 pp, 2.02 MB) [About PDF](#)

**On this reference above, please replace the embedded hyperlink with this one:**

**<http://www.epa.gov/radiation/docs/neshaps/subpart-w/riskassessmentrevision.pdf>**

- VDEQ (Virginia Department of Environmental Quality) 2000. "Landfill Cost Estimate Form." *(Note: this form has been superseded by an updated VDEQ form.)*

Tony Nesky  
Center for Radiation Information and Outreach  
Tel: 202-343-9597  
[nesky.tony@epa.gov](mailto:nesky.tony@epa.gov)

## Thornton, Marisa

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**From:** Rosnick, Reid  
**Sent:** Tuesday, September 02, 2014 2:46 PM  
**To:** Thornton, Marisa  
**Subject:** FW: Updates to Subpart W Reference page  
**Attachments:** FR76738.pdf; FR15076.pdf

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**From:** Nesky, Anthony  
**Sent:** Tuesday, July 22, 2014 3:18 PM  
**To:** Thornton, Marisa  
**Subject:** RE: Updates to Subpart W Reference page

Files attached this time.

Tony Nesky  
Center for Radiation Information and Outreach  
Tel: 202-343-9597  
[nesky.tony@epa.gov](mailto:nesky.tony@epa.gov)

---

**From:** Nesky, Anthony  
**Sent:** Tuesday, July 22, 2014 3:09 PM  
**To:** Thornton, Marisa  
**Subject:** Updates to Subpart W Reference page

Dear Marisa:

We have some updates to:

<http://epastage.epa.gov/staging1/rpd/neshaps/subpartw/eiareferences.html>

FR (Federal Register) 1985a. [EPA promulgated final standards for Elemental Phosphorus Plants, DOE-Facilities, and NRC-Licensed Facilities](#), Volume 50, p. 7280, February 8, 1985. (8 pp, 4.02 MB) [About PDF](#).

**Please replace the above reference with:**

FR (Federal Register) 1985a. EPA promulgated final standards for Elemental Phosphorus Plants, DOE-Facilities, and NRC-Licensed Facilities, Volume 50, p. 7280, February 8, 1985. {ERRATUM: The correct reference is: FR (Federal Register) 1983. EPA promulgated proposed standards for Elemental Phosphorus Plants, DOE-Facilities, and NRC-Licensed Facilities, Volume 48, p. 15706, April 6, 1983.

**Please link the title in the ERRATUM to the attached file, FR15076.pdf**

**Metadata:**

- **Title:** Standards for Radionuclides
- **Author:** EPA/OAR/Office of Radiation and Indoor Air
- **Subject:** Standards for Elemental Phosphorous Plants, NRC, and DOE facilities
- **Keywords:** "FR15076" "EPA" "radionuclide standards" "Phosphorous Plants" "NRC facilities" "DOE Facilities"

BDC (Behre Dolbear & Company) 2011. "Scoping Study of the Strathmore Resources (US), LTD, Church Rock Deposit, McKinley County, New Mexico," April 4, 2011. (*Reference unavailable after the company retracted it.*)

FR (Federal Register) 1979. EPA determination that radionuclides constitute a hazardous air pollutant within the meaning of section 112(a)(1), Volume 44, p. 78738, December 27, 1979.

**Please link to the attached file, FR78738.**

Metadata:

- **Title:** Determination that radionuclides are a hazardous air pollutant
- **Author:** EPA/OAR/Office of Radiation and Indoor Air
- **Subject:** carcinogenicity of radionuclides in air
- **Keywords:** "FR78738" "EPA" "radionuclides" "hazardous air pollutant"

SC&A (S. Cohen and Associates) 2010. "[Risk Assessment Revision for 40 CFR Part 61 Subpart W – Radon Emissions from Operating Mill Tailings, Task 5 – Radon Emission from Evaporation Ponds.](#)" Contract Number EP-D-10-042, Work Assignment No. 1-04, Task 5, SC&A, Inc., Vienna, Virginia, November 2010. (80 pp, 2.02 MB) [About PDF](#)

**On this reference above, please replace the embedded hyperlink with this one:**

<http://www.epa.gov/radiation/docs/neshaps/subpart-w/riskassessmentrevision.pdf>

- VDEQ (Virginia Department of Environmental Quality) 2000. "Landfill Cost Estimate Form." (*Note: this form has been superseded by an updated VDEQ form.*)

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Citation: 44 Fed. Reg. 76738 1979



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**ENVIRONMENTAL PROTECTION AGENCY**

[FRL 1292-8]

**National Emission Standards for Hazardous Air Pollutants; Addition of Radionuclides to List of Hazardous Air Pollutants****AGENCY:** Environmental Protection Agency.**ACTION:** Addition to List of Hazardous Air Pollutants.**SUMMARY:** This notice announces the Administrator's decision to list radionuclides as hazardous air pollutants under Section 112 of the Clean Air Act.**ADDRESSES:** Docket No. A-79-11, containing material relevant to this action, is located in the U.S. Environmental Protection Agency, Central Docket Section, Room WSM-2903B, 401 M Street, SW, Washington, DC. The Docket may be inspected between 8 a.m. and 4 p.m. on weekdays, and a reasonable fee may be charged for copying.**FOR FURTHER INFORMATION CONTACT:** James M. Hardin, Office of Radiation Programs (ANR-460), U.S. Environmental Protection Agency, Washington, D.C. 20460, telephone (703) 557-8610.**SUPPLEMENTARY INFORMATION:** Section 112 of the Clean Air Act as amended in 1977 directs the Administrator of the Environmental Protection Agency, after notice and opportunity for public hearing, to review all relevant information and determine whether emissions of radioactive pollutants will cause or contribute to air pollution which may endanger public health. Therefore, the Agency published a notice which called for relevant information and data on radioactive air pollutants and offered to hold a public hearing (44 FR 11707; April 11, 1979). All written comments received were considered in today's decision. Copies of these comments are to be found in the Agency's Central Docket No. A-79-11.

None of the commentors suggested that radioactive air pollutants do not endanger public health. Several commentors provided information on the release of specific radionuclides into the atmosphere. One commentor requested that the comment period remain open until completion of the third report of the National Academy of Sciences' Advisory Committee on the Biological Effects of Ionizing Radiation (BEIR). We do not believe such a delay is appropriate because the BEIR III

Report is unlikely to change substantially the conclusions of the first (1972) BEIR Report regarding the carcinogenic effects of radionuclides. We have received a summary of the BEIR III Report which supports this opinion. If the report is completed as scheduled, we will consider its findings in formulating any proposed standards. Public hearings will be held when standards are proposed and comments on the BEIR III Report, if it is used in formulating the standards, will be welcomed at that time.

One commentor requested that the Agency hold a hearing after we make a preliminary determination and decide on our legal, scientific, and economic positions so that informed public comment is possible on these issues before the final determination is made. We do not believe that such a public hearing is either required or useful. The intent of Section 112 is to insure that the Agency has an opportunity to consider any information not previously considered, or to call specific attention to particular information on the emissions of, and health effects from, air pollutants that may be hazardous. In EPA's view, Section 112 does not require what would essentially be a proposed listing notice and hearing. This view is based on the language and history of Section 112 and on the fact that a full hearing on those topics will be available after proposal of standards under Section 112.

Section 112 of the Act directs the Administrator to publish and from time-to-time to revise a list of air pollutants which, in his judgment, probably causes, or contributes to, an increase in mortality or serious illness and to which no national ambient air quality standard applies. Within 180 days after the inclusion of any air pollutant in the list, the Administrator must publish proposed regulations establishing emission standards for such a pollutant, together with a notice of a public hearing to be held within 30 days.

In accordance with the requirements of Sections 122 and 112, the Agency finds that studies of the biological effects of ionizing radiation indicate that exposure to radionuclides increases the risk of human cancer and genetic damage. Also, the Agency finds that emission data indicate that radionuclides are released into air from many different natural and man-made sources with the result that everyone is exposed to them. Further information on these findings is given in Appendix I (biological effects) and Appendix II (emission data) of this notice.

Based on this information, the Administrator has concluded that

emission of radionuclides may reasonably be anticipated to endanger public health, and that radionuclides constitute hazardous air pollutants within the meaning of the Clean Air Act. In making this determination, the Administrator has consulted with the Nuclear Regulatory Commission (NRC) as required by Section 122. Among the radionuclides included are those defined by the Atomic Energy Act as source material, special nuclear material, and byproduct material.

In accordance with Section 112(b)(1)(A) the Administrator hereby amends the list of hazardous air pollutants:

List of Hazardous Air Pollutants

\* \* \* \* \*

## 6. Radionuclides

Dated: November 8, 1979.

Douglas M. Costle,  
Administrator.**Appendix I—Summary of Evidence That Radionuclides are Carcinogenic and Mutagenic to Humans****A. EPA's Current View.** An extensive body of research has demonstrated that carcinogenicity and mutagenicity are associated with ionizing radiation and, therefore, with exposure to radionuclides. Exposure to enough ionizing radiation increases the risk of most forms of cancer, including leukemia, lymphoma, and cancers of the lung, bone, thyroid, breast, skin, stomach, pancreas, esophagus, pharynx, large intestines, and others. When germ cells of the ovary or testis are exposed to enough radiation, the risk of mutagenesis is increased which, in turn, may cause increased mortality and illness in future generations. For very low doses there is no conclusive evidence of the risk involved.

The relationships between specific radiation doses and risks to health are extremely complex. They depend on physical parameters, such as the energy and type of radiation (e.g., alpha, beta, or gamma radiation), total dose, dose distribution within the body, and dose rate. In addition, many biological factors, such as the specific organ exposed, the radiosensitivity of the individual exposed, errors that occur in biological repair mechanisms, sex, race, age at time of exposure, genetic composition, and state of health, may influence the effects of radiation. These factors involve complex mechanisms of interaction among biological, chemical, and physical systems, which are further complicated because people are also exposed to other factors such as tobacco smoke and industrial chemicals, which

may change the magnitude of radiation effects.

Although there is no conclusive evidence of the effects of very low doses of radiation on human populations, the Agency assumes that the effects of low doses of radiation are proportional to the dose received in estimating the health impact of possible low-level radiation protection standards. We believe this assumption is reasonable and prudent in the light of presently available evidence (1).

The information used by the Agency in formulating these estimates of the biological effects of radiation exposure and the relationships between radiation dose and the effects on public health has been summarized in publications by the National Academy of Sciences (NAS) (2), the United Nations Scientific Committee on the Effects of Atomic Radiation (UNSCEAR) (3), and the International Commission on Radiological Protection (ICRP) (4). These bodies agree that high levels of radiation cause cancer and mutations and that a sensible regulatory approach is to consider risk to be proportional to radiation dose at all low doses.

**B. The Basis of EPA's View.** The first human cancer attributed to external ionizing radiation was reported in 1902 from X-ray exposures (5). By 1911, 94 cases of radiation-related skin cancer and five cases of leukemia in man had been reported in the literature (6). Studies from 1910 to 1912 produced the first reports of radiation induced cancers in experimental animals (7, 8). In 1921, the first association between inhaled radionuclides and carcinogenesis in humans was made by Uhlig for radon exposure and lung cancer in underground miners in the Erz Mountains of Austria, and Czechoslovakia (9). This association was reaffirmed by Ludewig and Lorenser in 1924 (10). Swallowing radium was shown to cause bone necrosis (11), and in 1929, Martland and Humphries reported the association of swallowed radium and osteosarcoma in occupationally exposed workers (12).

In more recent times, several studies of human populations have conclusively shown that sufficient exposure to radiation increases the risk of many different kinds of cancer. Among the most significant of these are the following:

a. Survivors of the atomic bomb explosions at Hiroshima and Nagasaki, Japan (13).

b. Two large groups of medical patients given X-ray therapy or injections of radium-224 for ankylosing spondylitis of the spine (3).

c. Groups of women whose breasts were exposed to X-rays during diagnostic radiation of the thorax or during radiotherapy for benign conditions (3).

d. Patients medically treated with X-rays, mostly to the head and neck, for the alleviation of otherwise benign conditions (3).

e. Underground miners exposed to elevated levels of radon (3).

f. Persons who ingested radium-226 either for medical purposes or in the course of their occupations (2,3).

g. Patients injected with thorotrast (colloidal thorium dioxide) as an x-ray contrast medium (14,15).

h. Children exposed *in utero* to diagnostic x-rays (2,3).

Extensive studies in experimental animals, especially rodents, and studies of cell cultures support the idea that ionizing radiation can cause mutations. Animal studies have shown that ionizing radiation can cause many types of mutations: lethal mutations, translocations, inversions, nondisjunction, and point mutations (2,3). Extrapolations of mutation rates calculated in these studies form the basis for estimating the genetic (hereditary) impact of ionizing radiation in humans (2,3).

Although genetic damage to the children of irradiated persons has not been identified, chromosome aberrations in somatic cells have been observed in persons exposed to ingested strontium-90 and radium-226 (16), inhaled/ingested radon-222 (17), inhaled/ingested plutonium-239 (17), inhaled radon-222 (18), and also in lymphocytes from atomic bomb survivors (19) and shipyard workers at nuclear facilities in England (20).

#### REFERENCES

1. United States Environmental Protection Agency. *Policy Statement on Relationship Between Radiation Dose and Effect*; March 3, 1975 (41 FR 208409, July 9, 1976).

2. Advisory Committee on the Biological Effects of Ionizing Radiations. *The Effects on Populations of Exposure to Low Levels of Ionizing Radiation*. National Academy of Sciences, Washington, D.C. (1972).

3. United Nations Scientific Committee on the Effects of Atomic Radiation (UNSCEAR). *Sources and Effects of Ionizing Radiation*. United Nations, New York (1977).

4. International Commission on Radiological Protection. Publication 26, Radiation Protection, Pergamon Press, New York (1977).

5. Frieben, A. *Demonstration lines cancroïds des rechten Handrucksens, das sich nach langdauernder Einwirkung von Rontgenstrahlen entwickelt hatte*. Fortschr. Geb. Rontgenstr. 6:1096 (1902) cited by Upton (6).

6. Upton, A.C. *Physical Carcinogenesis: Radiation—History and Sources*, pp. 387-403 in Cancer 1, F. F. Becker, editor, Plenum Press, New York (1975).

7. Marie, P., Clunet, J., and Raulot-Lapointe, G. *Contribution a l'etude du developpement des tumeurs malignes sur les ulceres de roentgen*. Bull. Assoc. Franc. Etude Cancer 3:404 (1910) cited by UNSCEAR (3).

8. Marie, P., Clunet, J., and Raulot-Lapointe, G. *Nouveau cas de tumeur maligne provoquee par une radiodermite experimentale chez le rat blanc*. Bull. Assoc. Franc. Etude Cancer 5:125 (1912) cited by UNSCEAR (3).

9. Uhlig, M. *Über den Schneeberger Lungenkrebs*. Virchows Arch. Pathol. Anat. 230:76 (1921).

10. Ludewig, P. and Lorenser, E. *Untersuchung der Grubenluft in den Schneeberger Gruben auf den Gehalt an Radiumemanation*. Zschr. f. Phys. 22:178 (1924).

11. Hoffman, F. L. *Radium (Mesothorium) Necrosis*. J.A.M.A. 85:961 (1925).

12. Martland, H. S. and Humphries, R. E. *Osteogenic Sarcoma in Dial Painters Using Luminous Paint*. Arch. Pathol., 7:406 (1929).

13. Beebe, G. W., Kato, H. and Land, C. E. *Mortality Experience of Atomic Bomb Survivors, 1950-1974*. Life Span Study Report 8, RERF TR 1-77, Radiation Effects Research Foundation, Japan (1977).

14. International Meeting on the Toxicity of Thorotrast and Other Alpha-Emitting Heavy Elements, Lisbon, June 1977 (to be published in Environmental Research).

15. Kaul, A. and Muth, H. *Thorotrast Kientics and Radiation Dose*. Rad. and Environm. Biophys 15:24, 259 (1978).

16. Tuscany, R. and Klener, V. *Pokles Euploidia v Bunkach Kostni Drene osob s Vnitni Kontaminaci Kektteryi Radioisotopy Cisk*. Fysiol. 12:391 (1963).

17. Brandom, W. F., et al. *Somatic Cell Chromosome Changes in Humans Exposed to <sup>239</sup>Plutonium and <sup>222</sup>Radon*. Contract No. E(29-2)-3639, Progress Report July 1, 1976 through September 30, 1977. Department of Energy, Washington, D.C. (1977).

18. Pohl-Ruling, J., Fischer, P., and Pohl, E. *The Low-Level Shape of Dose Response for Chromosome Aberrations*, IAEA-SM-224/403. Presented at International Symposium on the Late Biological Effects of Ionizing Radiation, IAEA, Vienna (1978).

19. Awa, A. A., et al. *Relationship Between Dose and Chromosome Aberrations in Atomic Bomb Survivors, Hiroshima and Nagasaki*, RERF TR 12-77, Radiation Effects Research Foundation, Japan (1978).

20. Evans, H. J., Buckton K. E., Hamilton, G. E., and Carothers A. *Radiation-Induced Chromosome Aberrations in Nuclear-Dockyard Workers*, Nature 227:531 (February 15, 1979).

#### Appendix II—Summary of Evidence of Significant Public Exposure to Radionuclides Because of Emissions Into the Atmosphere

Most of the radionuclides in the atmosphere come from natural sources (1). However, radionuclides are used or produced in thousands of locations

throughout the United States including national defense weaponry facilities, nuclear power plants, industrial plants, research and development laboratories, and medical facilities. Fossil fuel combustion processes, such as large coal-fire boilers, make some contribution to the exposure of the general public. Certain kinds of mining and milling also substantially increase the local concentration of radionuclides in the air.

Although air cleaning equipment is usually used in these facilities, some radionuclides are still released into the atmosphere and can disperse into populated areas. In most cases the greatest danger comes from breathing these radionuclides, but material which settles on soil or plants may eventually be swallowed. Settled material may also be blown back into the air. People living near some facilities may also be exposed to small levels of direct gamma radiation from airborne or settled radionuclides.

EPA has recently published a preliminary evaluation of the harm caused by emissions of radionuclides into air in the United States (2). The document contains a compilation of the amount of radionuclides released into the atmosphere from each major category of facility known to use such materials. It estimates both the radiation dose to the nearest individual and to the regional population. Using these doses, we have estimated the additional lifetime fatal cancer risk to individuals and the total number of fatal cancers induced in the surrounding population for each year of facility operation. Risk estimates are limited to fatal cancers because we have less confidence in quantitative risk estimates of genetic effects in humans. Our current practice is to assume that for whole body exposure, the number of genetic health effects, and the number of nonfatal cancers are each about the same as the number of deaths (3).

Sources can be conveniently divided into three major groups: facilities licensed by NRC and certain States which have signed an agreement with NRC; facilities operated and regulated by the Department of Energy (DOE); and facilities emitting elevated concentrations of naturally-occurring radionuclides. The kinds of radionuclide emissions, estimates of dose rates, and estimates of fatal cancer risks derived from model facilities which are representative of source categories are shown in Tables 1 and 2. Table 3 shows data derived from actual DOE facilities.

These summary tables show that significant amounts of radionuclides are being released by man into the

atmosphere. Such estimates should be used carefully and with recognition that they are highly uncertain. This uncertainty is caused by limited data on emissions and by the use of assumptions in environmental transport models and in dose models. Based on these calculations, the highest estimated doses received are to people near elemental phosphorus plants. Our preliminary dose estimates for such people give 1800 mrem/yr to the kidney, 740 mrem/yr to the lung, and 570 mrem/yr to the bone. People living near underground uranium mines may be exposed to elevated airborne concentrations of radon daughters as high as 0.006 working levels. (WL).

We estimate that even the individuals who live closest to the facilities listed in Tables 1, 2, and 3 receive doses which are less than the present applicable Federal Guidance as established by the former Federal Radiation Council (4,5). However, EPA considers the potential risk from doses as large as those received from many of these facilities to be unnecessarily high. We believe that emissions from such facilities should be reduced to as low as reasonably achievable levels. In specific cases, EPA has already promulgated standards and proposed Federal Guidance which holds the exposure of people to levels below that found around many of the listed source categories. These actions include: Drinking Water Regulations (Radionuclides) (6), Environmental Radiation Protection Standards for Nuclear Power Operations (7), and proposed Federal Guidance for Persons Exposed to Transuranium Elements in the Environment (8).

EPA considers its current estimates of risk to be sufficiently accurate to support the decision to list radionuclides as hazardous air pollutants. However, we will continue to improve our preliminary estimates of how much cancer is caused by facilities which release radionuclides into the air.

As provided in EPA's recently published proposed rules for regulating airborne carcinogens (44 F.R. 58642-58670; October 10, 1979), EPA will base all decisions on setting standards for radionuclide emissions on detailed risk assessments and complete regulatory options analyses considering the following factors: a detailed examination of sources of emissions of radionuclides into air, the risks caused by these emissions, the costs and effectiveness of emission control technologies, the benefits of the activities causing the emissions, the relationships between who is receiving the benefits versus who is required to

accept the risks, and the possibility of using substitutes to reduce emissions. EPA will request public comment before making standard-setting decisions.

#### REFERENCES

1. United Nations Scientific Committee on the Effects of Atomic Radiation (UNSCEAR). *Sources and Effects of Ionizing Radiation*. United Nations, New York (1977).
2. United States Environmental Protection Agency. *Radiological Impact Caused by Emissions of Radionuclides into Air in the United States—Preliminary Report (EPA 520/7-79-006)* Office of Radiation Programs, Washington, D.C. (1978).
3. U.S. Environmental Protection Agency. *Radiological Quality of the Environment in the United States, 1977 (EPA 520/1-77-009)*, Office of Radiation Programs, Washington, D.C. (1977).
4. Federal Radiation Council. *Background Material for the Development of Radiation Protection Standards (Report No. 1)*. Reprinted by the U.S. Department of Health, Education, and Welfare, Public Health Service, Washington, D.C. (May 13, 1960).
5. Federal Radiation Council. *Background Material for the Development of Radiation Protection Standards (Report No. 2)*. Reprinted by the U.S. Department of Health, Education, and Welfare, Public Health Service, Washington, D.C. (September 1961).
6. Federal Register, Vol. 41, No. 133, pp. 28402-09 (Friday, July 9, 1976).
7. Federal Register, Vol. 42, No. 9, pp. 2856-61 (Thursday, January 13, 1977).
8. Federal Register, Vol. 42, No. 230, pp. 60956-59 (Wednesday, November 30, 1977).

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## ENVIRONMENTAL PROTECTION AGENCY

### 40 CFR Part 61

[AH-FRL 2324-3]

### National Emission Standards for Hazardous Air Pollutants; Standards for Radionuclides

**AGENCY:** Environmental Protection Agency (EPA).

**ACTION:** Proposed Rule and Announcement of Public Hearing.

**SUMMARY:** On November 8, 1979, EPA listed radionuclides as a hazardous air pollutant under the provisions of Section 112 of the Clean Air Act. Pursuant to Section 112, EPA is proposing standards (including appropriate reporting requirements) for sources of emissions of radionuclides in four categories: (1) Department of Energy (DOE) Facilities, (2) Nuclear Regulatory Commission licensed facilities and non-DOE Federal facilities, (3) underground uranium mines, and (4) elemental phosphorous plants.

The Environmental Protection Agency (EPA) has identified several additional source categories that emit radionuclides and has determined there are good reasons for not proposing standards at this time for these categories. They are the following: (1) coal-fired boilers, (2) the phosphate industry, (3) other extraction industries, (4) uranium fuel cycle facilities, uranium mill tailings, management of high level waste, and (5) low energy accelerators.

**DATES:** Comments may be received on or before May 30, 1983.

**Public Hearings.** An informal public hearing will be held on April 28, 29, and 30, 1983 in Washington, D.C. The exact time and location of the hearing can be obtained by calling the Office of Radiation Programs at (703) 557-0704. Requests to participate in the informal hearing should be made by April 20, 1983. Written statements may be entered into the record before, during, or within 30 days after the hearing.

**ADDRESSES:** All written comments should be submitted to the Central Docket Section (A-130), U.S. Environmental Protection Agency, Washington, D.C. 20460, Attention: Docket No. A-79-11. This docket, containing information used by EPA in developing the proposed standards, is available for public inspection between 8:00 a.m. and 4:00 p.m., Monday through Friday at EPA's Central Docket Section, West Tower Lobby, Gallery One, Waterside Mall, 401 M Street SW., Washington, D.C. 20460.

Separate sections of the docket have been established for each category of radionuclide emissions to air. Comments specific to a proposed action should be addressed to the following docket sections:

Section III A—Department of Energy Facilities  
 Section III B—Nuclear Regulatory Commission Licensed Facilities and non-DOE Federal Facilities  
 Section III C—Underground Uranium Mines  
 Section III D—Elemental Phosphorous Plants  
 Section III E—Coal-fired Boilers  
 Section III F—Phosphate Industry  
 Section III G—Other Extraction Industries  
 Section III H—Uranium Fuel Cycle Facilities, Uranium Mill Tailings, and Management of High Level Waste  
 Section III I—Low Energy Accelerators

Requests to participate in the informal hearing should be made in writing to Richard J. Guimond, Director, Criteria and Standards Division (ANR-460), U.S. Environmental Protection Agency, Washington, D.C. 20460. All requests for participation should include, at least, an outline of the topics to be addressed in the opening statements and the names of the participants. Presentations should be limited to 15 minutes each.

A Background Information Document has been prepared that contains, for each source category, projected doses and risks to nearby individuals and to populations, descriptions of current control technology, and descriptions and costs of emission control technologies. Single copies of the Background Information Document for the proposed standards may be requested in writing from the Program Management Office (ANR-458), U.S. Environmental Protection Agency, Washington, D.C. 10460, or by calling (703) 557-9351.

**FOR FURTHER INFORMATION CONTACT:** Terrence A. McLaughlin, Chief, Environmental Standards Branch (ANR-460), U.S. Environmental Protection Agency, Washington, D.C. 20460, (703) 557-8977.

#### SUPPLEMENTARY INFORMATION:

##### I. Overview of the Proposed Standards

###### A. Basic Terms Used in This Notice

All matter is made up of atoms; their nuclei contain protons and neutrons. The number of protons in an atom determines the identity of the element. For example, the element with 6 protons is called carbon. Atoms can contain different numbers of neutrons. The total number of protons and neutrons in an atom is called the atomic weight.

The nuclei of atoms of chemical elements with certain atomic weights are unstable by nature. Such nuclei can disintegrate spontaneously in

predictable ways and are said to be radioactive. Atoms with nuclei that disintegrate are called radionuclides. For example, carbon atoms with 8 neutrons disintegrate, whereas carbon atoms with 6 neutrons are stable. The number of disintegrations which will occur in a given amount of time is termed activity; the unit of activity is the curie. One curie equals 37,000,000,000 disintegrations per second.

Some radionuclides are found in nature; others are made in reactors and accelerators. This notice concerns facilities which handle or produce all types of naturally occurring and manmade radionuclides in a manner that results in their being released into the air.

##### B. Background

In 1977, Congress amended the Clean Air Act (the Act) to address airborne emissions of radioactive materials. Before 1977, these emissions had been either regulated under the Atomic Energy Act or unregulated. Section 122 of the Act required the Administrator of EPA, after providing public notice and opportunity for public hearings (provided by 44 FR 21704, April 11, 1979), to determine whether emissions of radioactive pollutants cause or contribute to air pollution that may reasonably be anticipated to endanger public health. On December 27, 1979, EPA published a *Federal Register* Notice listing radionuclides as hazardous air pollutants under Section 112 of the Act (44 FR 76738, December 27, 1979). To support this determination, EPA published the report titled *Radiological Impact Caused By Emissions of Radionuclides into Air in the United States—Preliminary Report* [EPA 520/7-79-006], Office of Radiation Programs, U.S. Environmental Protection Agency, Washington, D.C. (August 1979).

Section 122(c)(2) of the Act directed that, once EPA listed radionuclides to be regulated under the Act, EPA and the Nuclear Regulatory Commission (NRC) were to enter into an interagency agreement with respect to those facilities under NRC jurisdiction. Such a memorandum of understanding was effected on October 24, 1980, and was subsequently published in the *Federal Register* (45 FR 72980, November 3, 1980). When EPA began developing standards for Department of Energy (DOE) facilities, a similar memorandum of understanding was negotiated with DOE. This memorandum of understanding was signed in October 1982, and a copy has been placed in the Docket for public review.

On June 16, 1981, the Sierra Club filed suit in the U.S. District Court for the Northern District of California pursuant to the citizens' suit provision of the Act (Sierra Club v. Gorsuch, No. 81-2436 WTS). The suit alleged that EPA had a nondiscretionary duty to propose standards for radionuclides under Section 112 of the Act within 180 days after listing them. In March 1982, the Court granted the Sierra Club motion for partial summary judgment on the liability issue, and, on September 30, 1982, the Court ordered EPA to publish proposed regulations establishing emission standards for radionuclides, with a notice of hearing, within 180 days of the date of that order.

EPA is proposing standards for certain sources of radionuclide emissions to air and is proposing not to regulate other sources. To EPA's knowledge, these comprise all source categories that release potentially regulatable amounts of radionuclides to air. The deadline established by the Court for this rulemaking has required EPA to proceed with less information than it would like. As always, EPA invites comments and will consider them carefully to ensure that the Agency's decisions are the best possible ones.

#### C. Estimates of Health Risk

Agencies can never obtain perfect data but have to make regulatory decisions on the basis of the best information available. Although additional study may be suggested to clarify the health implications from exposure to radiation at relatively low levels, EPA is concerned about the potential detrimental effects to human health caused by radiation based on the best scientific information currently available. EPA believes its estimates of doses to humans and the potential human health risks constitute an adequate basis for decisionmaking.

The information used by the Agency in estimating the hazards to health due to exposure to radiation is summarized in the following reports: *The Effects on Populations of Exposure to Low Levels of Ionizing Radiation* (1972) and *Health Effects of Alpha Emitting Particles in the Respiratory Tract* (1976) by the BEIR Committee, the report of the United Nations Scientific Committee on the Effects of Atomic Radiation entitled *Sources and Effects of Ionizing Radiation* (1977), and *Publication 26* (1977) by the International Commission on Radiological Protection. These bodies agree that high levels of radiation cause cancer and mutations and that, when formulating radiation protection standards and guidance, it is reasonable to assume that the risks of cancer and

mutations are proportional to radiation dose. Background information on the risk associated with radon emissions can be found in an EPA report titled *Indoor Radiation Exposure Due to Radium-226 in Florida Phosphate Lands*, [EPA 520/4-78-013] (1978).

In concert with the recommendations of these reports, even for relatively low doses, EPA has assumed a linear, nonthreshold, dose-effect relationship as a reasonable basis for estimating the public health hazards due to exposure to radiation. This means that any radiation dose is assumed to pose some risk of damage to health and that the risk associated with low doses is directly proportional to the risk that has been demonstrated at higher doses. EPA believes this assumption is reasonable for public health protection in light of presently available information. However, EPA recognizes that the data available preclude neither a threshold for some types of damage below which there are no harmful effects nor the possibility that low doses of gamma radiation may be less harmful to people than the linear model implies.

As used in this notice, the term "dose to an individual" means an estimate of the dose rate in units of dose equivalent per year (rem/y) to the whole body or to a specified body organ due to exposure to radiation at a given level for the person's lifetime (70 years). These dose rates are a measure of, although not directly proportional to, the individual's risk of fatal cancer. The term "lifetime risk to an individual" means an estimate of the potential probability of premature death due to cancer caused by radiation exposure at a given level for the person's lifetime. There are also risks of nonfatal cancer and serious genetic effects, depending on which organs receive the exposure to radiation. The risks of nonfatal cancer and genetic effects cannot be accurately estimated, but neither risk is larger than the fatal cancer risk. EPA considers all these risks when it makes regulatory decisions on limiting emissions by restricting dose rates or exposures to radionuclide concentrations.

As used in this notice, the term "dose to population" means an estimate of the summed dose received by all persons in a population living within a given distance of the source, typically within 80 kilometers, due to a one year release of radionuclides (person-rem per year of operations). A person-rem is a total amount of exposure received by a large group equivalent to one person receiving an exposure of one rem. The term "risk to population" means an estimate of the number of potential fatal cancers that

might occur in the population living within a given distance of the emission source, typically within 80 kilometers. The risk is related to the amount of radionuclides that are emitted during a year of operation. Part of the population risk is likely to occur some time after the radionuclides are emitted because: (1) There is a delay between release and exposure as the radionuclides move through environmental pathways and (2) there is a latent period between exposure and the onset of the disease. The dose to populations for a specific organ is related to, although not directly proportional to, the risks of fatal cancer, nonfatal cancer, and serious genetic effects. EPA considers all fatal and nonfatal risks in making regulatory decisions on whether standards are needed to protect the general public. As used in this notice, the term "health effect" means potential fatal cancers. Additional information on risk can be found in the Draft Background Information Document.

EPA must make numerous assumptions when estimating the radiation dose to individuals and population groups and the likely risk this might present to health. The assumptions introduce uncertainties in the estimates of radiation doses and health risks. All individual risk calculations assume that individuals reside at a single location for a 70 year life and are exposed to a constant source of radionuclide emissions for the entire time. Factors such as radionuclide uptake by vegetation, consumption of locally produced crops and milk, and meteorology are quite site specific and can influence the actual risk to any given individual. Individual characteristics such as age, physiology, physical activity level, amount of time spent indoors, and eating habits can influence the rate and amount of radionuclides affecting the individual and, thus, the risk of that person.

EPA's risk estimates are "best estimates" considering the above factors. EPA believes that the estimates are within a factor of ten of the actual health risks to individuals if the assumptions are valid for the particular situation under consideration.

#### D. Summary of the Proposed Standards

EPA is proposing specific standards for sources in four categories: (1) DOE facilities, (2) NRC-licensed facilities and non-DOE Federal facilities, (3) underground uranium mines and (4) elemental phosphorous plants.

An indirect emission standard is proposed for all DOE facilities that will restrict emissions from each site to the

amount that would cause an annual dose equivalent to 10 millirem (mrem) to the whole body and 30 mrem to any organ of any individual. This emission standard will keep the radiation doses relatively low both to nearby individuals and to populations living around the sites. In addition, EPA expects these facilities to continue to comply with the current Federal Guidance requirement that emissions be limited to as low as practicable levels and has proposed a reporting requirement to describe emission control technology.

An indirect emission standard is proposed for NRC licensees and non-DOE Federal facilities that will restrict emissions from each site to the amount that would cause an annual dose equivalent of 10 mrem to any organ of any individual. This emission standard will keep radiation doses relatively low to nearby individuals and populations in the vicinity of the site. The term "NRC licensees" includes those facilities licensed by the NRC and by States under agreement with the NRC.

An indirect emission standard is proposed for underground uranium mines that will restrict the increase in annual average concentration of radon-222 at places people can live to 0.2 picocurie per liter (pCi/l). A person living in a house for a long time in an area exposed to this concentration might still be subject to a significant estimated level of risk. However, neither control technology nor other methods to reduce radon emissions from these mines are available at reasonable cost; thus, more restrictive controls are not reasonable. The proposed standard will reduce risk to people living closest to the mines; protection of the health of regional and more distant populations is of less concern because most mines are located in remote areas.

An emission standard is proposed for elemental phosphorous plants that will limit annual emissions of polonium-210 from each site to 1 curie. While other radionuclides are emitted from these plants, polonium-210 is the major contributor to the maximum individual risk. Limiting polonium-210 will control the others. Such a standard will keep radiation doses relatively low to both individuals and populations.

While one of the above standards limits stack emissions directly, the other three limit stack emissions indirectly by specifying dose or concentration limits to be achieved. EPA believes this is a reasonable approach, given the extreme diversity of DOE facilities and NRC licensees and the fact that radon-222 emissions from uranium mines are not amenable to controls. The form of the

proposed standards follows well developed and widely accepted practices in radiation protection. The use of procedures developed primarily to control chemicals would, in this context, be unworkable.

#### *E. Basis for the Proposed Standards*

In the Federal Register of May 18, 1960, President Eisenhower directed Federal agencies to follow the Radiation Protection Guidance of the Federal Radiation Council (FRC). When EPA was established, the Federal Radiation Council was abolished, and its responsibilities were transferred to EPA. EPA has considered this Guidance in establishing emission standards under Section 112 of the Clean Air Act, and the Agency's approach is compatible with it. For the purposes of this rulemaking, key elements of the Guidance are:

1. There should not be any man-made radiation exposure without the expectation of benefit resulting from such exposure.

2. The term "Radiation Protection Guide" should be adopted for Federal use. This term is defined as the radiation dose which should not be exceeded without careful consideration of the reasons for doing so; every effort should be made to encourage the maintenance of radiation doses as far below this guide as practicable.

3. For the individual in the population, the basic Radiation Protection Guide for annual whole body dose in 0.5 rem. This Guide applies when the individual whole body doses are known. As an operational technique, where the individual whole body doses are not known, a suitable sample of the exposed population should be developed whose Protection Guide for annual whole body dose will be 0.17 rem per capita per year.

4. There can be no single permissible or acceptable level of exposure without regard to the reason for permitting the exposure. It should be general practice to reduce exposure to radiation, and positive efforts should be carried out to fulfill the sense of these recommendations. It is basic that exposure to radiation should result from a real determination of its necessity.

5. There can be different Radiation Protection Guides with different numerical values, depending upon the circumstances.

6. The Federal agencies shall apply these Radiation Protection Guides with judgment and discretion to assure that reasonable probability is achieved in the attainment of the desired goal of protecting man from the undesirable effects of radiation. The Radiation Protection Guides provide a general

framework for the radiation protection requirements. It is expected that each Federal agency, by virtue of its immediate knowledge of its operating problems, will use these Guides as a basis upon which to develop detailed standards tailored to meet its particular requirements.

EPA believes that the following points in these guides are of particular importance: (1) There should be benefits from exposure to radiation; (2) Exposures should be kept as low as practicable; and (3) It is appropriate to have different standards with different values, depending on the circumstances.

These Guides apply to Federal agencies to the extent that they are not incompatible with more specific legislative directives. The Clean Air Act directs EPA to establish emission standards for hazardous pollutants and directs EPA to propose these standards at a level which, in the Administrator's judgment, will protect the public health with an ample margin of safety. Congress did not describe the degree of protection that provides an ample margin of safety, nor did it describe what factors the Administrator should consider in making these judgments. Therefore, EPA considers those factors it believes are necessary to make reasonable judgments on whether standards are needed and, if so, at what level they should be established.

If a hazardous pollutant under review has been shown to possess a threshold level below which no detrimental health effects are likely, it might be relatively easy to establish an emission standard. For example, the Agency might select an appropriate safety factor, divide the threshold level by this factor, and establish an emission standard that corresponds to the reduced level. This regulatory strategy would provide reasonable assurance that no detrimental effects would result from exposure to the hazardous pollutant.

This approach is not feasible or reasonable for radionuclides. This is because the risk of cancer from exposure to radiation has not been shown to have a threshold level. Consequently, if EPA applied the approach previously described, the Agency would likely conclude that the standard should be established at zero emissions. They only way to meet such a standard would be to close all facilities emitting radionuclides because it is impossible to reduce radionuclide emissions to zero through control technology. If this approach were adopted, society would be harmed greatly since it would have to forgo the

benefits of industries that emit radionuclides. Therefore, to allow society to continue to benefit from these activities, EPA must establish emission standards for radionuclides at a level that may present some human health risk. The Agency is not aware of any single level of risk that would be generally acceptable or constitute an ample margin of health protection. Some argue that an increase in cancer risk not exceeding one in 1000 due to a specific cause is acceptable, whereas others argue that an increase in risk of one in one million is unacceptable. EPA believes it should adopt an approach that will allow those various factors that influence society's health and well being to be weighed in assessing each source category. To accomplish this, EPA has decided to consider the following factors in making its judgments:

1. The radiation dose and risk to nearby individuals;
2. The cumulative radiation dose and risk to populations in the vicinity of the source;
3. The potential for radiation emissions and risk to increase in the future;
4. The availability, practicality, and cost of control technology to reduce emissions; and
5. The effect of current standards under the Act or other applicable legislative authorities.

By considering these factors, EPA will be able to provide public health protection that is consistent with the intent of the Federal Radiation Protection Guides and Clean Air Act.

The first three factors are used to assess the likely impact of emissions on the health of individuals and large populations and to estimate the potential for significant emissions in the future. The fourth factor enables EPA to assess whether state-of-the-art control technologies are currently in use and whether there are any practical means of reducing emissions through control technology or other control strategies. The last factor allows EPA to assess whether regulations or standards that have been established to control particulates or other pollutants are also minimizing releases of radionuclides.

The dose and risk to the individuals nearest a site are often the primary considerations when evaluating the need to control emissions of radionuclides. Controlling maximum individual dose assures that people living nearest a source are not subjected to unreasonably high risk. Further, protecting individuals usually provides an adequate level of protection to populations living further away from the source. Estimating the maximum

individual dose and risk allows a comparison of the potential impact of one source to other sources.

EPA believes that cumulative population dose and risk also need to be examined. The cumulative radiation dose and risk to surrounding populations are determined by adding together all of the individual doses and risks that everyone within a certain radius (usually 80 km) of an emission source receives. This factor can sometimes be more important than the maximum individual risk in deciding whether controls are needed, particularly if an extremely large population may be exposed. The aggregate dose and population risk can be of such magnitude that it would be reasonable to require a reduction in the total risk even though, if the maximum individual dose were considered alone, one might conclude that no further controls are needed.

In addition, EPA believes that the potential for emissions and risk to increase in the future needs to be considered even though the current projected maximum individual and population risks are very low. An emission standard might be appropriate because the facilities now, or may in the future, handle large quantities of radionuclides that could escape into the air if improperly controlled. Alternatively, when the amount handled by a facility is small or is decreasing, and there is no potential for large releases now or in the future, standards may not be needed.

The availability and practicality of control technology are important in judging how much control of emissions is warranted. For this rulemaking, EPA believes that the standard should be established at a level that will require best available technology with allowance for variation in emissions, once a determination is made that additional controls are necessary. Additional actions, such as requiring development of new technology, closure of a facility, or other extreme measures may be considered if significant emissions remain after best available technology is in place or if there are significant emissions and there is no applicable control technology. EPA is defining best available technology as that which, in the judgment of the Administrator, is the most advanced level of controls adequately demonstrated, considering economic, energy, and environmental impacts. The technological and economic impacts associated with retrofits are considered when determining best available technology for existing sources.

Finally, EPA believes it is reasonable to consider whether other EPA standards are achieving approximately the same goal as the Act, i.e., protecting public health with an ample margin of safety. In cases where other standards are providing comparable control for radionuclides, EPA believes it is appropriate not to propose redundant standards under the Act. There would be no benefits because the public health would already be protected with an ample margin of safety, but there could be unnecessary costs associated with implementing an additional standard.

EPA considered each of the relevant factors in making determinations for each source category that was reviewed. These factors were not quantitatively balanced through the use of formulas to derive emission limits. Rather, they were qualitatively weighed before deciding whether a standard was needed and, if so, what level of control was suitable. The consideration of these factors as they apply to each source category is detailed in the portion of this preamble devoted to that source category.

EPA requests comments on the appropriateness of the factors it has selected for consideration. Should some factors be added or deleted? Should more emphasis be placed on some factors than others? How should the cost-effectiveness, cost-benefits, or affordability of controls be considered when establishing appropriate emission standards to provide an ample margin of safety? EPA also requests comments on whether the factors were appropriately applied to the nine source categories that were reviewed.

It is the intent of the Act that control technology or operational practices be used to control emissions. Buying land to expand the size of the site or building higher stacks to reduce exposure to nearby individuals may not be used where other emission control devices or operational procedures are reasonably available. However, there are radionuclides, principally radon, which present significant risks and for which emission controls may not always be reasonably available. As a last resort in such cases, EPA has decided to propose standards achievable through dispersion techniques.

## II. Department of Energy Facilities (DOE)

### A. General Description

DOE administers many facilities that emit radionuclides to air. These facilities are Government owned but are managed and operated for DOE by private contractors. Operations at these

facilities include research and development, production and testing of nuclear weapons, enrichment of uranium and production of plutonium and other fissile materials for nuclear weapons, reactors, and other purposes, and processing, storing, and disposing of radioactive wastes. These facilities are on large sites, some of which cover hundreds of square miles in mostly remote locations, and are located in about 20 different states. Some of the smaller facilities resemble typical industrial sites and are located in suburban areas.

Each facility differs in emission rates, site size, nearby population densities, and other parameters that directly affect the dose from radionuclide emissions. Many different kinds of radionuclides are emitted to air. Six sites have multipurpose operations spread over very large areas. About a dozen sites are primarily research and development facilities, located in more populated areas. Reactor and accelerator operations at these sites may release radioactive noble gases and tritium; other operations may release small amounts of other radionuclides. Several facilities are primarily engaged in weapons development and production and may release small amounts of tritium and certain long-lived radionuclides. Finally, two sites are dedicated entirely to gaseous diffusion plants that enrich uranium for use in utility electric power reactors and for defense purposes. They primarily emit uranium.

#### *B. Estimates of Dose and Risk*

At 15 of the 25 DOE facilities, which are considered as a group in the Background Information Document because of their relatively small health impact, the doses to the nearby individuals are estimated to be considerably less than 1 millirem per year (mrem/y). The collective dose to the populations living around the sites is also low, no higher than about 10 person-rem as the result of 1 year of site operation. The health risk associated with this group is correspondingly low. The maximum lifetime risk to the most exposed individual is estimated to be less than 10 in 1,000,000 and the impact on the population is estimated to be less than 1 potential health effect per 100 years of operation. These estimates were developed using methods and assumptions discussed in Unit I.C. of this notice.

A second group of 13 facilities, those with the largest emissions of radionuclides, were studied in more detail. They included the following major sites: Argonne National

Laboratory, Brookhaven National Laboratory, Feed Materials Production Center, Fermi National Accelerator Laboratory, Hanford Reservation, Idaho National Engineering Laboratory, Lawrence Livermore Laboratory, Los Alamos National Laboratory, Oak Ridge Reservation, Paducah Gaseous Diffusion Plant, Portsmouth Gaseous Diffusion Plant, Rocky Flats Plant, and the Savannah River Plant.

The highest doses to individuals are projected for Los Alamos national Laboratory (about 9 mrem/y to all organs), Oak Ridge Reservation (about 50 mrem/y to lung and 8 mrem/y to the bone) the Paducah Gaseous Diffusion Plant (about 7 mrem/y to bone and 5 mrem/y to the lung), the Portsmouth Gaseous Diffusion Plant (about 11 mrem/y to bone, 7 mrem/y to lung and 2 mrem/y to thyroid), Feed Materials Production Center (about 88 mrem/y to lung and 28 mrem/y to bone), and Savannah River Plant (about 2 mrem/y to most organs and 5 mrem/y to the thyroid). The corresponding doses to large populations ranged up to about 200 person-rem to the lung per year of site operations. The corresponding maximum lifetime risk to the most exposed individual is estimated to be less than about 2 in 10,000, while the total risk to populations surrounding all 13 sites is estimated to be less than 1 potential health effect per 15 years of operation.

All risk estimates for DOE facilities were developed using methods and assumption discussed in Unit I.C. of this notice. It is important to recognize that the actual risk to specific individuals may differ greatly from these estimates because the circumstances involving the actual exposure may differ significantly from the assumptions used to make the estimates.

#### *C. Emission Control Technology*

Emissions from DOE facilities are, in general well controlled as part of a long-standing DOE program of systematically upgrading emission controls when practical. High-efficiency filters, usually in series when large amounts of radionuclides are processed, are used to control particulate emissions. At some facilities, there are processes that discharge radioactive noble gases and tritium mixed with large volumes of air. For these cases, control technologies to remove the noble gases and tritium are usually not feasible.

At the Oak Ridge site, the highest doses to nearby individuals are mostly caused by uranium-234 and uranium-238 emissions from the Y-12 plant, a facility that has fabrication operations using enriched uranium. Particulate emissions

from this facility are controlled by scrubbers, prefilters, cloth bag filters, or high-efficiency particulate filters. At the Feed Materials Production Center, the highest projected doses to nearby individuals are due to emissions of uranium-234 and uranium-238 from fabrication operations using uranium. There is also high exposure to radon decay products due to wastes containing radium-226 that are stored on this site. Particulate emissions are controlled by cloth bag filters or scrubbers but can be reduced further by additional high-efficiency filters or improved scrubbers. Waste tanks can be sealed to prevent the escape of radon.

#### *D. The Proposed Standard*

EPA is proposing that emissions of radionuclides from DOE facilities be restricted to the amount that would cause a dose equivalent rate of 10 mrem/y to the whole body and 30 mrem/y to any organ of any individual living nearby. For most practical purposes, compliance with this standard would be determined by calculating the dose to persons assumed to be living at the site boundary.

Consistent with the principles embodied in Federal Radiation Guidance to keep exposure to radiation as low as practical, it is EPA's intent that facilities subject to the DOE standard shall use best available technology even if compliance is possible with a lesser degree of control. This means that operators should periodically evaluate radionuclide emissions to air and reduce them to as low a level below the standard as is reasonably possible. This also means that the facilities now well controlled to levels considerably below the proposed standard should not relax their emission controls and that new facilities should use best available emission controls.

To determine if the standard is being implemented in a manner that keeps exposure as low as practicable, EPA is proposing a reporting requirement. DOE shall submit to EPA a concise annual report which includes the results of monitoring emissions, dose calculations, and discussions of DOE's programs for maintaining airborne releases of radionuclides as low as practicable. Much of this information is currently being collected; for example, emission data are reported by DOE's effluent information systems and annual site reports describe recent and planned improvements in emission controls. Therefore, EPA believes the burden of this reporting is reasonable. This information will be reviewed by EPA in

carrying out its compliance responsibilities.

The proposed emission standards of 10 mrem/y whole body and 30 mrem/y to any organ were selected by considering highest existing emissions from those major DOE facilities where best available technology is used and considering the level to which emissions would be reduced by applying additional controls to other facilities. Uniform standards for DOE facilities could not be set lower than these values because emissions from some major DOE facilities cannot, as a practical matter, be reduced further without closing major operations at the facilities. These DOE facilities provide substantial benefits in the areas of electrical power generation and national defense. The consequence of a more restrictive standard would be to eliminate some of these beneficial activities. Consequently, the risks associated with the proposed standard are not unreasonable. Those few DOE facilities, tending to have emissions greater than this proposed limit can, in EPA's judgment, reduce their emissions using available technology or work practices. EPA believes that the proposed standard would be met if the following plants upgraded their control technology: (1) Oak Ridge Y-12 plant (\$10 million capital costs) (2) Feed Materials Production Center (\$15 million capital costs).

The dose allowed by the proposed standard is a factor of 50 lower than the current upper limits now used by DOE. These current upper limits are based on the 1960 recommendations of the Federal Radiation Council, although the Federal Radiation Council admonished Federal agencies to establish standards that would reduce emissions to as low as practical below the upper limits. Actual public exposure to radiation due to releases from DOE facilities has been far below the 1960 Federal Guidance levels because of the DOE practice of limiting emissions to as low as practicable levels. Since the proposed standard is much more restrictive than the 1960 guidance, it will limit radiation doses to low levels. In practice, EPA expects that most DOE facilities will operate well below the proposed standard.

EPA estimates the actual lifetime individual risk associated with the proposed standard to be at the most about 2 in 50,000 when facilities are complying with the standard. EPA believes that the proposed standard and the reporting requirement will protect the public living around DOE facilities with an ample margin of safety. The

uncertainty associated with estimates of radiation dose and risk is discussed in Unit I.C. and II.B of this notice.

EPA requests comments on the proposed values and the methodology used in arriving at them.

#### *E. Alternatives to the Proposed Standard*

EPA considered proposing emission limits in units of curies per year (Ci/y) for each radionuclide, with secondary corrections for particle size, lung clearance class, and other such factors. This approach was rejected because it would require very detailed and complex emission limits for each DOE facility to be as protective of public health as the proposed standard. In EPA's judgment, this would be so complex and difficult as to be infeasible.

The Agency considered proposing higher values than the proposed dose limit. We believe that many of these facilities are achieving the proposed standard at current operating levels. For the few cases where additional controls are needed to meet the standard, the technology appears available and effective and is not unreasonably expensive to purchase or operate. The protection offered by the proposed standard appears achievable, and we have not identified any good reason for accepting a lesser degree of protection.

Lower values were considered. Such limits, would be extremely costly or could force the closure of major operations of benefit to the country, possibly at several sites. The possible small additional reduction of dose and risk to a few individuals is not sufficient to justify such severe action.

Emission limits that would control dose to the general population rather than individuals were considered. In particular, EPA considered emission limits for long-half-life radionuclides such as tritium, carbon-14, krypton-85, and iodine-129. These kinds of radionuclides may cause population doses that are more significant than the doses these radionuclides cause to nearby individuals. EPA decided not to propose this kind of standard. For DOE facilities, population doses from these radionuclides are small; the highest of these small doses are caused by emissions of tritium for which control technologies are not effective. Consequently, proposing emission standards for long-half-life radionuclides at existing DOE facilities would not serve a useful purpose.

Different emission limits were considered for existing and new DOE facilities and for specific groups of DOE facilities, rather than setting uniform standards for all DOE facilities. Such a

strategy would permit more restrictive standards for certain DOE facilities, although not for all of them, at the cost of having to develop a much more complex standard. Rather than do this, EPA will rely on existing Federal Guidance to all Federal agencies to ensure that exposures are kept as far below the proposed standard as practicable and has added a reporting requirement to this end. This should provide, in practice, the same measure of emission control. EPA requests comments on the desirability of setting separate standards for different categories of DOE facilities.

EPA considered the alternative of proposing the standard in the form of a risk-equivalent, whole-body dose, using methodology similar to that recently recommended by the International Commission on Radiation Protection. The principal advantage is one of equity; that is, the emissions from each facility are limited on the basis of causing equivalent levels of risk. A disadvantage of this alternative is that the proposed standard would have to be reduced from 10 mrem/y to about 5 mrem/y to maintain a comparable degree of protection with the 30 mrem/y limit to any organ. Some sources could not meet such a standard using currently available technology. The Agency particularly requests comment on the use of the whole-body, risk-equivalent dose method as an approach to selecting emission standards.

EPA considered requiring the proposed standard to be met at a site boundary in all cases, even if there are good reasons why people are not likely to be at that location, but decided not to because this would be unrealistic. EPA requests comments on where the standard should apply.

#### *F. Implementation of the Proposed Standards*

The standards will be implemented by DOE pursuant to the Memorandum of Understanding between EPA and DOE. EPA will provide oversight to ensure that implementation procedures are appropriate. The standard should be implemented using pathway and dose calculations based on EPA's codes or, alternatively, on modeling techniques which, in EPA's judgment, are as suitable for particular applications as the EPA codes.

## **II. NRC Licensed Facilities and Non-DOE Federal Facilities**

### *A. General Description*

This category of facilities encompasses a wide range of activities

including research and test reactors, shipyards, the radiopharmaceutical industry, and other industrial facilities. For purposes of this proposed rule, EPA excludes facilities that are part of the uranium fuel cycle. The category includes both facilities licensed by NRC and facilities licensed by a State under an agreement with NRC. These facilities number in the tens of thousands and are located in all 50 states. The principal differences among these various types of activities are their emission characteristics and rates, their sizes, and the population densities of the surrounding areas. The following discussion provides illustrative examples.

There are a wide variety of designs of research and test reactors, and they operate over a range of power levels from near zero to approximately 10 megawatts. They emit primarily argon-41 and tritium at rates ranging from less than 1 Ci/y of each radionuclide up to several thousand Ci/y of argon-41 and several hundred Ci/y of tritium. They are most often located at or near universities.

The radiopharmaceutical industry currently produces about 65 different radionuclides for a variety of uses in hospitals and clinics. In most cases, emissions of iodine-125 and iodine-131 cause the highest organ (thyroid) doses to nearby individuals because: (1) They are emitted in the largest quantities, (2) environmental pathways bring them into contact with man, and (3) the thyroid concentrates iodine. Emissions occur at radiopharmaceutical manufacturing sites, hospitals, and sewage treatment plants receiving hospital wastewater.

There are many other industrial uses of a number of different radionuclides that result in emissions to air, including the manufacture of industrial gauges, static eliminators, radiographic devices, and certain commercial products (e.g., self-illuminating watches and smoke detectors). Most of the industrial uses of radionuclides involve production of sealed (encapsulated) sources. Once their manufacture is completed, these sealed sources do not emit radionuclides.

#### *B. Estimates of Dose and Risk*

The vast majority of NRC licensed facilities and non-DOE Federal facilities emit relatively small quantities of radionuclides, which cause correspondingly low doses to people living nearby. Most such facilities cause maximum radiation doses of less than 1 mrem/y; the total dose to the population living around a site rarely exceeds 1 or 2 person-rem per year of operations. The maximum corresponding lifetime risks

of such exposures are estimated to be less than 1 in 50,000 for the individuals receiving the highest doses, and the total risk to the population surrounding a typical facility should be less than about 1 health effect per 500 years of operation.

These estimates were developed by using methods and assumptions discussed in Unit I.C. of this notice. It is important to recognize that the actual risk to specific individuals may differ greatly from these estimates because the circumstances involving the actual exposure may differ significantly from the assumptions used to make the estimates.

#### *C. Control Technology*

Some NRC-licensed facilities emit argon-41 and tritium mixed with large volumes of air. For this type of facility, virtually all of the dose is caused by argon-41. Demonstrated treatment technology to reduce argon-41 emissions is not available because argon is a noble gas and cannot be filtered or easily trapped. However, design features, operating procedures, and equipment maintenance can be used to minimize formation of argon-41 in these reactors. For example, since air contains a small percentage of argon-40, areas in which air is exposed to neutrons generated by the reactor are sources of argon-41 when argon-40 absorbs a neutron during reactor operation. In some situations, these areas can be purged with an inert gas to reduce the amount of argon-40 available before starting up the reactor. In other cases, sealing air leaks will reduce the amount of argon-41 that would be produced.

Most facilities emitting dust to which radionuclides are attached use conventional particulate removal technology, such as fabric filters, electrostatic precipitators, scrubbers, or high-efficiency particulate air filters.

#### *D. The Proposed Standards*

EPA is proposing that emissions of radionuclides from NRC-licensed facilities and non-DOE Federal facilities be limited to that amount that would cause a dose equivalent of 10 mrem/y to any organ of any individual living nearby. Uranium fuel cycle facilities and all particle accelerators are specifically not covered by this standard for reasons discussed Unit VII of this notice.

In proposing this standard, EPA examined emission levels from facilities in this category and estimated the dose these emissions cause for people living nearby. The highest doses are caused by research and test reactors emitting principally argon-41. The dose associated with the operation of these

facilities is low and cannot be significantly reduced without major redesign and reengineering of these facilities. Therefore, EPA has decided to propose a standard at a level that can be met by existing facilities if they continue to use good management and operational controls to limit their emissions.

EPA believes that the proposed standard protects public health with an ample margin of safety. EPA estimates the risk associated with the proposed standard to be the same as for current practice for the individual receiving the highest dose. The uncertainty associated with estimates of risk is discussed in Units I.C. and III. B. of this notice.

EPA requests comments on the proposed standards and the methodology used in deriving it.

#### *E. Alternatives to the Proposed Standard*

The Agency considered higher and lower dose limits than the one being proposed. Higher values were rejected because the proposed standard is currently being met by all facilities in this group. A lower limit was rejected because the dose associated with these emissions is very low and EPA does not believe it is reasonable to set a lower standard and force these facilities to close or reduce their hours of operations.

EPA considered not proposing a standard for this category of facility because the dose from the operations is generally very low. The Agency rejected this alternative because of the potential impact of new facilities or modifications to existing facilities; a standard will ensure that no facilities will emit radionuclides at unreasonably high levels.

EPA also considered requiring that these facilities submit reports documenting that their emissions are as low as practicable, as is being proposed for DOE facilities. Such a requirement would impose a very large paperwork burden on government and industry. Facilities in this category number in the tens of thousands. For EPA to implement such a requirement for this category would require monitoring and reporting by thousands of facilities and a substantial effort on the part of NRC or EPA to review the reports. This considerable effort would help ensure that emissions remain very low. However, because the risk associated with the proposed standard is already low, EPA does not believe the paperwork burden on government and industry is justified. Furthermore, EPA expects that facilities in this category

will, in practice, keep emission levels as low as practicable, both to ensure compliance with the proposed standard and as a matter of good radiation protection principles when dealing with hazardous materials.

#### *F. Implementation of the Proposed Standards*

For NRC licensed facilities, NRC will implement the standards subject to EPA oversight to ensure there is compliance with the standard, as is specified in a Memorandum of Understanding between EPA and NRC (45 FR 72980). Implementation will follow the established NRC practice, which is based on a review of control measures used by licensees and their effectiveness as determined by generic assessments.

For non-DOE Federal facilities, EPA will ensure compliance with the standards. EPA's implementation will use the models AIRDOS-EPA and RADRISK to perform pathway analysis and to calculate dose equivalents.

### **IV. Underground Uranium Mines**

#### *A. General Description*

Uranium mining involves the handling of large quantities of ore containing uranium-238 and its decay products. The concentrations of these radionuclides in ore may be up to 1,000 times their concentration in other rocks and soils. After mining, the ore is shipped to a uranium mill where the uranium is separated for subsequent use in nuclear power reactors.

Uranium mining is generally carried out by either surface (open pit) or underground mining methods, depending on the depth of the ore deposit. In 1981, there were 167 underground mines and 50 open pit mines in operation in the United States. These mines accounted for about 80 percent of the uranium produced in this country.

All uranium mining in the United States now takes place in western States. In general, the mines are located in relatively remote, low population areas. In 1981, about 70 percent of domestic uranium ore production took place in New Mexico, Wyoming, and Texas.

EPA has evaluated radionuclide emissions from uranium mining activities. These evaluations show that radon-222 is the most significant radionuclide emitted to air. Radon-222 is released to air from underground mines in relatively high concentration through a series of ventilation shafts installed at appropriate locations along the mine haulage ways. These ventilation shafts provide sufficient air exchange in the working areas of the mine to keep the

miners' exposures to radon decay products below the permissible limits. A recent study of 27 underground mines showed that radon-222 emissions to air from individual vents ranged from 2 to 9,000 Ci/y with an average of 900 Ci/y. The number of vents per mine ranged from 2 to 15 with an average of 6 vents per mine. The radon-222 released through these ventilation shafts can cause significant increases in the radon-222 concentration in ambient air in the vicinity of the mine vents.

EPA's evaluation of releases of radon-222 from uranium mines shows that radon-222 is released from surface mines in considerably smaller quantities and in more dilute concentrations than from underground mines. Therefore, radon-222 emissions from surface mines causes only small increases in the radon-222 concentrations in ambient air near the mines and concerns for the health of people near uranium mines is greatest for people living near underground mines.

#### *B. Estimates of Exposure and Risk*

Individuals living near underground uranium mines can be exposed to high levels of radon-222. This exposure generally occurs in structures built around the mines. Radon-222 enters the building and decays into other radionuclides which become attached to dust particles in the air. The concentration of these radionuclides build up in the air within the structures. EPA estimated the potential detriment to human health because of radon-222 emissions from uranium mines using the general assumptions discussed in Unit I.C. of this notice. It is important to recognize that the actual risk to individuals may differ greatly from these estimates because the circumstances involving the exposure may differ significantly from the assumptions used to make the estimates. Further, people need to be occupying a structure and not just standing outdoors for these estimates to be applicable.

It is estimated that an individual living 500 meters in the predominant wind direction from a large underground uranium mine will be exposed to a radon-222 concentration of 1 to 2 picocuries per liter (pCi/l) above background. Continuous exposure to indoor radon decay product concentrations (0.007-0.014 working level (WL)) produced by this radon-222 level might result in an increased lifetime risk of 1 to 2 in 100, although in areas where there are many mine vents clustered relatively close together, the risks could be as high as an order of magnitude greater. (A working level is a

unit used to measure exposure to radon decay products).

Collective exposures for populations living near uranium mines are relatively low because these mines generally are located in low population areas. For example, the population risk due to radon-222 emissions from a large underground mine is estimated to be extremely small (about 1 health effect per 30 years of operation of the mine). Consequently, for underground uranium mines, the exposure to the general population is of considerably less public health concern than the exposure for the people that live very close to the mine vents.

#### *C. Control Technology*

There are no radon-222 emission control systems now in use in underground uranium mines. However, several methods for reducing the radon-222 concentration in mine air are available and have been used or tested for controlling radon-222 decay product concentrations in the mine itself. These methods, which primarily involve preventing radon-222 from entering the mine air through the use of sealants on the mine walls, bulkheading or backfilling the mined-out stopes, and mine pressurization can also reduce the radon-222 emissions to the outside air. EPA has carried out engineering evaluations of the cost and effectiveness of some of these methods in a hypothetical mine. These evaluations showed that such control methods would be relatively costly and not very effective. The study predicted radon-222 emission reductions from 14 to 49 percent at costs from \$0.30 to \$4.70 dollars per ton of ore mined.

Based on available information, EPA has concluded that no practical technology now exists for achieving satisfactory reductions in radon-222 emissions to air from underground uranium mines. The most effective procedure for limiting exposure to individuals is to provide for greater dispersion of the released radon-222. The Act indicates a preference for avoiding this type of control action to reduce health risks. However, in this situation, traditional emission control methods do not appear to be sufficiently effective in reducing the human health risks posed by release of radon-222 from underground uranium mine vents.

#### *D. The Proposed Standard*

EPA is proposing a standard that will limit the annual average radon-222 concentration in air due to emissions from an underground mine to 0.2 pCi/l above background in any unrestricted

area. An unrestricted area is defined to be any area not under the control of the mine owner or a government agency. Under this proposed standard, for a typical, large underground mine using the modeling assumptions previously described, we estimate the lifetime risk to an individual will be on the order of about 1 in 500. For a case in which many mines are located close together, studies which estimate the hazard based on a lifetime exposure show that the potential risks would be higher. However, uranium mines have a limited useful lifetime, usually 5 to 15 years, which limits the period when radon-222 would be released. Further, several other assumptions used in these studies, such as the period of occupancy of the structure, are likely to be less severe in real cases. These factors are expected to make the actual remaining risk to individuals less than 1 in 500, possibly by one or two orders of magnitude, depending on the specific circumstances.

EPA chose a standard of 0.2 pCi/1 because higher values did not provide sufficient protection of public health, particularly when many mines are located close together. Values lower than the proposed standard were judged to be impractical because of the cost and difficulty in controlling additional land and the expense associated with other control measures compared to their effectiveness. EPA believes that the risks associated with the proposed standard are not unreasonable in comparison to the cost of additional control.

The standard can be met by one of the following procedures: (1) Reducing the percentage of time the mine operates, (2) increasing the effective height of the release, and (3) controlling additional land. EPA expects that the least expensive way to meet the standard is for the mine operator to control the land around the mine so that people do not live in houses on the land. EPA believes that, on the average, compliance with the proposed standard can be achieved by controlling land within 2 kilometers of the mine vents. The cost to meet the standard by purchasing surrounding land and structures is estimated to be about 4 million dollars per year. This estimate was determined from an evaluation of the cost to control land within 2 kilometers of 29 large mines representing about 90% of the underground uranium mine or production

Based on 1981 production values, this cost represents a \$0.30 per pound increase in the cost of producing

uranium. This represents a 1% increase in production costs. Although the costs for the smaller mines accounting for the remaining ore production are not included in the estimate, these costs will be relatively small because the radon-222 emissions from these mines are expected to be small.

Owners and operators of underground uranium mines will be required to keep records of radon-222 emissions and radon-222 concentration projections consistent with other actions under the Act.

EPA requests comments on the proposed concentration limit of 0.2 pCi/1. EPA believes that the proposed standard is the most practical and effective way to limit the potential risk to individuals due to radon-222 emissions from underground uranium mines.

#### *E. Alternative Standards*

The development of standards for uranium mines is more difficult and complicated than for other sources emitting radionuclides into air. Therefore, the Agency requests public comment on other possible options for standards. In particular, comments are requested on appropriate limits, cost, feasibility, and significance for public health for the following options:

*Option 1: Land Control Standard.* This type of standard would establish an exclusion area of fixed distance from a mine vent. This area would be under the control of the mine owner or a government agency to prevent excessive exposure to individuals.

*Option 2: Work Practice Standard.* This standard would include requirements for use of one or more of the following techniques to reduce radon emissions: bulkheading worked-out stopes (including the use of charcoal absorbers on bleeder pipes), backfilling worked-out stopes, and using sealants on mine walls.

*Option 3: Emission Standard.* This type of standard would establish an emission limit in curies per year of radon-222 from a mine vent as a function of the distance from the vent to the nearest unrestricted area. The emission limit would be set at a value that would keep the radon-222 concentration in ambient air in unrestricted areas below some predetermined value above background.

### **V. Elemental Phosphorus Plants**

#### *A. General Description*

About 10 percent of the phosphate rock mined in the United States is used to produce elemental phosphorus. Elemental phosphorus is used primarily

for the production of high-grade phosphoric acid, phosphate based detergents, and organic chemicals. In 1977, approximately 285,000 metric tons of elemental phosphorus were produced from 4 million metric tons of phosphate rock.

Phosphate rock contains appreciable quantities of uranium and its decay products. The uranium concentration of phosphate rock ranges from about 20 to 200 parts per million (ppm), which is 10 to 100 times higher than the uranium concentration in most natural rocks and soil (2 ppm). The significant radionuclides present in phosphate rock are uranium-238, uranium-235, thorium-230, radium-226, radon-222, lead-210, and polonium-210. Because phosphate rock contains elevated concentrations of these radionuclides, handling and processing this material can, via dust particles, release radionuclides into the air. More importantly for elemental phosphorus plants, heating the phosphate rock to high temperatures in calciners and electric furnaces can volatilize lead-210 and polonium-210, resulting in the release of large quantities of these radionuclides into the air.

There are eight elemental phosphorus plants in the United States; these plants are located in Florida, Idaho, Montana, and Tennessee. EPA measurements at three of these plants show that polonium-210 and lead-210 are the radionuclides released from these plants in largest quantities. Most of these emissions occur in calciner stack exhausts. Based on these measurements, it is estimated that a large plant processing phosphate rock containing 25 picocuries per gram of uranium-238 and its decay products and using low energy scrubbers on its calciner exhausts would release about 4 curies of polonium-210 and 2 curies of lead-210 per year into the air. Several of the presently operating elemental phosphorus plants may be releasing comparable quantities of polonium-210 and lead-210, and these emissions would represent the largest quantity of alpha-emitting radionuclides released as particulates into the air by any type of facility in the United States.

#### *B. Estimates of Dose and Risk*

The most significant hazard associated with radionuclide emissions to air from elemental phosphorus plants is the radiation dose received by individuals living near those plants. EPA estimates that the radionuclide emissions, primarily polonium-210 and lead-210, from a large elemental phosphorus plant will cause radiation doses of 45 mrem/y to the kidney and 36

mrem/y to the lung of the most exposed individual living near the plant. The lifetime risk to the maximally exposed individual associated with these doses is estimated to be about 1 in 10,000.

The risks to the populations living near elemental phosphorus plants are relatively low. EPA estimates that the potential health risk to the population living around a large plant is about 1 health effect per 100 years of plant operation and that the total risk from radionuclide emissions from all elemental phosphorus plants is about 1 health effect per 20 years of operation.

These estimates were developed using methods and assumptions discussed in Unit I.C. of this notice. It is important to recognize that the actual risk to specific individuals may differ greatly from these estimates because the circumstances involving the exposure may differ significantly from the assumptions used to make the estimates.

#### C. Control Technology

Particulate emissions from calciner exhausts at elemental phosphorus plants are controlled through the use of wet scrubbers. Most plants use either spray towers or low-energy venturi scrubbers. Such systems are estimated to control particulate emissions to about 0.5 to 1.0 pound per ton of rock processed and are about 80 to 90 percent efficient for removal of polonium-210. One plant operates with two venturi-like scrubbers in series. Such a system should control particulate emissions to about 0.1 pound per ton of rock processed and is about 98 percent efficient for removal of polonium-210.

EPA has estimated the cost of installing high-energy venturi scrubbers on calciner stacks at large elemental phosphorus plants now operating with spray towers or low-energy scrubbers. The capital cost per plant for installing these scrubbers is about \$3 million, and the annual operating cost is \$1.5 million. A high-energy venturi scrubber is expected to be at least 98 percent efficient for polonium-210 removal and to reduce the emissions of this radionuclide for a large plant to less than 1 Ci/y. Lead-210 will be controlled at least as well because the scrubbers will remove lead with at least equal efficiency.

#### D. The Proposed Standard

EPA is proposing that the emissions of polonium-210 in the calciner off-gases at elemental phosphorus plants be limited to 1 Ci/y. EPA believes the use of best available technology at these facilities can achieve this standard. Limiting the polonium-210 emissions also effectively limits the lead-210 and other

radionuclide emissions in the calciner off-gases. This standard will keep the radiation doses to individuals living near these plants to less than 10 mrem/y to the lung and to less than 15 mrem/y to the kidney. The lifetime risk associated with these doses is less than 3 in 100,000. EPA believes this will protect the individuals living nearby with an ample margin of safety. The assumptions and uncertainties associated with estimates of risk are discussed in Units I.C. and V.B. of this notice.

Complete information is not available on the polonium-210 emissions from all elemental phosphorus plants. Therefore, some uncertainty exists regarding the number of plants that would need to retrofit emission control systems. However, based on presently available information, EPA estimates that no more than two plants would need to install additional control systems to meet the proposed standard. These would be the large-capacity plants processing high-radionuclide-content phosphate rock. Installation of high-energy venturi scrubbers on the calciner exhausts of two plants would result in a capital expenditure of about \$6 million and annual operating costs of \$3 million per year.

Under the proposed standard, owners or operators of elemental phosphorus plants will be required to (a) measure the polonium-210 emissions from their calciner stacks and to report the results of these tests to EPA and (b) continuously monitor the pressure drop across their calciner scrubbers and to maintain records of these measurements for a minimum of two years.

EPA requests comments on the proposed values and the methodology used in arriving at them.

#### E. Alternatives to the Proposed Standard

The Agency considered proposing higher or lower values than 1 Ci/y. Higher values did not seem justified because they would either not significantly reduce the radiation doses to individuals living near these plants or would cost just as much to implement as the proposed standard. Lower values were also considered, but available information indicates that additional control technology is not feasible to meet lower levels.

The Agency also considered a standard expressed as curies/metric ton of phosphate rock processed. However, this type of standard may require emission control retrofit by one or more additional plants even though their emissions of polonium-210 would be significantly less than 1 Ci/y. Since the

primary purpose of the standard is to limit the annual radiation doses to the most exposed individual living near these plants, the Agency concluded that an annual emission limit, rather than an emission limit per unit of rock processed, is the more appropriate form of the standard.

#### VI. Sources for Which Standards Are Not Proposed

EPA has identified several source categories that emit radionuclides to air for which standards are not being proposed. These emissions comprise radionuclides that occur naturally in the environment but are released to air due to industrial processes. In addition to these sources, EPA is not proposing emission standards for uranium fuel cycle facilities, uranium mill tailings, management of high level radioactive wastes, and low energy accelerators. The reasons for these decisions are discussed in the following paragraphs. Additional supporting information may be found in the Docket and in the Background Information Document.

Estimates of risk used in this analysis were developed using methods and assumptions discussed in Unit I.C. of this notice. It is important to recognize that the actual risk to specific individuals may differ greatly from the estimates because the circumstances involving the actual exposure may differ greatly from the assumptions used to make the estimates.

#### A. Coal-Fired Boilers

Large, coal-fired boilers are used by utilities and industry to generate electricity and by industry to make process steam and to heat water for space heaters and industrial processes. When these boilers are operating, trace amounts of uranium, radium, thorium, and decay products of these radionuclides that are present in coal become incorporated into the fly ash and are emitted along with the particulates into the air. Technology that removes particulates will, therefore, also limit radionuclide emissions.

Particulate emissions from new utility boilers are controlled under Section III of the Act (43 FR 42154, September 19, 1978, revised by 44 FR 33613, June 11, 1979). These New Source Performance Standards (NSPS) require utility boilers constructed after September 19, 1978, to have best available technology that limits particulate emissions to 13 nanograms per Joule (ng/J) (0.03 pound/million Btu). To meet this emission standard, electrostatic precipitators (ESPs) or fabric filter systems are usually installed. Doses from utility

boiler radionuclide emissions under NSPS are low, less than 1 mrem/y to any organ, and there is no practical way to reduce them further since best available technology is already being used. Further reduction in emissions would require a second fabric filter or ESP in series with the first; this would be unreasonably expensive for the emission reduction achieved. Thus, radionuclide emission standards for new utility boilers would be either redundant or, if more restrictive, prohibitively expensive.

Particulate emissions from new large industrial boilers are controlled by NSPS that limit particulate matter to 43 ng/J (0.1 pound/million Btu). EPA plans to propose NSPS for smaller industrial boilers also; draft proposed limits have been circulated for comment. These standards should reduce particulate emissions to low levels and should correspondingly reduce doses to nearby individuals from radionuclide emissions to less than 1 mrem/y to any organ. With NSPS in place, radionuclide standards for industrial boilers would be redundant.

Existing utility and industrial boilers are regulated for particulate emissions by State Implementation Plans (SIPs) required by the Act. Limits vary for specific plants, but, in general, SIPs require large boilers located in populated areas to be well controlled with ESPs. Preliminary information indicates that retrofitting existing utility boilers to further reduce radionuclide emissions would cost approximately \$15 billion for capital improvements and \$3 billion a year to operate them. Total retrofitting of the industry with best available technology would reduce the estimated potential health effects by about 1 to 2 per year. For industrial boilers, the costs are about \$3 billion for capital improvements and \$0.7 billion to operate them. Total retrofitting of the industry with best available technology would reduce the estimated potential health effects by about 1 every three years. For both utility and industrial boilers, the costs are judged to be unreasonable in comparison to the reduction in dose and risk that would result.

The amount of radionuclides that could potentially be emitted by coal-fired boilers is strictly limited by the amount of uranium and thorium in the incoming coal. EPA has no reasons, therefore, to expect that massive releases of radionuclides will occur or that current emission rates will increase significantly. Under the current Federal and State regulatory programs,

emissions should slowly decrease as old boilers are replaced.

In summary, EPA is not proposing standards for coal-fired boilers because existing emission controls that limit particulate releases also limit radionuclide releases. The risks to nearby individuals and the total risks to populations after application of controls already required are not large when compared to the cost of additional control technology. There is no potential for emissions to increase due to the limited amounts of radionuclides within the coal; rather, overall emissions will decrease with time as old plants are replaced with new ones with improved emission controls as required by the NSPS for particulate emissions.

EPA did consider the possibility that boilers may be using coal with radionuclide content that is significantly above average or that existing boilers may be operating in a manner that causes elevated emissions of radionuclides. If this is the case, there could be a subcategory of coal-fired boilers for which it would be appropriate to issue an emission standard. EPA requests comments and information on whether these situations do exist, their causes, their significance to public health, whether emission standards are needed, and what emission levels would be appropriate.

#### *B. Phosphate Industry*

The phosphate industry processes phosphate rock to produce fertilizers, detergents, animal feeds and other products. The production of fertilizer uses approximately 80 percent of the phosphate rock mined in the United States. Diammonium phosphate and triple superphosphate are the phosphate fertilizers produced in the largest quantities. Phosphate deposits contain large quantities of natural radioactivity, principally uranium-238 and members of its decay series. Uranium concentrations in phosphate deposits range from 10 to 100 times the concentration of uranium in other natural rocks and soils.

The processing of phosphate rock in dryers, grinders, and fertilizer plants results in the release of radionuclides into the air. As with coal-fired boilers, control techniques that remove particulates will also control radionuclide emissions and risks. Particulate emissions from the process exhausts of these plants are already well controlled, and the doses to individuals and populations from the radionuclides contained in the particulates are less than 15 mrem/y to any organ.

Particulate emissions from new or modified phosphate rock dryer and

grinder facilities are already regulated by NSPS under Section 111 of the Act (47 FR 16582, April 16, 1982). To meet these standards, high-energy scrubbers of high-energy ESPs are usually installed on dryers, and fabric filters are installed on grinders. Particulate emissions from existing dryers and grinders are regulated under SIPs. About 20 percent of the existing dryers already have controls equivalent to NSPS; the remaining dryers either employ low-energy or medium-energy scrubbers. About 75 percent of the existing grinders already have controls equivalent to NSPS; the remaining grinders use the equivalent of medium-energy scrubbers.

To retrofit all existing phosphate rock dryers with best available technology would require a capital expenditure of \$44 million and an increase of \$3 million in annual operating costs. This would reduce the maximum individual bone dose from 15 mrem/y to 3 mrem/y and avoid 1 health effect in 50 years of operations. To retrofit all existing phosphate grinders with best available technology would require a capital expenditure of \$4 million but would not increase the annual operating cost. This would reduce the maximum individual bone dose from 1 mrem/y to 0.2 mrem/y and avoid 1 health effect in 500 years of operations.

Phosphate fertilizer plants use wet-scrubber systems on their process exhausts. These controls are needed to comply with NSPS (40 CFR Part 60, Subparts T through X) or SIPs for fluoride emissions. About 75 percent of the existing industry production capacity is controlled by both primary and secondary scrubbers. Scrubbers used to control fluoride emissions are also effective controls for particulate emissions.

To retrofit all existing fertilizer plants with secondary scrubbers on their diammonium phosphate and triple superphosphate process stacks would require capital costs of \$14 million and would result in an increase of \$1.5 million in annual operating costs. This would reduce the maximum individual bone dose from 2 mrem/y to 1 mrem/y and would avoid 1 health effect in 500 years of operations.

In summary, EPA is not proposing standards for phosphate rock dryers and grinders or phosphate fertilizer plants, because (1) the bone dose to individuals represent a small hazard to health compared to a similar dose to most other organs, (2) the potential for increased emissions is not present due to the limited amount of radionuclides in the phosphate rock, (3) other Clean Air Act standards require controls that also

reduce radionuclide emissions, and (4) the cost to further reduce radionuclide emissions is unreasonably large compared to the additional protection achieved.

About 25 percent of the phosphate rock used for fertilizer production is treated in calciners rather than dryers to remove organic matter prior to processing. Since calciners operate at significantly higher temperatures than dryers, this may result in the volatilization and release to air of significant quantities of polonium-210, similar to the emissions from elemental phosphorus plants. Radionuclide emission studies are being planned for phosphate rock calciner plants. However, no radionuclide emission data are available for calciners, and, therefore, EPA is unable to determine at this time that standards are needed for these facilities. EPA requests comments and information on these emissions, their significance to public health, whether emission standards are needed, and what limits would be appropriate.

#### C. Other Extraction Industries

Almost all industrial operations involving removal and processing of soils and rocks to recover valuable commodities release some radionuclides into the air. EPA has carried out studies of airborne radioactive emissions from such mining, milling, and smelting operations.

The industries studied include iron, copper, zinc, clay, limestone, fluor spar, and bauxite. These are relatively large industries and are, therefore, considered to have the greatest potential for emitting radioactive materials into the air.

Although the analysis of data from these studies is not complete, the information available to the Agency at the present time shows that the radiation doses to individuals and populations from radionuclide emissions from these types of facilities are small and would not be reduced at reasonable cost. Therefore, EPA is not proposing standards for these parts of the extraction industry.

#### D. Uranium Fuel Cycle Facilities, Uranium Mill Tailings, and Management of High Level Waste

The Uranium Fuel Cycle (UFC) consists of operations associated with production of electric power for public use by light-water-cooled reactors using uranium fuel. It includes light-water-cooled nuclear power plants and facilities that mill the uranium ore, enrich uranium, and fabricate and reprocess uranium fuel. EPA has promulgated emission standards for

normal operations of the UFC under the Atomic Energy Act (40 CFR Part 190). These standards limit the annual dose equivalent to body organs of nearby individuals to 25 mrem/y (75 mrem/y for the thyroid) and limit the emissions of krypton-85, iodine-129, and other long-half-life, alpha-emitting, transuranium radionuclides. As a practical matter, the EPA standards and their implementation by the NRC require the use of best available technology, which keeps doses to individuals and populations to low levels. The estimated individual risk associated with 25 mrem/y to all organs for a lifetime is about 1 in 2000.

Uranium mill tailings remain after uranium ore is processed to remove the uranium. Altogether, there are many thousands of acres of these tailings at both inactive and active uranium mill sites, mostly in the Southwest. Large amounts of radon-222 are emitted to air from the piles due to the radium-226 remaining in the tailings after the uranium is removed. Congress addressed this problem through the Uranium Mill Tailings Radiation Control Act of 1978 (Pub. L. 95-604). Under this authority, EPA has active programs to promulgate standards requiring remedial actions that will, among other objectives, prevent these tailings from being moved and prevent radon from escaping after the piles become inactive. Standards have been promulgated for inactive mill sites and will soon be proposed for active mill sites.

The highly radioactive liquid or solid wastes from reprocessing spent nuclear fuel, or the spent fuel elements themselves if they are disposed of without reprocessing, are called "high level wastes". Over the last several years, the Federal government has intensified its program to develop and demonstrate a permanent disposal method for high level waste. As part of this effort, EPA has proposed standards to limit radiation exposure of members of the public from management of this waste prior to disposal (47 FR 58196, December 29, 1982). These proposed standards would limit the annual dose equivalent to any member of the public to 25 mrem/y to the whole body, 75 mrem/y to the thyroid, or 25 mrem/y to any other organ. Waste management operations are also to be conducted so as to reduce exposures below these levels to the extent that this is reasonably achievable.

EPA is not proposing additional radionuclide standards for UFC facilities, uranium mill tailings, and high level wastes because the Agency believes that EPA standards established (or to be established) under other applicable authorities will protect public

health with an ample margin of safety in the same way as an emission standard established under Section 112 of the Act.

#### E. Low Energy Accelerators

Accelerators, which impart energy to charged particles such as electrons, alpha particles, and protons, are used for a wide variety of applications, including radiography, activation analysis, food sterilization and preservation, radiation therapy, and research. There are over 1,200 accelerators in use in the United States, not including accelerators owned by DOE. This number has been growing at a rate of approximately 65 machines per year.

Accelerators other than those owned by the DOE operate at low energy levels (i.e., less energy is imparted to the particles). These machines emit very small quantities of radionuclides (specifically, carbon-11, carbon-14, nitrogen-13, oxygen-15, and argon-41) because they operate at relatively low energies. In addition, those accelerators using tritium targets may emit a small quantity of tritium, typically less than 1 Ci/y. The quantity of radionuclides produced is so small that the doses and health risks associated with those emissions are extremely low, generally several orders of magnitude less than other sources discussed in the proposed rule. Further, there is no practical way to reduce them. EPA is not proposing standards for accelerators because of the low doses, less than 1 microrem/y to nearby individuals, and because there is no potential for the doses from existing or new facilities to exceed this level significantly.

#### F. Request for Comments

EPA requests comments on its proposed decisions not to issue standards for radionuclide emissions from the categories of sources just described. These decisions will be reconsidered if additional information becomes available indicating that doses and risks are significantly greater, costs are significantly lower, or controls are more available than those on which EPA based its decisions.

If the Administrator decides not to issue standards for particular source categories, such decisions are likely to be accompanied by determinations that these decisions are of nationwide scope and effect under the terms of section 307(b) of the Act.

### VIII. Miscellaneous

#### A. Docket

The Docket is an organized and complete file of all information

considered by EPA in the development of these proposed standards. The Docket allows interested persons to identify and locate documents so that they can effectively participate in the rulemaking process. It also serves as the record for judicial review.

A transcript of the hearing and all written statements will be placed in the Docket and will be available for inspection and copying during normal working hours.

#### B. Executive Order 12291

Under Executive Order 12291, issued February 17, 1981, EPA must judge whether a rule is a "major rule" and, therefore, subject to the requirement that a Regulatory Impact Analysis be prepared. EPA has determined that this rule is not a major rule as that term is defined in Section 1(b) of the Executive Order.

EPA concluded that the rule is not major under the criteria of section 1(b) because the annual effect of the rule on the economy will be less than \$100 million. It will not cause a major increase in costs or prices for any sector of the economy or for any geographic region. Also, it will not result in any significant adverse effects on competition, employment, investment, productivity, innovation, or on the ability of United States enterprises to compete with foreign enterprises in domestic or foreign markets.

This proposed rule was submitted to the Office of Management and Budget (OMB) prior to publication, as required by the Executive Order.

#### List of Subjects in 40 CFR Part 61

Air pollution control, Asbestos, Beryllium, Hazardous materials, Mercury, Vinyl chloride, Radionuclides.

#### C. Paperwork Reduction Act

The Paperwork Reduction Act of 1980 (Pub. L. 96-511) (PRA) requires that the Office of Management and Budget review reporting and recordkeeping requirements that constitute "information collection" as defined. Assuming, without deciding, that some or all of the proposed reporting and recordkeeping requirements constitute information collection within the meaning of the PRA, the PRA requires the Office of Management and Budget to review information collection activities to determine whether they are "necessary for the proper performance of the functions of the Agency" (section 3508).

This proposal, if promulgated, would impose reporting and recordkeeping requirements for one Federal agency and on owners and operators of

elemental phosphorus plants and underground uranium mines.

EPA requests comments on the reasonableness of the information collection requirements and on the costs involved as compared to other means of compliance determinations.

#### D. Regulatory Flexibility Analysis

Section 603 of the Regulatory Flexibility Act, 5 U.S.C. 603, requires EPA to prepare and make available for comment an "initial regulatory flexibility analysis" in connection with any rulemaking for which there is a statutory requirement that a general notice of proposed rulemaking be published. The "initial regulatory analysis" describes the effect of the proposed rule on small business entities.

However, Section 604(b) of the Regulatory Flexibility Act provides that Section 603 "shall not apply to any proposed \* \* \* rule if the head of the Agency certifies that the rule will not, if promulgated, have a significant economic impact on a substantial number of small entities."

EPA believes that virtually all small businesses covered by this proposed rule are already meeting the proposed standards. Therefore, this rule will have little or no impact on small businesses.

For the preceding reasons, I certify that this rule, if promulgated, will not have significant economic impact on a substantial number of small entities.

Dated: March 29, 1983.

Lee Thomas,  
Acting Administrator.

It is proposed to amend Part 61 of chapter I of title 40 of the Code of Federal Regulations as follows:

1. By adding to the table of sections the following items:

#### Subpart K—National Emission Standards for Radionuclide Emissions from Department of Energy Facilities

- Sec.  
61.120 Designation of facilities.  
61.121 Definitions.  
61.122 Standard.  
61.123 Emission monitoring and test procedures.  
61.124 Compliance and reporting.

#### Subpart L—National Emission Standard for Radionuclide Emissions From Facilities Licensed by the Nuclear Regulatory Commission and Federal Facilities Not Covered by Subpart K

- 61.130 Applicability.  
61.131 Definitions.  
61.132 Standard.

#### Subpart M—National Emission Standard for Radionuclide Emissions From Underground Uranium Mines

- 61.140 Applicability.  
61.141 Definitions.

- Sec.  
61.142 Standard.  
61.143 Emission tests.  
61.144 Reporting.

#### Subpart N—National Emission Standard for Radionuclide Emissions From Elemental Phosphorous Plants

- 61.150 Applicability.  
61.151 Definitions.  
61.152 Standard.  
61.153 Emission tests.  
61.154 Test methods and procedures.  
61.155 Monitoring of Operations.

\* \* \* \* \*

#### Appendix B—Test Methods

\* \* \* \* \*

Method 111—Determination of polonium-210 emissions from stationary sources.

Authority: Sec. 112 and 301(a), Clean Air Act, as amended [42 U.S.C. 7412, 7601(a)].

2. By adding the following Subpart K:

#### Subpart K—National Emission Standards for Radionuclide Emissions From Department of Energy Facilities

##### § 61.120 Designation of facilities.

The provisions of this subpart apply to radiation dose equivalent values received by members of the public as the result of operations at facilities that are owned or operated by the Department of Energy and that emit radionuclides to air.

##### § 61.121 Definitions.

(a) "Whole body" means all human organs, organ systems, and tissues exclusive of the integumentary system (skin) and cornea.

(b) "Organ" means any human organ or tissue exclusive of the integumentary system (skin) and the cornea.

(c) "Radionuclide" means any nuclide that emits radiation.

(d) "Dose equivalent" means the product of absorbed dose and appropriate factors to account for differences in biological effectiveness due to the quality of radiation and its distribution in the body. The unit of the dose equivalent is the rem.

##### § 61.122 Standard.

Emissions of radionuclides to air from operations of Department of Energy facilities shall not exceed those amounts that cause a dose equivalent rate of 10 mrem/y to whole body or 30 mrem/y to any organ of any member of the public.

##### § 61.123 Emission monitoring and test procedures.

To determine compliance with the standard, radionuclide emissions shall be determined and dose equivalent values to members of the public calculated using EPA approved sampling procedures, codes AIRDOSE-EPA and RADRISK, or other procedures

which EPA has determined to be suitable.

**§ 61.124 Compliance and reporting.**

DOE shall submit to EPA an annual report which includes the results of monitoring emissions from points subject to this standard and dose calculations for each site. The report shall also describe the DOE program for maintaining airborne radionuclide releases as low as practicable below the standard, including a discussion of current controls, new control equipment installed during the year, and a discussion of new controls that are under consideration.

3. By adding the following Subpart L:

**Subpart L—National Emission Standards for Radionuclide Emissions From facilities Licensed by the Nuclear Regulatory Commission and Federal Facilities Not Covered by Subpart K**

**§ 61.130 Applicability.**

The provisions of this subpart apply to NRC-licensed facilities and to facilities owned or operated by any Federal agency other than the Department of Energy, except that this subpart does not apply to facilities regulated under 40 CFR Part 190 or to any accelerator.

**§ 61.131 Definitions.**

(a) "Agreement State" means and State with which the Atomic Energy Commission or the Nuclear Regulatory Commission has entered into an effective agreement under subsection 274(b) of the Atomic Energy Act of 1954, as amended.

(b) "Dose equivalent" means the product of absorbed dose and appropriate factors to account for differences in biological effectiveness due to the quality of radiation and its distribution in the body. The unit of the dose equivalent is the rem.

(c) "NRC/licensed facility" means any facility licensed by the Nuclear Regulatory Commission or any Agreement State to receive title to, receive, possess, use, transfer, or deliver any source, by-product, or special nuclear material.

(d) "Organ" means any human organ or tissue exclusive of the integumentary system (skin) and the cornea.

(e) "Radionuclide" means any nuclide that emits radiation.

**§ 61.132 Standard.**

(a) Emissions of radionuclides to air from facilities subject to this subpart shall not exceed those amounts that cause a dose equivalent rate of 10 mrem/y to any organ of any member of the public.

(b) This standard shall be implemented using pathway and dose equivalent calculations based on EPA's codes AIRDOSE-EPA and RADRISK or modeling techniques which, in EPA's judgment, are as suitable for particular applications as the EPA codes.

4. By adding the following Subpart M:

**Subpart M—National Emission Standard for Radionuclide Emission From Underground Uranium Mines**

**§ 61.140 Applicability.**

The provisions of this subpart are applicable to owners or operators of underground uranium mines.

**§ 61.141 Definitions.**

(a) "Unrestricted area," as used in this subpart, means an area not under the control of the mine owner or operator or a governmental agency for the purpose of restricting the use or establishment of structures for residential purposes.

(b) "Mine vent" means a shaft extending from the working areas of an underground uranium mine to the earth's surface for the purpose of discharging ventilation air from the mine to the earth's atmosphere.

(c) "Curie" is a unit of radioactivity equal to 37 billion nuclear transformations (decays) per second.

**§ 61.142 Standard.**

The radon-222 emissions to air from the mine vents of an underground uranium mine shall not result in an increase in the annual average radon-222 concentration in air in an unrestricted area in excess of 0.2 pCi/l.

**§ 61.143 Emission tests.**

(a) Unless a waiver of emission testing is obtained under 61.13, each mine owner or operator subject to 61.142 shall measure the radon-222 emissions from each of his mine vents:

(1) Within 90 days of the effective date of this rule, and annually thereafter, in the case of an existing source or a new source which has an initial startup date preceding the effective date of this rule; or

(2) Within 90 days of startup, and annually thereafter, in the case of a new source that did not have an initial startup date preceding the effective date.

(b) The Administrator shall be notified at least 30 days prior to an emission test so that EPA may, at its option, observe the test.

(c) Each emission test shall consist of three runs. The tests shall be conducted during normal operating and ventilation conditions. The average of all three runs shall apply in computing the emission rate.

(d) For use in calculating radon-222 concentrations in unrestricted areas under § 61.144, the annual emissions from each mine vent shall be determined by multiplying the radon-222 concentration measured in the air emitted from the mine vent by the total volume of air discharged through the vent over a one year period based on continuous operation of the ventilation system.

(e) Records of emission test results and other data needed to determine total emissions shall be retained at the source and made available for inspection by the Administrator for a minimum of 2 years.

**§ 61.144 Reporting.**

(a) Each owner or operator of a source subject to the requirements of § 61.142 shall calculate the average annual radon-222 concentration in air at the nearest unrestricted area to each of the mine vents from his mine using the following equation:

$$C_j = 0.1 \sum_i Q_i (X_{ij})^{-1.72}$$

Where

$C_j$  = radon-222 concentration in picocuries per liter (pCi/l) at location j due to all vents from the mine.

$Q_i$  = radon emission rate in kilocuries per year from vent i.

$X_{ij}$  = distance in kilometers from mine vent i to location j.

(b) Rather than use the method prescribed in paragraph (a), an owner or operator of a mine may, subject to the approval of the Administrator, use dispersion factors based on site specific meteorology.

(c) The calculations performed under paragraph (a) or (b) shall be reported to the Administrator within 30 days of completion of the emission tests required under § 61.143.

5. By adding the following Subpart N:

**Subpart N—National Emission Standard for Radionuclide Emission From Elemental Phosphorus Plants**

**§ 61.150 Applicability.**

The provisions of this subpart are applicable to owners and operators of nodulizing kilns and electric furnaces at elemental phosphorus plants.

**§ 61.151 Definitions.**

(a) "Elemental phosphorus plant" means any facility that processes phosphate rock to produce elemental phosphorus using pyrometallurgical techniques.

(b) "Nodulizing kiln" means a unit in which phosphate rock is heated to convert it to a nodular form.

(c) "Electric furnace" means a unit in which the phosphate rock is heated with silica and coke to reduce the phosphate to elemental phosphorus.

(d) "Curie" is a unit of radioactivity equal to 37 billion nuclear transformations (decays) per second.

#### § 61.152 Standard.

Emissions of polonium-210 to air from sources subject to this subpart shall not exceed 1 curie in a calendar year.

#### § 61.153 Emission tests.

(a) Unless a waiver of emission testing is obtained under § 61.13, each owner or operator required to comply with § 61.152 shall test emissions from his source within the following time limits:

(1) Within 90 days of the effective date of this rule in the case of an existing source or a new source that has an initial startup date preceding the effective date of this rule; or

(2) Within 90 days of startup in the case of a new source that did not have an initial startup date preceding the effective date of this rule.

(b) The Administrator shall be notified at least 30 days prior to an emission test so that EPA may, at its option, observe the test.

(c) Each emission test shall consist of three runs. The phosphate rock processing rate during each test shall be recorded. The average of all three runs shall apply in computing the emission rate. For determining compliance with the emission standard of § 61.152, the annual polonium-210 emissions shall be determined by multiplying the polonium-210 emission rate in curies per metric ton of phosphate rock processed by the annual phosphate rock processing rate in metric tons. In determining the annual phosphate rock processing rate, the values used for operating hours and operating capacity shall be values that will maximize the expected production rate. If the owner or operator of a source subject to this subpart changes his operation in a way that could change his emissions of polonium-210, he may determine his compliance with the requirements of this subpart on the basis of calculations using data from previous emission tests.

(d) All samples shall be analyzed, and polonium-210 emissions shall be determined within 30 days after the source test. All determinations shall be reported to the Administrator by a registered letter dispatched before the close of the next business day following such determination.

(e) Records of emission test results and other data needed to determine total emissions shall be retained at the

source and made available for inspection by the Administrator for a minimum of 2 years.

#### § 61.154 Test methods and procedures.

(a) Each owner or operator of a source required to test emissions under § 61.153, unless an equivalent or alternate method has been approved by the Administrator, shall use the following test methods:

1. Test Method 1 of Appendix A to Part 60 shall be used to determine sample and velocity traverses;

2. Test Method 2 of Appendix A to Part 60 shall be used to determine velocity and volumetric flow rate;

3. Test Method 5 of Appendix A to Part 60 shall be used to collect particulate matter containing the polonium-210;

4. Test Method 111 of Appendix B to this part shall be used to determine the polonium-210 emissions.

#### § 61.155 Monitoring of operations.

(a) The owner or operator of any source subject to this subpart using a wet scrubbing emission control device shall install, calibrate, maintain, and operate a monitoring device for the continuous measurement of the pressure loss of the gas stream through the scrubber. The monitoring device must be certified by the manufacturer to be accurate within  $\pm 250$  pascals ( $\pm 1$  inch of water). Records of these measurements shall be maintained at the source and made available for inspection by the Administrator for a minimum of two years.

(b) For the purpose of conducting an emission test under § 61.153, the owner or operator of any source subject to the provisions of this subpart shall install, calibrate, maintain, and operate a device for measuring the phosphate rock feed to any affected nodulizing kiln. The measuring device used must be accurate to within  $\pm 5$  percent of the mass rate over its operating range.

#### Appendix B—[Amended]

6. By adding the following test method of Appendix B:

Method 111—Determination of Polonium-210 Emissions From Stationary Sources

Performance of this method should not be attempted by persons unfamiliar with the use of equipment for measuring radioactive disintegration rates.

#### 1.0 Applicability and Principle

1.1 *Applicability.* This method is applicable to the determination of polonium-210 emissions in particulate samples collected in stack gases.

1.2 *Principle.* A particulate sample is collected from stack gases as described in Method 5 of Appendix A to 40 CFR

Part 60. The polonium-210 in the sample is put in solution, deposited on a metal disc and the radioactive disintegration rate measured. Polonium in acid solution spontaneously deposits on surfaces of metals which are more electropositive than polonium. This principle is routinely used in the radiochemical analyses of polonium-210 (reference 1).

#### 2.0 Apparatus

2.1 Alpha-counter photomultiplier tube, (5 cm), with associated electronics to record pulses.

2.2 Constant temperature bath at 85°C.

2.3 Polished nickel discs, 3.8 cm diameter, 0.6 mm thick.

2.4 Silver activated zinc sulfide screen.

2.5 Beakers, 400 ml, 150 ml.

2.6 Hot plate, electric.

2.7 Fume hood.

2.8 Teflon beakers, 150 ml.

Teflon is a registered trademark of DuPont Co.

#### 3.0 Reagents

##### 3.1 Analysis.

3.1.1 Ascorbic acid, reagent grade.

3.1.2 Distilled water.

3.1.3 Hydrochloric acid 12M, concentrated reagent grade.

3.1.4 Hydrofluoric acid 28M, reagent grade.

3.1.5 Nitric acid 16M, concentrated reagent grade.

3.1.6 Perchloric acid 12M, 72 percent reagent grade.

3.1.7 Sodium hydroxide 18M. Dissolve 720 g of sodium hydroxide pellets in distilled water and dilute to 1 liter.

3.1.8 Trichloroethylene.

3.2. *Standard solution.* Prepare calibrated solution of polonium-210 from supplier of this radionuclide. Known aliquots are to be used to establish efficiency of deposition.

#### 4.0 Procedure

##### 4.1 Sample Preparation.

4.1.1 Place filter collected by EPA Method 5 Part 60 in Teflon beaker, add 30 ml hydrofluoric acid and evaporate to dryness on hot plate in hood.

4.1.2 Repeat step 4.1.1 until glass fiber filter has been digested.

4.1.3 Add 100 ml 16M nitric acid to residue in Teflon beaker and evaporate to dryness. Do not overheat.

4.1.4 Add 50 ml 16M nitric acid to residue from step 4.1.3 and heat to 80°C.

4.1.5 Decant acid solution into glass beaker and add 10 ml 12M perchloric acid.

4.1.6 Heat acid mixture to perchloric acid fumes.

4.1.7 Adjust volume to 60 ml with distilled water and neutralize with 18M sodium hydroxide.

4.1.8 Dilute to 100 ml with distilled water and adjust solution to 0.5M in HCl by adding 4 ml 12M hydrochloric acid.

4.2 *Sample Analysis.* Analyze the solution for polonium-210 using any published method which involves the spontaneous electrodeposition of polonium-210, including the method described below:

4.2.1 Add 200 ml of ascorbic acid and heat solution to 85°C in constant temperature bath.

4.2.2 Melt a thin coating of polyethylene on the unpolished side of disc to prevent deposition. Adhesion of the polyethylene to the disc is enhanced by sanding the nickel surface with garnet paper.

4.2.3 Clean polished side with trichloroethylene, hydrochloric acid, and distilled water.

4.2.4 Suspend nickel disc in the solution using glass or plastic hook.

4.2.5 Maintain disc in solution for 3 hours while stirring the solution.

4.2.6 Remove nickel disc, rinse with distilled water and dry at room temperature.

#### 4.3 *Measurement of Polonium-210.*

4.3.1 Position deposition side of nickel disc adjacent to zinc sulfide screen on photomultiplier tube and count pulses.

4.3.2 Establish background count rate by measuring counts over clean nickel discs.

4.3.3 Determine procedure efficiency by adding calibrated aliquots of polonium-210 to acid solution with clean filter and following procedure through radioassay step.

4.3.4 Determine counter efficiency by carefully evaporating known aliquots of polonium-210 on nickel disc and measuring count rate, comparing count rate to known disintegration rate as fraction.

#### 5.0 *Calculations*

5.1 Calculate the curies of polonium-210 in the sample using the following equation:

$$A = \frac{C_T - C_B}{2.22 \times 10^{12} (E_C)(E_P)(T)(D)}$$

A = Curies of polonium-210 in sample.

C<sub>T</sub> = total sample counts for counting period.

C<sub>B</sub> = background counts for counting period.

E<sub>P</sub> = procedure efficiency.

E<sub>C</sub> = counting efficiency.

T = counting time in minutes.

D = decay correction.

##### 5.1.1 *Decay Correction*

$$\text{Decay correction (D)} = e^{-\frac{0.693(T)}{t_{1/2}}}$$

T = time in days from midpoint of collection time to the counting time.  
t<sub>1/2</sub> = radiological half life of polonium-210, 138.4 days.

#### 5.2 *Procedure for Calculating Emissions.*

Calculate the polonium-210 emission per metric ton of rock processed using the following equation:

$$E = \frac{AQ_3}{V_1M}$$

E = Curies of polonium-210 per metric ton of rock processed.

A = Curies of polonium-210 in sample from 5.1.

Q<sub>3</sub> = Volumetric flow rate of effluent stream in m<sup>3</sup>/h.

V<sub>1</sub> = Total volume of air sampled in m<sup>3</sup>.

M = Rock processing rate during sampling in metric tons/hr.

#### 6.0 *References*

1. Blanchard, Richard L., *Rapid Determination of Lead-210 and Polonium-210 in Environmental Samples by Deposition on Nickel*, Anal. Chem., 38, 189 (1966).

[FR Doc. 83-8726 Filed 4-5-83; 8:45 am]

BILLING CODE 6560-50-M

## Thornton, Marisa

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**From:** Rosnick, Reid  
**Sent:** Tuesday, September 02, 2014 3:00 PM  
**To:** Thornton, Marisa  
**Subject:** FW: Public references ready to go--except there are problems with these three.

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**From:** Nesky, Anthony  
**Sent:** Monday, July 21, 2014 10:23 PM  
**To:** Rosnick, Reid  
**Cc:** Herrenbruck, Glenna  
**Subject:** Public references ready to go--except there are problems with these three.

Dear Reid:

We have all the publically available references linked and ready to go, except for these three—

1. FR (Federal Register) 1985a. [EPA promulgated final standards for Elemental Phosphorus Plants, DOE-Facilities, and NRC-Licensed Facilities](#), Volume 50, p. 7280, February 8, 1985. (8 pp, 4.02 MB) [About PDF](#)

There is a problem here. First, the reference in the report is wrong- p 7280 is Subpart W! Second, the title says “final standards,” yet the only reference I can find is proposed standards on April 6, 1983, which were withdrawn on October 31, 1984. Were the standards ever finalized? If not, should we just provide a corrected reference as an erratum?

2. BDC (Behre Dolbear & Company) 2011. “Scoping Study of the Strathmore Resources (US), LTD, Church Rock Deposit, McKinley County, New Mexico,” April 4, 2011.

This reference has been retracted by the company and neither Andrew or I can find it on the web--  
Do you want to get a copy from the contractor.

3. VDEQ (Virginia Department of Environmental Quality) 2000. “Landfill Cost Estimate Form.”  
This reference has been superseded and is no longer on line. Do you want to get a copy from the contractor?

Tony Nesky  
Center for Radiation Information and Outreach  
Tel: 202-343-9597  
[nesky.tony@epa.gov](mailto:nesky.tony@epa.gov)

## Thornton, Marisa

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**From:** Rosnick, Reid  
**Sent:** Tuesday, September 02, 2014 3:00 PM  
**To:** Thornton, Marisa  
**Subject:** FW: Update to RPD Home page

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**From:** Thornton, Marisa  
**Sent:** Tuesday, July 22, 2014 7:32 AM  
**To:** Nesky, Anthony; Romero, Carmen  
**Cc:** Rosnick, Reid; Herrenbruck, Glenna  
**Subject:** RE: Update to RPD Home page

Done - <http://epastage.epa.gov/staging1/rpd/>

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**From:** Nesky, Anthony  
**Sent:** Monday, July 21, 2014 5:47 PM  
**To:** Thornton, Marisa; Romero, Carmen  
**Cc:** Rosnick, Reid; Herrenbruck, Glenna  
**Subject:** Update to RPD Home page  
**Importance:** High

Dear Carmen and Marissa:

On the RPD home page, under "Regulations Under Review." Please replace the first bullet "Notice of Proposed Rulemaking", with the following—

**Comment period extended to October 29, 2014.** [National Emission Standards for Hazardous Air Pollutants \(NESHAPs\)-Radon from Operating Uranium Mill Tailings](#) EPA has released a Notice of Proposed Rulemaking that would revise "National Emission Standards for Radon Emissions from Operating Mill Tailings," Subpart W of 40 CFR Part 61. The public is invited to submit comments on the proposed rulemaking. Comments are due October 29, 2014.

Tony Nesky  
Center for Radiation Information and Outreach  
Tel: 202-343-9597  
[nesky.tony@epa.gov](mailto:nesky.tony@epa.gov)

## Thornton, Marisa

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**From:** Rosnick, Reid  
**Sent:** Tuesday, September 02, 2014 3:00 PM  
**To:** Thornton, Marisa  
**Subject:** FW: Changes to Subpart W website

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**From:** Thornton, Marisa  
**Sent:** Tuesday, July 22, 2014 7:34 AM  
**To:** Nesky, Anthony; Romero, Carmen  
**Cc:** Rosnick, Reid; Herrenbruck, Glenna  
**Subject:** RE: Changes to Subpart W website

Done - <http://epastage.epa.gov/staging1/rpd/neshaps/subpartw/rulemaking-activity.html>

Let me know when you're ready to go live. I'm working until 3:30pm today.

Marisa

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**From:** Nesky, Anthony  
**Sent:** Monday, July 21, 2014 5:29 PM  
**To:** Romero, Carmen  
**Cc:** Thornton, Marisa; Rosnick, Reid; Herrenbruck, Glenna  
**Subject:** Changes to Subpart W website  
**Importance:** High

Dear Carmen and Marisa:

On

<http://www.epa.gov/radiation/neshaps/subpartw/rulemaking-activity.html>

Please make the following three changes

### Change No. 1

Under **'On this page:'**

Please change

**"Comment Period"** to

**"Comment Period Extended to 10/29/2014"**

and add a “New” graphic.

## Change No. 2

Please replace the section, “Requests for Extension of the Public Comment Period” as follows

### **Requests for Extension of the Public Comment Period**

In response to a number of requests, EPA has extended the public comment period for the proposed rulemaking for NESHAP Subpart W. **Comments are now due October 29, 2014.**

- [Federal Register Notice about the Extension](#) (2 pp, 216 KB [About PDF](#))
- [Request from Uranium Watch \(PDF\)](#) (2 pp, 58.9 KB [About PDF](#))
- [Request from NTAA \(PDF\)](#) (1 pp, 32.4 KB [About PDF](#))
- [Letter from Jennifer Thurston 6-19-14 \(PDF\)](#) (1 pp, 60K)
- [Hearing Request \(PDF\)](#) (5 pp, 82K)

## Change No. 3

Please replace the section, “EPA is proposing revisions to Subpart W. Comment period is open” as follows

### **EPA is proposing revisions to Subpart W. Comments due October 29, 2014.**

“National Emission Standards for radon emissions from Operating Uranium Mill Tailings,” Subpart W of 40 CFR Part 61. The proposed rule would require the use of generally available control technology (GACT) to limit radon emissions from tailings at all uranium recovery facilities. Specific control technologies would be required at conventional tailings impoundments, evaporation ponds and heap leach piles. The public is invited to submit comments on the proposed rulemaking. The docket (EPA-HQ-OAR-2008-0218) for this proposed rulemaking may be accessed at [Regulations.gov](#). Once in the docket, you can view the proposed rule and supporting documents. Written comments on the proposed rulemaking must be received on or before October 29, 2014.

Tony Nesky  
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Tel: 202-343-9597  
[nesky.tony@epa.gov](mailto:nesky.tony@epa.gov)

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**From:** Stahle, Susan  
**Sent:** Monday, July 21, 2014 4:37 PM  
**To:** Rosnick, Reid  
**Cc:** Thornton, Marisa; Nesky, Anthony  
**Subject:** updating Subpart W website for extension of public comment period

Hi –

I noticed the FR Notice was published today to extend the public comment period (see attached). Please update the “Comment Period” section of the Subpart W website and make sure this is posted to Subpart W website.

Thanks.

Susan Stahle  
Attorney-Advisor  
Air and Radiation Law Office  
Office of General Counsel  
U.S. Environmental Protection Agency  
202-564-1272 (ph)  
202-564-5603 (fax)  
[stahle.susan@epa.gov](mailto:stahle.susan@epa.gov)

## Thornton, Marisa

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**From:** Rosnick, Reid  
**Sent:** Tuesday, September 02, 2014 2:59 PM  
**To:** Thornton, Marisa  
**Subject:** FW: Please look at these updates to web pages re: extension of the comment period.  
**Importance:** High

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**From:** Nesky, Anthony  
**Sent:** Tuesday, July 22, 2014 9:10 AM  
**To:** Rosnick, Reid  
**Subject:** Please look at these updates to web pages re: extension of the comment period.  
**Importance:** High

Dear Reid:

As Sue noted, the extension was published in Federal Register. I have updated the Subpart W page and RPD Home Page to reflect this. Please look at the text on the test server, and give me any changes you might have.

On the Subpart W page:

<http://epastage.epa.gov/staging1/rpd/neshaps/subpartw/rulemaking-activity.html>

On the RPD Home Page;

<http://epastage.epa.gov/staging1/rpd/>

Tony Nesky  
Center for Radiation Information and Outreach  
Tel: 202-343-9597  
[nesky.tony@epa.gov](mailto:nesky.tony@epa.gov)

## Thornton, Marisa

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**From:** Rosnick, Reid  
**Sent:** Tuesday, September 02, 2014 2:59 PM  
**To:** Thornton, Marisa  
**Subject:** FW: Please look at hearing registration website and RPD website text

**Importance:** High

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**From:** Nesky, Anthony  
**Sent:** Tuesday, July 22, 2014 9:20 AM  
**To:** Rosnick, Reid  
**Subject:** Please look at hearing registration website and RPD website text  
**Importance:** High

Dear Reid:

I have asked Angelique and Whitney to check out the registration website. I think we are very close to finalizing it, and making it live. Please take a look at it and give me your feedback--

The registration website is at:

<https://www.eventbrite.com/e/subpart-w-hearings-registration-1408042493>

Password: SRA

Please note that the password requirement will be removed when we make the site public. Here is the text that I would like to put on the RPD website.

### **On the Subpart W Page:**

**PUBLIC HEARING, SEP. 3 and 4, 2014, DENVER, COLO.** EPA will hold a public hearing to allow the public to give verbal comments on the proposed revisions to Subpart W. The hearing will be held September 3 and 4, 2014 at the EPA Region 8 Office, 1595 Wynkoop Street, Denver, CO 80202-1129. Sessions will be held both days from 9AM-12 PM and from 1PM to 5PM. Please sign-up if you wish to attend. Those wishing to speak are strongly encouraged to sign-up by August 22, 2014. [CLICK TO SIGN-UP FOR THE HEARING.](#)

Note: Attendance at the hearing is not necessary to comment on this proposed rulemaking. EPA also welcomes [written comments](#).

### Requests for a Public Hearing

- [Memo to Docket on Telephone Request for Public Hearing \(PDF\)](#) (1 pp, 196 KB [About PDF](#))
- [Letter from Uranium Watch \(PDF\)](#) (1 pp, 42.9 KB [About PDF](#))

### **On the RPD Home Page:**

**Notice of Proposed Rulemaking.** [National Emission Standards for Hazardous Air Pollutants \(NESHAPs\)-Radon from Operating Uranium Mill Tailings](#) EPA has released a Notice of Proposed Rulemaking that would revise “National Emission Standards for Radon Emissions from Operating Mill Tailings,” Subpart W of 40 CFR Part 61.

- **Comment period extended to October 29, 2014.** The public is invited to submit comments on the proposed rulemaking for NESHAP Subpart W. Comments are due October 29, 2014.
- **Public Hearing, Sep. 3 and 4, 2014, Denver, Colo.** EPA will hold a [public hearing](#) at its Region 8 offices in Denver to allow the public to give verbal comments on the proposed revisions to Subpart W.

Tony Nesky  
Center for Radiation Information and Outreach  
Tel: 202-343-9597  
[nesky.tony@epa.gov](mailto:nesky.tony@epa.gov)

## Thornton, Marisa

---

**From:** Rosnick, Reid  
**Sent:** Tuesday, September 02, 2014 2:58 PM  
**To:** Thornton, Marisa  
**Subject:** FW: Public references ready to go--except there are problems with these three.

---

**From:** Rosnick, Reid  
**Sent:** Tuesday, July 22, 2014 9:47 AM  
**To:** Nesky, Anthony  
**Subject:** RE: Public references ready to go--except there are problems with these three.

I suggest we announce that all three are unavailable or out of date and leave it at that. We (you, actually) have done a great job on finding all these references.

Reid

---

**From:** Nesky, Anthony  
**Sent:** Monday, July 21, 2014 10:23 PM  
**To:** Rosnick, Reid  
**Cc:** Herrenbruck, Glenna  
**Subject:** Public references ready to go--except there are problems with these three.

Dear Reid:

We have all the publically available references linked and ready to go, except for these three—

1. FR (Federal Register) 1985a. [EPA promulgated final standards for Elemental Phosphorus Plants, DOE-Facilities, and NRC-Licensed Facilities](#), Volume 50, p. 7280, February 8, 1985. (8 pp, 4.02 MB) [About PDF](#)

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Do you want to get a copy from the contractor.

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## Thornton, Marisa

---

**From:** Rosnick, Reid  
**Sent:** Tuesday, September 02, 2014 2:58 PM  
**To:** Thornton, Marisa  
**Subject:** FW: Changes to Subpart W website

---

**From:** Nesky, Anthony  
**Sent:** Tuesday, July 22, 2014 9:52 AM  
**To:** Thornton, Marisa  
**Subject:** RE: Changes to Subpart W website

Thanks for your fast turnaround! Please publish this.

Tony Nesky  
Center for Radiation Information and Outreach  
Tel: 202-343-9597  
[nesky.tony@epa.gov](mailto:nesky.tony@epa.gov)

---

**From:** Thornton, Marisa  
**Sent:** Tuesday, July 22, 2014 7:34 AM  
**To:** Nesky, Anthony; Romero, Carmen  
**Cc:** Rosnick, Reid; Herrenbruck, Glenna  
**Subject:** RE: Changes to Subpart W website

Done - <http://epastage.epa.gov/staging1/rpd/neshaps/subpartw/rulemaking-activity.html>

Let me know when you're ready to go live. I'm working until 3:30pm today.

Marisa

---

**From:** Nesky, Anthony  
**Sent:** Monday, July 21, 2014 5:29 PM  
**To:** Romero, Carmen  
**Cc:** Thornton, Marisa; Rosnick, Reid; Herrenbruck, Glenna  
**Subject:** Changes to Subpart W website  
**Importance:** High

Dear Carmen and Marisa:

On

<http://www.epa.gov/radiation/neshaps/subpartw/rulemaking-activity.html>

Please make the following three changes

## Change No. 1

Under ‘**On this page:**’

Please change

“**Comment Period**” to

“**Comment Period Extended to 10/29/2014**”

and add a “New” graphic.

## Change No. 2

Please replace the section, “Requests for Extension of the Public Comment Period” as follows

### **Requests for Extension of the Public Comment Period**

In response to a number of requests, EPA has extended the public comment period for the proposed rulemaking for NESHAP Subpart W. **Comments are now due October 29, 2014.**

- [Federal Register Notice about the Extension](#) (2 pp, 216 KB [About PDF](#))
- [Request from Uranium Watch \(PDF\)](#) (2 pp, 58.9 KB [About PDF](#))
- [Request from NTAA \(PDF\)](#) (1 pp, 32.4 KB [About PDF](#))
- [Letter from Jennifer Thurston 6-19-14 \(PDF\)](#) (1 pp, 60K)
- [Hearing Request \(PDF\)](#) (5 pp, 82K)

## Change No. 3

Please replace the section, “EPA is proposing revisions to Subpart W. Comment period is open” as follows

### **EPA is proposing revisions to Subpart W. Comments due October 29, 2014.**

“National Emission Standards for radon emissions from Operating Uranium Mill Tailings,” Subpart W of 40 CFR Part 61. The proposed rule would require the use of generally available control technology (GACT) to limit radon emissions from tailings at all uranium recovery facilities. Specific control technologies would be required at conventional tailings impoundments, evaporation ponds and heap leach piles. The public is invited to submit comments on the proposed rulemaking. The docket (EPA-HQ-OAR-2008-0218) for this proposed rulemaking may be accessed at [Regulations.gov](#). Once in the docket, you can view the proposed rule and supporting documents. Written comments on the proposed rulemaking must be received on or before October 29, 2014.

Tony Nesky  
Center for Radiation Information and Outreach  
Tel: 202-343-9597  
[nesky.tony@epa.gov](mailto:nesky.tony@epa.gov)

---

**From:** Stahle, Susan  
**Sent:** Monday, July 21, 2014 4:37 PM  
**To:** Rosnick, Reid  
**Cc:** Thornton, Marisa; Nesky, Anthony  
**Subject:** updating Subpart W website for extension of public comment period

Hi –

I noticed the FR Notice was published today to extend the public comment period (see attached). Please update the “Comment Period” section of the Subpart W website and make sure this is posted to Subpart W website.

Thanks.

Susan Stahle  
Attorney-Advisor  
Air and Radiation Law Office  
Office of General Counsel  
U.S. Environmental Protection Agency  
202-564-1272 (ph)  
202-564-5603 (fax)  
[stahle.susan@epa.gov](mailto:stahle.susan@epa.gov)

## Thornton, Marisa

---

**From:** Rosnick, Reid  
**Sent:** Tuesday, September 02, 2014 2:58 PM  
**To:** Thornton, Marisa  
**Subject:** FW: Update to RPD Home page

---

**From:** Nesky, Anthony  
**Sent:** Tuesday, July 22, 2014 9:52 AM  
**To:** Thornton, Marisa  
**Subject:** RE: Update to RPD Home page

Thanks. Please publish.

Tony Nesky  
Center for Radiation Information and Outreach  
Tel: 202-343-9597  
[nesky.tony@epa.gov](mailto:nesky.tony@epa.gov)

---

**From:** Thornton, Marisa  
**Sent:** Tuesday, July 22, 2014 7:32 AM  
**To:** Nesky, Anthony; Romero, Carmen  
**Cc:** Rosnick, Reid; Herrenbruck, Glenna  
**Subject:** RE: Update to RPD Home page

Done - <http://epastage.epa.gov/staging1/rpd/>

---

**From:** Nesky, Anthony  
**Sent:** Monday, July 21, 2014 5:47 PM  
**To:** Thornton, Marisa; Romero, Carmen  
**Cc:** Rosnick, Reid; Herrenbruck, Glenna  
**Subject:** Update to RPD Home page  
**Importance:** High

Dear Carmen and Marissa:

On the RPD home page, under "Regulations Under Review." Please replace the first bullet "Notice of Proposed Rulemaking", with the following—

**Comment period extended to October 29, 2014.** [National Emission Standards for Hazardous Air Pollutants \(NESHAPs\)-Radon from Operating Uranium Mill Tailings](#) EPA has released a Notice of Proposed Rulemaking that would revise "National Emission Standards for Radon Emissions from Operating Mill Tailings," Subpart W of 40 CFR Part 61. The public is invited to submit comments on the proposed rulemaking. Comments are due October 29, 2014.

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Center for Radiation Information and Outreach

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**Sent:** Tuesday, September 02, 2014 2:58 PM  
**To:** Thornton, Marisa  
**Subject:** FW: updating Subpart W website for extension of public comment period

---

**From:** Thornton, Marisa  
**Sent:** Tuesday, July 22, 2014 10:01 AM  
**To:** Nesky, Anthony  
**Cc:** Rosnick, Reid; Stahle, Susan; Herrenbruck, Glenna; Romero, Carmen  
**Subject:** RE: updating Subpart W website for extension of public comment period

Tony,

You may now view your changes on the live server –

- <http://www.epa.gov/radiation/>
- <http://www.epa.gov/radiation/neshaps/subpartw/rulemaking-activity.html>

---

**From:** Stahle, Susan  
**Sent:** Monday, July 21, 2014 4:37 PM  
**To:** Rosnick, Reid  
**Cc:** Thornton, Marisa; Nesky, Anthony  
**Subject:** updating Subpart W website for extension of public comment period

Hi –

I noticed the FR Notice was published today to extend the public comment period (see attached). Please update the “Comment Period” section of the Subpart W website and make sure this is posted to Subpart W website.

Thanks.

Susan Stahle  
Attorney-Advisor  
Air and Radiation Law Office  
Office of General Counsel  
U.S. Environmental Protection Agency  
202-564-1272 (ph)  
202-564-5603 (fax)  
[stahle.susan@epa.gov](mailto:stahle.susan@epa.gov)

## Thornton, Marisa

---

**From:** Rosnick, Reid  
**Sent:** Tuesday, September 02, 2014 2:58 PM  
**To:** Thornton, Marisa  
**Subject:** FW: Please look at hearing registration website and RPD website text

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**From:** Nesky, Anthony  
**Sent:** Tuesday, July 22, 2014 10:11 AM  
**To:** Rosnick, Reid  
**Subject:** RE: Please look at hearing registration website and RPD website text

The last question on the registration page:

Do you have special needs (mobility, ASL, foreign language, etc?)

We had some teething troubles with the site yesterday, but the contractor and Eventbrite fixed it. I have asked Angelique and Whitney to make sure it meets their needs. Once I hear back from them, we can make the site live and put a link to it on our website.

Tony Nesky  
Center for Radiation Information and Outreach  
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[nesky.tony@epa.gov](mailto:nesky.tony@epa.gov)

---

**From:** Rosnick, Reid  
**Sent:** Tuesday, July 22, 2014 9:45 AM  
**To:** Nesky, Anthony  
**Subject:** RE: Please look at hearing registration website and RPD website text

Hi Tony,

I have looked at both the hearing registration website and the Subpart W website changes. The website changes look good, thank you. On the hearing registration site, are we going to ask about special needs? I saw that in the exchange between you and Angelique. That's my only comment, good job.

Reid

---

**From:** Nesky, Anthony  
**Sent:** Tuesday, July 22, 2014 9:20 AM  
**To:** Rosnick, Reid  
**Subject:** Please look at hearing registration website and RPD website text  
**Importance:** High

Dear Reid:

I have asked Angelique and Whitney to check out the registration website. I think we are very close to finalizing it, and making it live. Please take a look at it and give me your feedback--

The registration website is at:

<https://www.eventbrite.com/e/subpart-w-hearings-registration-1408042493>

Password: SRA

Please note that the password requirement will be removed when we make the site public. Here is the text that I would like to put on the RPD website.

#### **On the Subpart W Page:**

**PUBLIC HEARING, SEP. 3 and 4, 2014, DENVER, COLO.** EPA will hold a public hearing to allow the public to give verbal comments on the proposed revisions to Subpart W. The hearing will be held September 3 and 4, 2014 at the EPA Region 8 Office, 1595 Wynkoop Street, Denver, CO 80202-1129. Sessions will be held both days from 9AM-12 PM and from 1PM to 5PM. Please sign-up if you wish to attend. Those wishing to speak are strongly encouraged to sign-up by August 22, 2014. [CLICK TO SIGN-UP FOR THE HEARING.](#)

Note: Attendance at the hearing is not necessary to comment on this proposed rulemaking. EPA also welcomes [written comments](#).

#### Requests for a Public Hearing

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## Thornton, Marisa

---

**From:** Rosnick, Reid  
**Sent:** Tuesday, September 02, 2014 2:57 PM  
**To:** Thornton, Marisa  
**Subject:** FW: Public references ready to go--except there are problems with these three.

---

**From:** Nesky, Anthony  
**Sent:** Tuesday, July 22, 2014 10:21 AM  
**To:** Rosnick, Reid  
**Subject:** RE: Public references ready to go--except there are problems with these three.

I agree that we say that the VA DEQ reference and BDC report are unavailable, but it hard to do that for a Federal Register reference. The one missing FR reference was mis-cited. I **\*think\*** they were referring to a proposed rule. What do you think of this approach:

FR (Federal Register) 1985a. EPA promulgated final standards for Elemental Phosphorus Plants, DOE-Facilities, and NRC-Licensed Facilities, Volume 50, p. 7280, February 8, 1985.  
{ERRATUM: The correct reference is: FR (Federal Register) 1983. EPA promulgated proposed standards for Elemental Phosphorus Plants, DOE-Facilities, and NRC-Licensed Facilities, Volume 48, p. 15706, April 6, 1983.}

We do have the reference in the erratum.

And thanks for the compliment, but you really do need to give a lot of credit to Andrew!

Tony Nesky  
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**From:** Rosnick, Reid  
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**To:** Nesky, Anthony  
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I suggest we announce that all three are unavailable or out of date and leave it at that. We (you, actually) have done a great job on finding all these references.

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**Sent:** Monday, July 21, 2014 10:23 PM  
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**Cc:** Herrenbruck, Glenna  
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This reference has been retracted by the company and neither Andrew or I can find it on the web-- Do you want to get a copy from the contractor.

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**From:** Nesky, Anthony  
**Sent:** Tuesday, July 22, 2014 10:41 AM  
**To:** Rosnick, Reid  
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I think there is one more thing we need to add to the registration site (and our website). Some people may attend a hearing in hopes of engaging in debate with EPA, so we need to explain that that we are listening only. My suggestion for the sidebar on the registration website is below. What do you think?

About Hearings and Comments

**This hearing is being held to give the public the chance to give verbal comments on the proposed rulemaking.** Remarks made during the hearing will be transcribed and entered into the public docket. Each speaker will be allotted 5 minutes to present verbal remarks . All remarks and submissions become part of the official public record.

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No one method for submission of comments is “better” than another. **After the comment period closes on October 29, 2014, EPA will review and respond to all substantive comments in the rulemaking docket, whether they were submitted in writing or verbally in this hearing. EPA will not respond to comments during the hearing sessions.**

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{ERRATUM: The correct reference is: FR (Federal Register) 1983. EPA promulgated proposed standards for Elemental Phosphorus Plants, DOE-Facilities, and NRC-Licensed Facilities, Volume 48, p. 15706, April 6, 1983.}

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## Thornton, Marisa

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**From:** Rosnick, Reid  
**Sent:** Tuesday, July 22, 2014 10:43 AM  
**To:** Nesky, Anthony  
**Subject:** RE: Public references ready to go--except there are problems with these three.

I think that is a good idea, and I think it will be reinforced by the Hearing officer.

I'm signing off now, off to PT!

---

**From:** Nesky, Anthony  
**Sent:** Tuesday, July 22, 2014 10:41 AM  
**To:** Rosnick, Reid  
**Subject:** RE: Public references ready to go--except there are problems with these three.

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**To:** Rosnick, Reid

**Cc:** Herrenbruck, Glenna

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**Sent:** Tuesday, September 02, 2014 2:57 PM  
**To:** Thornton, Marisa  
**Subject:** FW: Public references ready to go--except there are problems with these three.

---

**From:** Nesky, Anthony  
**Sent:** Tuesday, July 22, 2014 11:14 AM  
**To:** Rosnick, Reid  
**Subject:** RE: Public references ready to go--except there are problems with these three.

I'd tell you to have fun, but I have been to PT myself for myofascial release, so let me just wish you well....

Tony Nesky  
Center for Radiation Information and Outreach  
Tel: 202-343-9597  
[nesky.tony@epa.gov](mailto:nesky.tony@epa.gov)

---

**From:** Rosnick, Reid  
**Sent:** Tuesday, July 22, 2014 10:43 AM  
**To:** Nesky, Anthony  
**Subject:** RE: Public references ready to go--except there are problems with these three.

I think that is a good idea, and I think it will be reinforced by the Hearing officer.

I'm signing off now, off to PT!

---

**From:** Nesky, Anthony  
**Sent:** Tuesday, July 22, 2014 10:41 AM  
**To:** Rosnick, Reid  
**Subject:** RE: Public references ready to go--except there are problems with these three.

I think there is one more thing we need to add to the registration site (and our website). Some people may attend a hearing in hopes of engaging in debate with EPA, so we need to explain that that we are listening only. My suggestion for the sidebar on the registration website is below. What do you think?

About Hearings and Comments

**This hearing is being held to give the public the chance to give verbal comments on the proposed rulemaking.** Remarks made during the hearing will be transcribed and entered into the public docket. Each speaker will be allotted 5 minutes to present verbal remarks . All remarks and submissions become part of the official public record.

Attendance at the hearing is not necessary to comment on this proposed rulemaking. EPA also welcomes written comments. Instructions on how to submit written comments can be found at:  
<http://www.epa.gov/radiation/neshaps/subpartw/rulemaking-activity.html>

No one method for submission of comments is “better” than another. After the comment period closes on October 29, 2014, EPA will review and respond to all substantive comments in the rulemaking docket, whether they were submitted in writing or verbally in this hearing. EPA will not respond to comments during the hearing sessions.

Tony Nesky  
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---

**From:** Rosnick, Reid  
**Sent:** Tuesday, July 22, 2014 10:29 AM  
**To:** Nesky, Anthony  
**Subject:** RE: Public references ready to go--except there are problems with these three.

I like your idea. Let's do it.

Sorry I missed the registration question. It looks good to go.

Reid

---

**From:** Nesky, Anthony  
**Sent:** Tuesday, July 22, 2014 10:21 AM  
**To:** Rosnick, Reid  
**Subject:** RE: Public references ready to go--except there are problems with these three.

I agree that we say that the VA DEQ reference and BDC report are unavailable, but it hard to do that for a Federal Register reference. The one missing FR reference was mis-cited. I **\*think\*** they were referring to a proposed rule. What do you think of this approach:

FR (Federal Register) 1985a. EPA promulgated final standards for Elemental Phosphorus Plants, DOE-Facilities, and NRC-Licensed Facilities, Volume 50, p. 7280, February 8, 1985.  
{ERRATUM: The correct reference is: FR (Federal Register) 1983. EPA promulgated proposed standards for Elemental Phosphorus Plants, DOE-Facilities, and NRC-Licensed Facilities, Volume 48, p. 15706, April 6, 1983.}

We do have the reference in the erratum.

And thanks for the compliment, but you really do need to give a lot of credit to Andrew!

Tony Nesky  
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[nesky.tony@epa.gov](mailto:nesky.tony@epa.gov)

---

**From:** Rosnick, Reid  
**Sent:** Tuesday, July 22, 2014 9:47 AM  
**To:** Nesky, Anthony  
**Subject:** RE: Public references ready to go--except there are problems with these three.

I suggest we announce that all three are unavailable or out of date and leave it at that. We (you, actually) have done a great job on finding all these references.

Reid

---

**From:** Nesky, Anthony  
**Sent:** Monday, July 21, 2014 10:23 PM  
**To:** Rosnick, Reid  
**Cc:** Herrenbruck, Glenna  
**Subject:** Public references ready to go--except there are problems with these three.

Dear Reid:

We have all the publically available references linked and ready to go, except for these three--

1. FR (Federal Register) 1985a. [EPA promulgated final standards for Elemental Phosphorus Plants, DOE-Facilities, and NRC-Licensed Facilities](#), Volume 50, p. 7280, February 8, 1985. (8 pp, 4.02 MB) [About PDF](#)

There is a problem here. First, the reference in the report is wrong- p 7280 is Subpart W! Second, the title says "final standards," yet the only reference I can find is proposed standards on April 6, 1983, which were withdrawn on October 31, 1984. Were the standards ever finalized? If not, should we just provide a corrected reference as an erratum?

2. BDC (Behre Dolbear & Company) 2011. "Scoping Study of the Strathmore Resources (US), LTD, Church Rock Deposit, McKinley County, New Mexico," April 4, 2011.

This reference has been retracted by the company and neither Andrew or I can find it on the web--  
Do you want to get a copy from the contractor.

3. VDEQ (Virginia Department of Environmental Quality) 2000. "Landfill Cost Estimate Form."  
This reference has been superseded and is no longer on line. Do you want to get a copy from the contractor?

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## Thornton, Marisa

---

**From:** Rosnick, Reid  
**Sent:** Tuesday, September 02, 2014 2:57 PM  
**To:** Thornton, Marisa  
**Subject:** FW: Updates to Subpart W and RPD Home Again

---

**From:** Thornton, Marisa  
**Sent:** Tuesday, July 22, 2014 1:36 PM  
**To:** Nesky, Anthony  
**Subject:** RE: Updates to Subpart W and RPD Home Again

Done -

<http://epastage.epa.gov/staging1/rpd/>  
<http://epastage.epa.gov/staging1/rpd/neshaps/subpartw/rulemaking-activity.html>

---

**From:** Nesky, Anthony  
**Sent:** Tuesday, July 22, 2014 1:18 PM  
**To:** Thornton, Marisa  
**Subject:** Updates to Subpart W and RPD Home Again

Dear Marisa:

We will soon be opening up registration for a public hearing for Subpart W, and will need to update the Subpart W page and the RPD home page. Please draft pages on the test server as follows--

On <http://www.epa.gov/radiation/neshaps/subpartw/rulemaking-activity.html>  
Please replace the "Requests for a Public Hearing" section with the text below.

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Please sign-up if you wish to attend. Those wishing to speak are strongly encouraged to sign-up by August 22, 2014.  
[CLICK TO SIGN-UP FOR THE HEARING.](#)

Note: Attendance at the hearing is not necessary to comment on this proposed rulemaking. EPA also welcomes [written comments](#).

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On the RPD Home Page:

Under “Regulations Under Review,” please replace the first entry “Notice of Proposed Rulemaking,” with the following.

**Notice of Proposed Rulemaking.** [National Emission Standards for Hazardous Air Pollutants \(NESHAPs\)-Radon from Operating Uranium Mill Tailings](#) EPA has released a Notice of Proposed Rulemaking that would revise “National Emission Standards for Radon Emissions from Operating Mill Tailings,” Subpart W of 40 CFR Part 61.

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- **Public Hearing, Sep. 3 and 4, 2014, Denver, Colo.** EPA will hold a [public hearing](#) at its Region 8 offices in Denver to allow the public to give verbal comments on the proposed revisions to Subpart W.

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## Thornton, Marisa

---

**From:** Rosnick, Reid  
**Sent:** Tuesday, September 02, 2014 2:56 PM  
**To:** Thornton, Marisa  
**Subject:** FW: updating Subpart W website for extension of public comment period

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**From:** Stahle, Susan  
**Sent:** Tuesday, July 22, 2014 2:21 PM  
**To:** Thornton, Marisa; Nesky, Anthony  
**Cc:** Rosnick, Reid; Herrenbruck, Glenna; Romero, Carmen; Peake, Tom; Perrin, Alan  
**Subject:** RE: updating Subpart W website for extension of public comment period

Tony - just left you a message about this. Please call me when you can.

Alan - I know a lot of folks are out right now. Who is managing this while they are out?

Susan Stahle  
Attorney-Advisor  
Air and Radiation Law Office  
Office of General Counsel  
U.S. Environmental Protection Agency  
202-564-1272 (ph)  
202-564-5603 (fax)  
[stahle.susan@epa.gov](mailto:stahle.susan@epa.gov)

---

**From:** Thornton, Marisa  
**Sent:** Tuesday, July 22, 2014 10:01 AM  
**To:** Nesky, Anthony  
**Cc:** Rosnick, Reid; Stahle, Susan; Herrenbruck, Glenna; Romero, Carmen  
**Subject:** RE: updating Subpart W website for extension of public comment period

Tony,

You may now view your changes on the live server –

- <http://www.epa.gov/radiation/>
- <http://www.epa.gov/radiation/neshaps/subpartw/rulemaking-activity.html>

---

**From:** Stahle, Susan  
**Sent:** Monday, July 21, 2014 4:37 PM  
**To:** Rosnick, Reid  
**Cc:** Thornton, Marisa; Nesky, Anthony  
**Subject:** updating Subpart W website for extension of public comment period

Hi –

I noticed the FR Notice was published today to extend the public comment period (see attached). Please update the "Comment Period" section of the Subpart W website and make sure this is posted to Subpart W website.

Thanks.

Susan Stahle  
Attorney-Advisor  
Air and Radiation Law Office  
Office of General Counsel  
U.S. Environmental Protection Agency  
202-564-1272 (ph)  
202-564-5603 (fax)  
[stahle.susan@epa.gov](mailto:stahle.susan@epa.gov)

## Thornton, Marisa

---

**From:** Rosnick, Reid  
**Sent:** Tuesday, September 02, 2014 2:46 PM  
**To:** Thornton, Marisa  
**Subject:** FW: Updates to Subpart W and RPD Home Again

---

**From:** Thornton, Marisa  
**Sent:** Tuesday, July 22, 2014 2:34 PM  
**To:** Nesky, Anthony  
**Subject:** RE: Updates to Subpart W and RPD Home Again

Ok

---

**From:** Nesky, Anthony  
**Sent:** Tuesday, July 22, 2014 2:34 PM  
**To:** Thornton, Marisa  
**Subject:** RE: Updates to Subpart W and RPD Home Again

DON'T MAKE ANY CHANGES—THE CURRENT WEBPAGES ARE FINE!

Tony Nesky  
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[nesky.tony@epa.gov](mailto:nesky.tony@epa.gov)

---

**From:** Thornton, Marisa  
**Sent:** Tuesday, July 22, 2014 2:28 PM  
**To:** Nesky, Anthony  
**Subject:** RE: Updates to Subpart W and RPD Home Again

Do you want me for you to speak with Susan before I make more changes?

---

**From:** Nesky, Anthony  
**Sent:** Tuesday, July 22, 2014 1:45 PM  
**To:** Thornton, Marisa  
**Subject:** RE: Updates to Subpart W and RPD Home Again

Thanks. I have a few tweaks.

On  
<http://epastage.epa.gov/staging1/rpd/>

under Regulations under Review, please restore the whole second bullet ...Comment Period Extended to August 3, 2014. You can just copy it back from the current live home page.

On <http://epastage.epa.gov/staging1/rpd/neshaps/subpartw/rulemaking-activity.html>

Under "On this page," please add a NEW graphic next to the "Public Hearing" jump.

And if possible, please remove the bold header from "Requests for a Public Hearing"

Thanks!

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[nesky.tony@epa.gov](mailto:nesky.tony@epa.gov)

---

**From:** Thornton, Marisa  
**Sent:** Tuesday, July 22, 2014 1:36 PM  
**To:** Nesky, Anthony  
**Subject:** RE: Updates to Subpart W and RPD Home Again

Done -  
<http://epastage.epa.gov/staging1/rpd/>  
<http://epastage.epa.gov/staging1/rpd/neshaps/subpartw/rulemaking-activity.html>

---

**From:** Nesky, Anthony  
**Sent:** Tuesday, July 22, 2014 1:18 PM  
**To:** Thornton, Marisa  
**Subject:** Updates to Subpart W and RPD Home Again

Dear Marisa:

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## Thornton, Marisa

---

**From:** Rosnick, Reid  
**Sent:** Tuesday, September 02, 2014 2:46 PM  
**To:** Thornton, Marisa  
**Subject:** FW: updating Subpart W website for extension of public comment period

---

**From:** Nesky, Anthony  
**Sent:** Tuesday, July 22, 2014 2:36 PM  
**To:** Thornton, Marisa  
**Cc:** Rosnick, Reid; Herrenbruck, Glenna; Romero, Carmen; Peake, Tom; Perrin, Alan  
**Subject:** RE: updating Subpart W website for extension of public comment period

I just got off the phone with Sue. The webpages have been updated to her satisfaction. She just needed to refresh her browser.

Tony Nesky  
Center for Radiation Information and Outreach  
Tel: 202-343-9597  
[nesky.tony@epa.gov](mailto:nesky.tony@epa.gov)

---

**From:** Stahle, Susan  
**Sent:** Tuesday, July 22, 2014 2:21 PM  
**To:** Thornton, Marisa; Nesky, Anthony  
**Cc:** Rosnick, Reid; Herrenbruck, Glenna; Romero, Carmen; Peake, Tom; Perrin, Alan  
**Subject:** RE: updating Subpart W website for extension of public comment period

Tony - just left you a message about this. Please call me when you can.

Alan - I know a lot of folks are out right now. Who is managing this while they are out?

Susan Stahle  
Attorney-Advisor  
Air and Radiation Law Office  
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202-564-1272 (ph)  
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[stahle.susan@epa.gov](mailto:stahle.susan@epa.gov)

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**From:** Thornton, Marisa  
**Sent:** Tuesday, July 22, 2014 10:01 AM  
**To:** Nesky, Anthony  
**Cc:** Rosnick, Reid; Stahle, Susan; Herrenbruck, Glenna; Romero, Carmen  
**Subject:** RE: updating Subpart W website for extension of public comment period

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- <http://www.epa.gov/radiation/>
- <http://www.epa.gov/radiation/neshaps/subpartw/rulemaking-activity.html>

---

**From:** Stahle, Susan

**Sent:** Monday, July 21, 2014 4:37 PM

**To:** Rosnick, Reid

**Cc:** Thornton, Marisa; Nesky, Anthony

**Subject:** updating Subpart W website for extension of public comment period

Hi –

I noticed the FR Notice was published today to extend the public comment period (see attached). Please update the “Comment Period” section of the Subpart W website and make sure this is posted to Subpart W website.

Thanks.

Susan Stahle

Attorney-Advisor

Air and Radiation Law Office

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## Thornton, Marisa

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**From:** Rosnick, Reid  
**Sent:** Tuesday, September 02, 2014 2:46 PM  
**To:** Thornton, Marisa  
**Subject:** FW: Updates to Subpart W and RPD Home Again

---

**From:** Nesky, Anthony  
**Sent:** Tuesday, July 22, 2014 2:38 PM  
**To:** Thornton, Marisa  
**Subject:** RE: Updates to Subpart W and RPD Home Again

NO, please do not. Sue was talking about yesterday's email, not my latest updates. Everything that is on the live website now is fine. We will have changes to the new text that you just put on the staging server.

Tony Nesky  
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**From:** Thornton, Marisa  
**Sent:** Tuesday, July 22, 2014 2:36 PM  
**To:** Nesky, Anthony  
**Subject:** RE: Updates to Subpart W and RPD Home Again

These changes are still on the staging server...should I revert them to reflect what's on the live server?

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**Sent:** Tuesday, July 22, 2014 1:18 PM  
**To:** Thornton, Marisa  
**Subject:** Updates to Subpart W and RPD Home Again

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**To:** Nesky, Anthony  
**Subject:** RE: Updates to Subpart W and RPD Home Again

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## Thornton, Marisa

---

**From:** Rosnick, Reid  
**Sent:** Tuesday, September 02, 2014 2:46 PM  
**To:** Thornton, Marisa  
**Subject:** FW: Review of text about hearings

**Importance:** High

---

**From:** Nesky, Anthony  
**Sent:** Tuesday, July 22, 2014 2:48 PM  
**To:** Stahle, Susan  
**Cc:** Rosnick, Reid  
**Subject:** Review of text about hearings  
**Importance:** High

Dear Sue:

Thanks for your offer to review the text announcing the public hearings. Here's the text we were planning to put on the website:

1. ON THE SUBPART W PAGE:

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- [Letter from Uranium Watch \(PDF\)](#) (1 pp, 42.9 KB [About PDF](#))

2, On the RPD Home Page:

**Notice of Proposed Rulemaking.** [National Emission Standards for Hazardous Air Pollutants \(NESHAPs\)- Radon from Operating Uranium Mill Tailings](#) EPA has released a Notice of Proposed Rulemaking that would

revise "National Emission Standards for Radon Emissions from Operating Mill Tailings," Subpart W of 40 CFR Part 61.

- **Comment period extended to October 29, 2014.** The public is invited to submit comments on the proposed rulemaking for NESHAP Subpart W. Comments are due October 29, 2014.
- **Public Hearing, Sep. 3 and 4, 2014, Denver, Colo.** EPA will hold a [public hearing](#) at its Region 8 offices in Denver to allow the public to give verbal comments on the proposed revisions to Subpart W.

### 3. ON THE REGISTRATION SITE ITSELF

You should probably take a look at the registration page. Please note the sidebar: About Hearings and Comments, and the Registration Information. To view all the text, please go ahead and test register as a speaker.

Website:

<https://www.eventbrite.com/e/subpart-w-hearings-registration-1408042493>

Password: SRA (Note: password will be removed when the site goes live.)

I'm working from home because of the office move. You can reach me at 703-403-7014.

Tony Nesky  
Center for Radiation Information and Outreach  
Tel: 202-343-9597  
[nesky.tony@epa.gov](mailto:nesky.tony@epa.gov)

## Thornton, Marisa

---

**From:** Rosnick, Reid  
**Sent:** Tuesday, September 02, 2014 3:00 PM  
**To:** Thornton, Marisa  
**Subject:** FW: Please test the registration website again  
**Attachments:** 1408042493-319309461-registration.pdf  
  
**Importance:** High

---

**From:** Nesky, Anthony  
**Sent:** Monday, July 21, 2014 6:38 PM  
**To:** Diaz, Angelique; Trulove-Cranor, Whitney  
**Cc:** Rosnick, Reid  
**Subject:** Please test the registration website again  
**Importance:** High

Dear Angelique and Whitney:

OK, let's try testing the registration website again. We are now asking for affiliation, special needs, and whether a person intends to speak at one of the sessions. . Please check it out to make sure it meets your needs. I just registered, and my ticket and registration receipt are attached. Feel free to test the registration yourselves! Id appreciate your feedback today if possible, so that we can launch the site tomorrow.

The registration website is at:

<https://www.eventbrite.com/e/subpart-w-hearings-registration-1408042493>

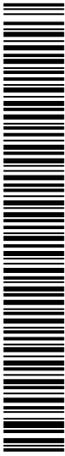
Password: SRA

Please note that the password requirement will be removed when we make the site public.

Tony Nesky  
Center for Radiation Information and Outreach  
Tel: 202-343-9597  
[nesky.tony@epa.gov](mailto:nesky.tony@epa.gov)



Please print and bring with you to the event

 319309461403610993001	Event <h1>Subpart W Hearings</h1>		
	Date+Time	Location EPA Region 8 Office 1595 Wynkoop Street Denver, CO 80202-1129	Payment Status Free Order
	Order Info Order #319309461. Ordered by Tony Nesky on July 21, 2014 3:24 PM		
	Type Subpart W Hearings - September 3, 2014, 9:00 AM - 12:00 PM MDT		

You are registered to attend the Subpart W Hearing.  
Please read the following before attending:

#### BUILDING LOCATION

The EPA Region 8 office is at 1595 Wynkoop Street, Denver, CO80202-1129. The building is located along the 16th Street Mall in downtown Denver, adjacent to Union Station and across from the Tattered Cover bookstore.

#### PARKING

The City of Denver provides information on parking here: <http://www.denvergov.org/tabid/437781/Default.aspx>><http://www.denvergov.org/tabid/437781/Default.aspx>

#### DRIVING DIRECTIONS

If coming from Denver International Airport--  
Follow the "Airport Exit" signs to proceed south and west on Pena Boulevard for about 9 miles. Keep following the natural turn to the right as Pena Blvd. turns into Interstate 70 West, heading toward downtown. Follow I-70 West for 10 miles before exiting onto I-25 South. Two miles after turning south on I-25, take the Speer Avenue South exit and make a left towards downtown and the Pepsi Center. Upon crossing the Interstate, you will see the Pepsi Center on your right. Stay left and make a left at the stop light on Wewatta Street (there is a lefthand turn lane provided). Head across a small bridge and go straight until you reach 15th Street. Make a right on 15th Street, and your first left on Wynkoop Street. The EPA building is on the left, with the building entrance off of 16th Street.

If coming from the north, south or west--

Take Interstate 25 to the Speer Boulevard South exit and follow the directions two paragraphs above.

#### SECURITY REQUIREMENTS

Visitors to EPA's regional office must show identification and pass through security screening at the building entrance. The EPA Region 8 office building is a Level-4-security building, similar to what you experience at the airport. All visitors need to bring a government-issued photo ID (i.e., a driver's license). You will be asked to show this ID as you enter the lobby.

Please arrive at the building 15 minutes before any talks or events you have scheduled. Our security screening process is similar to screening at the airport: you will be asked to walk through a magnetometer (removing metal objects from your pockets), and your coats, bags etc. will be x-rayed. We regret that we do not have facilities to check coats or bags. You will be provided with a visitor badge after you pass through security. Please wear this at all times while you are in the building.

Video, as well as photos of any kind, are not allowed. Also, NO weapons of any kind are allowed in the building. This includes mace, knives, guns, etc. You will not be permitted in the building if you have any of these items.

#### TO GET TO THE HEARING ROOM

After going through security, please proceed to the 2nd Floor Conference Center via the elevator. Conference Center attendees are not allowed above the 2nd floor without having an EPA escort. Outside of the meeting room, there will be a registration table where you will check-in and receive a temporary badge that must be worn at all times while in the building. Any visitor exiting the building during breaks or lunch will be required to pass through security screening upon return each time. At the conclusion of the conference, please return to the registration table to be checked out and turn in your temporary visitor badge.

#### SPEAKERS

Speakers will be allotted 5 minutes to testify at the hearing. Speakers will be assigned a speaker number upon arriving, and will be called to give their testimony; Submission of written remarks is not required, but will be gladly accepted. All remarks and submissions become part of the official public record.

Please print and bring your ticket with you.



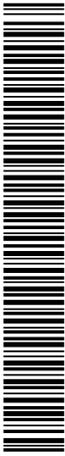
319309461403610993001

**Eventbrite**

**Do you organize events?**

Start selling in minutes with Eventbrite!  
[www.eventbrite.com](http://www.eventbrite.com)

Please print and bring with you to the event

 319309461403610995001	Event	<h1>Subpart W Hearings</h1>		
	Date+Time	Location		Payment Status
		EPA Region 8 Office 1595 Wynkoop Street Denver, CO 80202-1129		Free Order
	Order Info	Order #319309461. Ordered by Tony Nesky on July 21, 2014 3:24 PM		
Type	Subpart W Hearings - September 3, 2014, 1:00 PM - 5:00 PM MDT			

You are registered to attend the Subpart W Hearing.  
Please read the following before attending:

#### BUILDING LOCATION

The EPA Region 8 office is at 1595 Wynkoop Street, Denver, CO80202-1129. The building is located along the 16th Street Mall in downtown Denver, adjacent to Union Station and across from the Tattered Cover bookstore.

#### PARKING

The City of Denver provides information on parking here: <http://www.denvergov.org/tabid/437781/Default.aspx>><http://www.denvergov.org/tabid/437781/Default.aspx>

#### DRIVING DIRECTIONS

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Please arrive at the building 15 minutes before any talks or events you have scheduled. Our security screening process is similar to screening at the airport: you will be asked to walk through a magnetometer (removing metal objects from your pockets), and your coats, bags etc. will be x-rayed. We regret that we do not have facilities to check coats or bags. You will be provided with a visitor badge after you pass through security. Please wear this at all times while you are in the building.

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#### TO GET TO THE HEARING ROOM

After going through security, please proceed to the 2nd Floor Conference Center via the elevator. Conference Center attendees are not allowed above the 2nd floor without having an EPA escort. Outside of the meeting room, there will be a registration table where you will check-in and receive a temporary badge that must be worn at all times while in the building. Any visitor exiting the building during breaks or lunch will be required to pass through security screening upon return each time. At the conclusion of the conference, please return to the registration table to be checked out and turn in your temporary visitor badge.

#### SPEAKERS

Speakers will be allotted 5 minutes to testify at the hearing. Speakers will be assigned a speaker number upon arriving, and will be called to give their testimony; Submission of written remarks is not required, but will be gladly accepted. All remarks and submissions become part of the official public record.

Please print and bring your ticket with you.



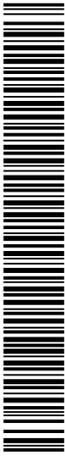
319309461403610995001

**Eventbrite**

**Do you organize events?**

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[www.eventbrite.com](http://www.eventbrite.com)

Please print and bring with you to the event

 319309461403610997001	Event		
	<h1>Subpart W Hearings</h1>		
	Date+Time	Location	Payment Status
		EPA Region 8 Office 1595 Wynkoop Street Denver, CO 80202-1129	Free Order
Order Info			
Order #319309461. Ordered by Tony Nesky on July 21, 2014 3:24 PM			
Type			
Subpart W Hearings - September 4, 2014, 9:00 AM - 12:00 PM MDT			

You are registered to attend the Subpart W Hearing.  
Please read the following before attending:

#### BUILDING LOCATION

The EPA Region 8 office is at 1595 Wynkoop Street, Denver, CO80202-1129. The building is located along the 16th Street Mall in downtown Denver, adjacent to Union Station and across from the Tattered Cover bookstore.

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#### TO GET TO THE HEARING ROOM

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#### SPEAKERS

Speakers will be allotted 5 minutes to testify at the hearing. Speakers will be assigned a speaker number upon arriving, and will be called to give their testimony; Submission of written remarks is not required, but will be gladly accepted. All remarks and submissions become part of the official public record.

Please print and bring your ticket with you.



319309461403610997001

**Eventbrite**

**Do you organize events?**

Start selling in minutes with Eventbrite!  
[www.eventbrite.com](http://www.eventbrite.com)

## Thornton, Marisa

---

**From:** Rosnick, Reid  
**Sent:** Tuesday, September 02, 2014 3:01 PM  
**To:** Thornton, Marisa  
**Subject:** FW: Changes to Subpart W website

**Importance:** High

---

**From:** Nesky, Anthony  
**Sent:** Monday, July 21, 2014 5:29 PM  
**To:** Romero, Carmen  
**Cc:** Thornton, Marisa; Rosnick, Reid; Herrenbruck, Glenna  
**Subject:** Changes to Subpart W website  
**Importance:** High

Dear Carmen and Marisa:

On

<http://www.epa.gov/radiation/neshaps/subpartw/rulemaking-activity.html>

Please make the following three changes

### Change No. 1

Under **'On this page:'**

Please change

**"Comment Period"** to

**"Comment Period Extended to 10/29/2014"**

and add a "New" graphic.

### Change No. 2

Please replace the section, "Requests for Extension of the Public Comment Period" as follows

### **Requests for Extension of the Public Comment Period**

In response to a number of requests, EPA has extended the public comment period for the proposed rulemaking for NESHAP Subpart W. **Comments are now due October 29, 2014.**

- [Federal Register Notice about the Extension](#) (2 pp, 216 KB [About PDF](#))
- [Request from Uranium Watch \(PDF\)](#) (2 pp, 58.9 KB [About PDF](#))
- [Request from NTAA \(PDF\)](#) (1 pp, 32.4 KB [About PDF](#))
- [Letter from Jennifer Thurston 6-19-14 \(PDF\)](#) (1 pp, 60K)
- [Hearing Request \(PDF\)](#) (5 pp, 82K)

### Change No. 3

Please replace the section, “EPA is proposing revisions to Subpart W. Comment period is open” as follows

### **EPA is proposing revisions to Subpart W. Comments due October 29, 2014.**

“National Emission Standards for radon emissions from Operating Uranium Mill Tailings,” Subpart W of 40 CFR Part 61. The proposed rule would require the use of generally available control technology (GACT) to limit radon emissions from tailings at all uranium recovery facilities. Specific control technologies would be required at conventional tailings impoundments, evaporation ponds and heap leach piles. The public is invited to submit comments on the proposed rulemaking. The docket (EPA-HQ-OAR-2008-0218) for this proposed rulemaking may be accessed at [Regulations.gov](#). Once in the docket, you can view the proposed rule and supporting documents. Written comments on the proposed rulemaking must be received on or before October 29, 2014.

Tony Nesky  
Center for Radiation Information and Outreach  
Tel: 202-343-9597  
[nesky.tony@epa.gov](mailto:nesky.tony@epa.gov)

---

**From:** Stahle, Susan  
**Sent:** Monday, July 21, 2014 4:37 PM  
**To:** Rosnick, Reid  
**Cc:** Thornton, Marisa; Nesky, Anthony  
**Subject:** updating Subpart W website for extension of public comment period

Hi –

I noticed the FR Notice was published today to extend the public comment period (see attached). Please update the “Comment Period” section of the Subpart W website and make sure this is posted to Subpart W website.

Thanks.

Susan Stahle  
Attorney-Advisor  
Air and Radiation Law Office  
Office of General Counsel  
U.S. Environmental Protection Agency  
202-564-1272 (ph)  
202-564-5603 (fax)  
[stahle.susan@epa.gov](mailto:stahle.susan@epa.gov)

## Thornton, Marisa

---

**From:** Rosnick, Reid  
**Sent:** Tuesday, September 02, 2014 3:01 PM  
**To:** Thornton, Marisa  
**Subject:** FW: Update to RPD Home page

**Importance:** High

---

**From:** Nesky, Anthony  
**Sent:** Monday, July 21, 2014 5:47 PM  
**To:** Thornton, Marisa; Romero, Carmen  
**Cc:** Rosnick, Reid; Herrenbruck, Glenna  
**Subject:** Update to RPD Home page  
**Importance:** High

Dear Carmen and Marissa:

On the RPD home page, under “Regulations Under Review.” Please replace the first bullet “Notice of Proposed Rulemaking”, with the following—

**Comment period extended to October 29, 2014.** [National Emission Standards for Hazardous Air Pollutants \(NESHAPs\)-Radon from Operating Uranium Mill Tailings](#) EPA has released a Notice of Proposed Rulemaking that would revise “National Emission Standards for Radon Emissions from Operating Mill Tailings,” Subpart W of 40 CFR Part 61. The public is invited to submit comments on the proposed rulemaking. Comments are due October 29, 2014.

Tony Nesky  
Center for Radiation Information and Outreach  
Tel: 202-343-9597  
[nesky.tony@epa.gov](mailto:nesky.tony@epa.gov)

## Thornton, Marisa

---

**From:** Rosnick, Reid  
**Sent:** Tuesday, September 02, 2014 3:01 PM  
**To:** Thornton, Marisa  
**Subject:** FW: Some HTML code is appearing on website: please fix.

---

**From:** Tracy, Lee-Ann [[mailto:Lee-Ann\\_Tracy@sra.com](mailto:Lee-Ann_Tracy@sra.com)]  
**Sent:** Monday, July 21, 2014 6:15 PM  
**To:** Nesky, Anthony  
**Cc:** Apostolico, Mary  
**Subject:** RE: Some HTML code is appearing on website: please fix.

Tony,

I think I've addressed all your requests/issues. I'm headed out for the evening, but if there are any more changes needed, send me an e-mail and I'll address them first thing in the morning.

Thanks,  
Lee-Ann

---

**From:** Nesky, Anthony [<mailto:Nesky.Tony@epa.gov>]  
**Sent:** Monday, July 21, 2014 4:33 PM  
**To:** Tracy, Lee-Ann  
**Subject:** RE: Some HTML code is appearing on website: please fix.

Thanks! I apologize if I inadvertently did something to inactivate it. I have one little change—for those registering to speak, there is an extra line break before "All remarks and submissions become part of the official public record."

Please make the above change. I then have one change I would like to discuss with you before proceeding; is possible to include the affiliation and address under Your Information, not other information. And is it possible to display the speaker information only once, since we are only allowing people to speak once. Let's discuss before proceeding with these 2 changes.

Tony Nesky  
Center for Radiation Information and Outreach  
Tel: 202-343-9597  
[nesky.tony@epa.gov](mailto:nesky.tony@epa.gov)

---

**From:** Tracy, Lee-Ann [[mailto:Lee-Ann\\_Tracy@sra.com](mailto:Lee-Ann_Tracy@sra.com)]  
**Sent:** Monday, July 21, 2014 4:08 PM  
**To:** Nesky, Anthony  
**Cc:** Apostolico, Mary  
**Subject:** RE: Some HTML code is appearing on website: please fix.

It should be there now. Sorry about that. I just re-saved it and it showed up on the view screen (even though the questions were already on the design page). Let me know if there is anything else.

Thanks,  
Lee-Ann

---

**From:** Nesky, Anthony [<mailto:Nesky.Tony@epa.gov>]  
**Sent:** Monday, July 21, 2014 3:44 PM  
**To:** Tracy, Lee-Ann  
**Cc:** Apostolico, Mary  
**Subject:** RE: Some HTML code is appearing on website: please fix.  
**Importance:** High

Dear Lee-Ann:

Thanks, the changes look great, but we seem to have lost some functionality. Before this set of changes, we asked for people's affiliations and whether they wanted to speak. We also asked if they had If they wanted to speak, they had to select their arrival time and were told that they could only speak at one event. Could you please restore this function for speakers, and ask all participants for their affiliation and whether they had special needs? I'm pretty sure the previous registration page had all of that.

Please call me at home at 703-329-6272 if you need to discuss this with me.

Tony Nesky  
Center for Radiation Information and Outreach  
Tel: 202-343-9597  
[nesky.tony@epa.gov](mailto:nesky.tony@epa.gov)

---

**From:** Tracy, Lee-Ann [[mailto:Lee-Ann\\_Tracy@sra.com](mailto:Lee-Ann_Tracy@sra.com)]  
**Sent:** Monday, July 21, 2014 11:37 AM  
**To:** Nesky, Anthony  
**Cc:** Apostolico, Mary; Miller, Beth  
**Subject:** RE: Some HTML code is appearing on website: please fix.

Requested changes have been made. Please check and confirm and let me know if you want any other changes and what time tomorrow you would like the site to go live.

Thanks,  
Lee-Ann

---

**From:** Nesky, Anthony [<mailto:Nesky.Tony@epa.gov>]  
**Sent:** Monday, July 21, 2014 11:09 AM  
**To:** Tracy, Lee-Ann  
**Cc:** Apostolico, Mary; Miller, Beth  
**Subject:** Some HTML code is appearing on website: please fix.  
**Importance:** High

Dear Lee-Ann:

Thanks for the prompt changes to the Eventbrite site. I notice that there is some HTML code appearing on the page. A screen shot is attached. Can you please fix it.

Also, as we discussed yesterday, on the Registration Information box, is it at all possible to add a line break in front of the headers—DRIVING DIRECTIONS, SECURITY REQUIREMENTS, etc, so that they are at the left margin. Right now, all the text runs together. If this is not possible, at the very least can you make the titles uppercase and underlined: DRIVING DIRECTIONS, SECURITY REQUIREMENTS, etc .

I'd like to make the site public tomorrow if possible. I'm working from home today and tomorrow: please call me at 703-329-6272 if you need to speak to me.

Thanks!

Tony Nesky  
Center for Radiation Information and Outreach  
Tel: 202-343-9597  
[nesky.tony@epa.gov](mailto:nesky.tony@epa.gov)

---

**From:** Tracy, Lee-Ann [[mailto:Lee-Ann\\_Tracy@sra.com](mailto:Lee-Ann_Tracy@sra.com)]  
**Sent:** Thursday, July 17, 2014 3:22 PM  
**To:** Nesky, Anthony  
**Cc:** Apostolico, Mary  
**Subject:** RE: Did you get my registration or test e-mail from Eventbrite?

Text has been changed.

Thanks,  
Lee-Ann

---

**From:** Nesky, Anthony [<mailto:Nesky.Tony@epa.gov>]  
**Sent:** Thursday, July 17, 2014 2:55 PM  
**To:** Tracy, Lee-Ann  
**Subject:** RE: Did you get my registration or test e-mail from Eventbrite?

Thanks. And here is one last (hopefully!) change. In the description on the first page:

“The public is invited to provide testimony or verbal comments on the proposed rulemaking at public hearings on September 3 and 4, 2014 at the EPA Region 8 Headquarters in Denver, CO. Two sessions will be held on each day...”

please delete testimony or, so that it reads as follows—

The public is invited to provide verbal comments on the proposed rulemaking at public hearings on September 3 and 4, 2014 at the EPA Region 8 Headquarters in Denver, CO. Two sessions will be held on each day

Tony Nesky  
Center for Radiation Information and Outreach  
Tel: 202-343-9597  
[nesky.tony@epa.gov](mailto:nesky.tony@epa.gov)

---

**From:** Tracy, Lee-Ann [[mailto:Lee-Ann\\_Tracy@sra.com](mailto:Lee-Ann_Tracy@sra.com)]  
**Sent:** Thursday, July 17, 2014 2:51 PM  
**To:** Nesky, Anthony  
**Subject:** RE: Did you get my registration or test e-mail from Eventbrite?

I'll work on that (i.e., Facebook link removal).

Thanks,  
Lee-Ann

---

**From:** Nesky, Anthony [<mailto:Nesky.Tony@epa.gov>]  
**Sent:** Thursday, July 17, 2014 2:17 PM  
**To:** Tracy, Lee-Ann  
**Subject:** RE: Did you get my registration or test e-mail from Eventbrite?

Dear Lee-Ann:

I received your registration, a test message from Eventbrite, and a question from.

I did see the language on the website that I thought was missing—the description of the Subpart W rule. Is it possible to delete the “Who’s Going” box and all links to Facebook?

Thanks!

Tony Nesky  
Center for Radiation Information and Outreach  
Tel: 202-343-9597  
[nesky.tony@epa.gov](mailto:nesky.tony@epa.gov)

---

**From:** Tracy, Lee-Ann [[mailto:Lee-Ann\\_Tracy@sra.com](mailto:Lee-Ann_Tracy@sra.com)]  
**Sent:** Thursday, July 17, 2014 2:01 PM  
**To:** Nesky, Anthony  
**Subject:** Did you get my registration or test e-mail from Eventbrite?

Thanks,  
Lee-Ann Tracy  
SRA International, Inc.  
3434 Washington Boulevard  
Arlington, VA 22201  
703.284.5056

Please consider the environment before printing this email or any attachments.

This electronic message transmission contains information from SRA International, Inc. which may be confidential, privileged or proprietary. The information is intended for the use of the individual or entity named above. If you are not the intended recipient, be aware that any disclosure, copying, distribution, or use of the contents of this information is strictly prohibited. If you have received this electronic information in error, please notify us immediately by telephone at 866-584-2143.

## Thornton, Marisa

---

**From:** Rosnick, Reid  
**Sent:** Tuesday, September 02, 2014 3:01 PM  
**To:** Thornton, Marisa  
**Subject:** FW: updating Subpart W website for extension of public comment period  
**Attachments:** FR Notice extending comment period 072114.pdf

---

**From:** Stahle, Susan  
**Sent:** Monday, July 21, 2014 4:37 PM  
**To:** Rosnick, Reid  
**Cc:** Thornton, Marisa; Nesky, Anthony  
**Subject:** updating Subpart W website for extension of public comment period

Hi –

I noticed the FR Notice was published today to extend the public comment period (see attached). Please update the “Comment Period” section of the Subpart W website and make sure this is posted to Subpart W website.

Thanks.

Susan Stahle  
Attorney-Advisor  
Air and Radiation Law Office  
Office of General Counsel  
U.S. Environmental Protection Agency  
202-564-1272 (ph)  
202-564-5603 (fax)  
[stahle.susan@epa.gov](mailto:stahle.susan@epa.gov)

impose any additional regulatory requirements on sources beyond those imposed by State law. Redesignation to attainment does not in and of itself create any new requirements, but rather results in the applicability of requirements contained in the CAA for areas that have been redesignated to attainment. Moreover, the Administrator is required to approve a SIP submission that complies with the provisions of the Act and applicable Federal regulations. 42 U.S.C. 7410(k); 40 CFR 52.02(a). Thus, in reviewing SIP submissions, EPA's role is to approve State choices, provided that they meet the criteria of the Clean Air Act. Accordingly, these actions merely propose to approve a State plan and redesignation request as meeting Federal requirements and do not impose additional requirements beyond those by State law. For these reasons, these proposed actions:

- Are not a "significant regulatory action" subject to review by the Office of Management and Budget under Executive Order 12866 (58 FR 51735, October 4, 1993) and Executive Order 13563 (76 FR 3821, January 21, 2011);
  - Do not impose an information collection burden under the provisions of the Paperwork Reduction Act (44 U.S.C. 3501 *et seq.*);
  - Are certified as not having a significant economic impact on a substantial number of small entities under the Regulatory Flexibility Act (5 U.S.C. 601 *et seq.*);
  - Do not contain any unfunded mandate or significantly or uniquely affect small governments, as described in the Unfunded Mandates Reform Act of 1995 (Pub. L. 104-4);
  - Do not have Federalism implications as specified in Executive Order 13132 (64 FR 43255, August 10, 1999);
  - Are not an economically significant regulatory action based on health or safety risks subject to Executive Order 13045 (62 FR 19885, April 23, 1997);
  - Are not a significant regulatory action subject to Executive Order 13211 (66 FR 28355, May 22, 2001);
  - Are not subject to requirements of Section 12(d) of the National Technology Transfer and Advancement Act of 1995 (15 U.S.C. 272 note) because application of those requirements would be inconsistent with the CAA; and
  - Do not provide EPA with the discretionary authority to address disproportionate human health or environmental effects with practical, appropriate, and legally permissible methods under Executive Order 12898 (59 FR 7629, February 16, 1994).
- In addition, this proposed rule does not have Tribal implications as

specified by Executive Order 13175 (65 FR 67249, November 9, 2000), because the SIP is not approved to apply in Indian country located in the State, and EPA notes that it will not impose substantial direct costs on Tribal governments or preempt Tribal law. Nonetheless, EPA has discussed the proposed action with the one Tribe, the Las Vegas Paiute Tribe, located within the Las Vegas Valley PM<sub>10</sub> nonattainment area.

#### List of Subjects

##### 40 CFR Part 52

Environmental protection, Air pollution control, Intergovernmental relations, Nitrogen dioxide, Particulate matter, Reporting and recordkeeping requirements, Sulfur dioxide.

##### 40 CFR Part 81

Environmental protection, Air pollution control, National parks, Wilderness areas.

Dated: June 27, 2014.

**Alexis Strauss,**

*Acting Regional Administrator, Region IX.*

[FR Doc. 2014-16575 Filed 7-18-14; 8:45 am]

**BILLING CODE 6560-50-P**

## ENVIRONMENTAL PROTECTION AGENCY

### 40 CFR Part 61

[EPA-HQ-OAR-2008-0218; FRL-9914-06-OAR]

RIN 2060-AP26

### Revisions to National Emission Standards for Radon Emissions From Operating Mill Tailings

**AGENCY:** Environmental Protection Agency (EPA).

**ACTION:** Proposed rule; extension of comment period.

**SUMMARY:** The Environmental Protection Agency is announcing an extension of the public comment period for the Notice of Proposed Rulemaking (NPRM) requesting public comment and information on revisions to the EPA's "National Emission Standards for Radon Emissions from Operating Mill Tailings". The EPA published the NPRM on May 2, 2014 in the **Federal Register**, which included a request for comments on or before July 31, 2014. The purpose of this action is to extend the public comment period an additional 90 days.

**DATES:** Written comments on the proposed rule published on May 2, 2014 (79 FR 25388) must be received on or before October 29, 2014.

**ADDRESSES:** Submit your comments, identified by Docket ID No. EPA-HQ-OAR-2008-0218, by one of the following methods:

- *www.regulations.gov:* Follow the on-line instructions for submitting comments.

- *Email:* [a-and-r-docket@epa.gov](mailto:a-and-r-docket@epa.gov).

- *Fax:* (202) 566-9744.

- *Mail:* U.S. Postal Service, send comments to: Air and Radiation Docket, EPA Docket Center, Docket ID No. EPA-HQ-OAR-2008-0218, 1200 Pennsylvania Ave. NW., Washington, DC 20460. Please include a total of two copies.

*Hand Delivery:* In person or by courier, deliver comments to: EPA Docket Center, Docket ID No. EPA-HQ-OAR-2008-0218, EPA West, Room 3334, 1301 Constitution Avenue NW., Washington, DC 20004. Such deliveries are only accepted during the Docket's normal hours of operation, and special arrangements should be made for deliveries of boxed information. Please include a total of two copies.

*Instructions:* Direct your comments to Docket ID No. EPA-HQ-OAR-2008-0218. The Agency's policy is that all comments received will be included in the public docket without change and may be made available online at [www.regulations.gov](http://www.regulations.gov), including any personal information provided, unless the comment includes information claimed to be Confidential Business Information (CBI) or other information whose disclosure is restricted by statute. Do not submit information that you consider to be CBI or otherwise protected through [www.regulations.gov](http://www.regulations.gov) or email. The [www.regulations.gov](http://www.regulations.gov) Web site is an "anonymous access" system, which means EPA will not know your identity or contact information unless you provide it in the body of your comment. If you send an email comment directly to EPA without going through [www.regulations.gov](http://www.regulations.gov) your email address will be automatically captured and included as part of the comment that is placed in the public docket and made available on the Internet. If you submit an electronic comment, EPA recommends that you include your name and other contact information in the body of your comment and with any disk or CD-ROM you submit. If EPA cannot read your comment due to technical difficulties and cannot contact you for clarification, EPA may not be able to consider your comment. Electronic files should avoid the use of special characters, any form of encryption, and be free of any defects or viruses. For additional information about the EPA's public docket, visit the

EPA Docket Center homepage at [www.epa.gov/epahome/dockets.htm](http://www.epa.gov/epahome/dockets.htm).

*Docket:* All documents in the docket are listed in the [www.regulations.gov](http://www.regulations.gov) index. Although listed in the index, some information is not publicly available, e.g., CBI or other information for which disclosure is restricted by statute. Certain other material, such as copyrighted material, will be publicly available only in hard copy. Publicly available docket materials are available either electronically in [www.regulations.gov](http://www.regulations.gov) or in hard copy at the EPA Docket Center, EPA West, Room 3334, 1301 Constitution Ave. NW., Washington, DC. The Public Reading Room is open from 8:30 a.m. to 4:30 p.m., Monday through Friday, excluding legal holidays. The telephone number for the Public Reading Room is (202) 566-1744, and the telephone number for the Docket Center is (202) 566-1742.

**FOR FURTHER INFORMATION CONTACT:** Reid J. Rosnick, EPA Office of Radiation and Indoor Air, (202) 343-9290, [rosnick.reid@epa.gov](mailto:rosnick.reid@epa.gov).

**SUPPLEMENTARY INFORMATION:**

**A. What should I consider as I prepare my comments for the EPA?**

1. *Tips for Preparing Your Comments.* When submitting comments, remember to:

- Identify the rulemaking by docket number, subject heading, **Federal Register** date and page number.
- Explain why you agree or disagree; suggest alternatives and substitute language for your requested changes.
- Describe any assumptions and provide any technical information and/or data that you used.
- If you estimate potential costs or burdens, explain how you arrived at your estimate in sufficient detail to allow it to be reproduced.
- Illustrate your concerns with specific examples and suggest alternatives.
- Explain your views as clearly as possible, avoiding the use of profanity or personal threats.
- Make sure to submit your comments by the comment period deadline identified.

**B. How can I get copies of this document, the proposed rule and other related information?**

The EPA has established a docket for this action under Docket ID No. EPA-HQ-OAR-2008-0218. The EPA has also developed a Web site for the NPRM at: [www.epa.gov/radiation/neshaps/subpartw/rulemaking-activity.html](http://www.epa.gov/radiation/neshaps/subpartw/rulemaking-activity.html). Please refer to the original **Federal**

**Register** notice on the NPRM for detailed information on accessing information related to the notice.

In response to requests for an extension, we are extending the public comment period for this NPRM through October 29, 2014. This extension will provide the public additional time to provide comment on updating this standard.

Dated: July 11, 2014.

**Janet G. McCabe,**

*Acting Assistant Administrator, Office of Air and Radiation.*

[FR Doc. 2014-17135 Filed 7-18-14; 8:45 am]

**BILLING CODE 6560-50-P**

**FEDERAL COMMUNICATIONS COMMISSION**

**47 CFR Part 54**

**[WC Docket No. 10-90; DA 14-944]**

**Wireline Competition Bureau Announces Posting of Broadband Data From Urban Rate Survey and Seeks Comment on Calculation of Reasonable Comparability Benchmark for Broadband Services**

**AGENCY:** Federal Communications Commission.

**ACTION:** Proposed rule.

**SUMMARY:** In this document, the Wireline Competition Bureau (Bureau) announces the posting of the fixed broadband services data collected in the 2013 urban rate survey, and explanatory notes regarding the data, on the Commission's Web site. The Bureau also proposes a specific methodology for calculating the reasonable comparability benchmark for fixed broadband services which would result in a broadband benchmark that ranges from \$68.48 to \$71.84 for services meeting the current broadband performance standard of 4 Mbps downstream/1 Mbps upstream, with the specific benchmark depending on the associated usage allowance.

**DATES:** Comments are due on or before August 20, 2014.

**ADDRESSES:** Interested parties may file comments on or before August 20, 2014. All pleadings are to reference WC Docket No. 10-90. Comments may be filed using the Commission's Electronic Comment Filing System (ECFS) or by filing paper copies, by any of the following methods:

- Electronic Filers: Comments may be filed electronically using the Internet by accessing the ECFS: <http://fjallfoss.fcc.gov/ecfs2/>.

- Paper Filers: Parties who choose to file by paper must file an original and one copy of each filing.

- People with Disabilities: To request materials in accessible formats for people with disabilities (Braille, large print, electronic files, audio format), send an email to [fcc504@fcc.gov](mailto:fcc504@fcc.gov) or call the Consumer & Governmental Affairs Bureau at (202) 418-0530 (voice), (202) 418-0432 (tty).

For detailed instructions for submitting comments and additional information on the rulemaking process, see the **SUPPLEMENTARY INFORMATION** section of this document.

**FOR FURTHER INFORMATION CONTACT:** Suzanne Yelen, Wireline Competition Bureau at (202) 418-0626 or TTY (202) 418-0484.

**SUPPLEMENTARY INFORMATION:** This is a synopsis of the Wireline Competition Bureau's Public Notice (Notice) in WC Docket No. 10-90; DA 14-944, released June 30, 2014. The complete text of this document is available for inspection and copying during normal business hours in the FCC Reference Information Center, Portals II, 445 12th Street SW., Room CY-A257, Washington, DC 20554. The document may also be purchased from the Commission's duplicating contractor, Best Copy and Printing, Inc., 445 12th Street SW., Room CY-B402, Washington, DC 20554, telephone (800) 378-3160 or (202) 863-2893, facsimile (202) 863-2898, or via Internet at <http://www.bcpweb.com>.

1. The Wireline Competition Bureau (Bureau) announces the posting of the fixed broadband services data collected in the 2013 urban rate survey, and explanatory notes regarding the data, on the Commission's Web site at <http://www.fcc.gov/encyclopedia/urban-rate-survey-data>. The Bureau (Bureau) also proposes a specific methodology for calculating the reasonable comparability benchmark for fixed broadband services. In the *USF/ICC Transformation Order*, the Commission required that as a condition of receiving Connect America Fund support, recipients must offer voice and broadband services in supported areas at rates that are reasonably comparable to rates for similar services in urban areas. The methodology proposed here would result in a broadband benchmark that ranges from \$68.48 to \$71.84 for services meeting the current broadband performance standard of 4 Mbps downstream/1 Mbps upstream, with the specific benchmark depending on the associated usage allowance.

2. Consistent with longstanding Commission precedent for the voice comparability benchmark, we will

## Thornton, Marisa

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**From:** Rosnick, Reid  
**Sent:** Tuesday, September 02, 2014 3:02 PM  
**To:** Thornton, Marisa  
**Subject:** FW: Hearing Registration is working: please check it out to see that it meets Region 8 needs

---

**From:** Diaz, Angelique  
**Sent:** Monday, July 21, 2014 3:33 PM  
**To:** Nesky, Anthony; Trulove-Cranor, Whitney  
**Cc:** Rosnick, Reid  
**Subject:** RE: Hearing Registration is working: please check it out to see that it meets Region 8 needs

Tony, I seemed to recall that there was going to be more information requested during registration. For example, affiliation as well as if the registrant has any special needs. Did we also say we were going to identify whether or not they were going to speak?

Whitney/Reid, am I missing any more information?

Angelique D. Diaz, Ph.D.  
Environmental Engineer  
Air Program, USEPA/Region 8  
1595 Wynkoop Street (8P-AR)  
Denver, CO 80202-1129  
Office: 303.312.6344  
Fax: 303.312.6064  
[diaz.angelique@epa.gov](mailto:diaz.angelique@epa.gov)

---

**From:** Nesky, Anthony  
**Sent:** Monday, July 21, 2014 1:11 PM  
**To:** Diaz, Angelique; Trulove-Cranor, Whitney  
**Cc:** Rosnick, Reid  
**Subject:** Hearing Registration is working: please check it out to see that it meets Region 8 needs  
**Importance:** High

Dear Angelique and Whitney:

I have tested the registration website for the Subpart W hearings, and it seems to work well. Please check it out to make sure it meets your needs. A example ticket and registration receipt is attached. Feel free to test the registration yourselves! Id appreciate your feedback today if possible, so that we can launch the site tomorrow.

The registration website is at:

<https://www.eventbrite.com/e/subpart-w-hearings-registration-1408042493>

Password: SRA

Please note that the password requirement will be removed when we make the site public.

Tony Nesky  
Center for Radiation Information and Outreach  
Tel: 202-343-9597  
[nesky.tony@epa.gov](mailto:nesky.tony@epa.gov)

## Thornton, Marisa

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**From:** Rosnick, Reid  
**Sent:** Tuesday, September 02, 2014 3:02 PM  
**To:** Thornton, Marisa  
**Subject:** FW: Hearing Registration is working: please check it out to see that it meets Region 8 needs

---

**From:** Nesky, Anthony  
**Sent:** Monday, July 21, 2014 3:34 PM  
**To:** Diaz, Angelique  
**Subject:** RE: Hearing Registration is working: please check it out to see that it meets Region 8 needs

It WAS there, let me see what happened

Tony Nesky  
Center for Radiation Information and Outreach  
Tel: 202-343-9597  
[nesky.tony@epa.gov](mailto:nesky.tony@epa.gov)

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**From:** Diaz, Angelique  
**Sent:** Monday, July 21, 2014 3:33 PM  
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Whitney/Reid, am I missing any more information?

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Office: 303.312.6344  
Fax: 303.312.6064  
[diaz.angelique@epa.gov](mailto:diaz.angelique@epa.gov)

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**From:** Nesky, Anthony  
**Sent:** Monday, July 21, 2014 1:11 PM  
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**Cc:** Rosnick, Reid  
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## Thornton, Marisa

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**From:** Rosnick, Reid  
**Sent:** Tuesday, September 02, 2014 3:02 PM  
**To:** Thornton, Marisa  
**Subject:** FW: Hearing Registration is working: please check it out to see that it meets Region 8 needs

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**From:** Nesky, Anthony  
**Sent:** Monday, July 21, 2014 3:38 PM  
**To:** Diaz, Angelique; Trulove-Cranor, Whitney  
**Cc:** Rosnick, Reid  
**Subject:** RE: Hearing Registration is working: please check it out to see that it meets Region 8 needs

Sorry, please hold off reviewing the site until I contact you again. We lost some registration features—let me get it fixed and get back to you as soon as I can.

Tony Nesky  
Center for Radiation Information and Outreach  
Tel: 202-343-9597  
[nesky.tony@epa.gov](mailto:nesky.tony@epa.gov)

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**From:** Diaz, Angelique  
**Sent:** Monday, July 21, 2014 3:33 PM  
**To:** Nesky, Anthony; Trulove-Cranor, Whitney  
**Cc:** Rosnick, Reid  
**Subject:** RE: Hearing Registration is working: please check it out to see that it meets Region 8 needs

Tony, I seemed to recall that there was going to be more information requested during registration. For example, affiliation as well as if the registrant has any special needs. Did we also say we were going to identify whether or not they were going to speak?

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Environmental Engineer  
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[diaz.angelique@epa.gov](mailto:diaz.angelique@epa.gov)

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**From:** Nesky, Anthony  
**Sent:** Monday, July 21, 2014 1:11 PM  
**To:** Diaz, Angelique; Trulove-Cranor, Whitney  
**Cc:** Rosnick, Reid

**Subject:** Hearing Registration is working; please check it out to see that it meets Region 8 needs

**Importance:** High

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Password: SRA

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Tony Nesky  
Center for Radiation Information and Outreach  
Tel: 202-343-9597  
[nesky.tony@epa.gov](mailto:nesky.tony@epa.gov)

## Thornton, Marisa

---

**From:** Rosnick, Reid  
**Sent:** Tuesday, September 02, 2014 3:02 PM  
**To:** Thornton, Marisa  
**Subject:** FW: Some HTML code is appearing on website: please fix.

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**From:** Tracy, Lee-Ann [[mailto:Lee-Ann\\_Tracy@sra.com](mailto:Lee-Ann_Tracy@sra.com)]  
**Sent:** Monday, July 21, 2014 4:08 PM  
**To:** Nesky, Anthony  
**Cc:** Apostolico, Mary  
**Subject:** RE: Some HTML code is appearing on website: please fix.

It should be there now. Sorry about that. I just re-saved it and it showed up on the view screen (even though the questions were already on the design page). Let me know if there is anything else.

Thanks,  
Lee-Ann

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**From:** Nesky, Anthony [<mailto:Nesky.Tony@epa.gov>]  
**Sent:** Monday, July 21, 2014 3:44 PM  
**To:** Tracy, Lee-Ann  
**Cc:** Apostolico, Mary  
**Subject:** RE: Some HTML code is appearing on website: please fix.  
**Importance:** High

Dear Lee-Ann:

Thanks, the changes look great, but we seem to have lost some functionality. Before this set of changes, we asked for people's affiliations and whether they wanted to speak. We also asked if they had If they wanted to speak, they had to select their arrival time and were told that they could only speak at one event. Could you please restore this function for speakers, and ask all participants for their affiliation and whether they had special needs? I'm pretty sure the previous registration page had all of that.

Please call me at home at 703-329-6272 if you need to discuss this with me.

Tony Nesky  
Center for Radiation Information and Outreach  
Tel: 202-343-9597  
[nesky.tony@epa.gov](mailto:nesky.tony@epa.gov)

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**From:** Tracy, Lee-Ann [[mailto:Lee-Ann\\_Tracy@sra.com](mailto:Lee-Ann_Tracy@sra.com)]  
**Sent:** Monday, July 21, 2014 11:37 AM  
**To:** Nesky, Anthony  
**Cc:** Apostolico, Mary; Miller, Beth  
**Subject:** RE: Some HTML code is appearing on website: please fix.

Requested changes have been made. Please check and confirm and let me know if you want any other changes and what time tomorrow you would like the site to go live.

Thanks,  
Lee-Ann

---

**From:** Nesky, Anthony [<mailto:Nesky.Tony@epa.gov>]  
**Sent:** Monday, July 21, 2014 11:09 AM  
**To:** Tracy, Lee-Ann  
**Cc:** Apostolico, Mary; Miller, Beth  
**Subject:** Some HTML code is appearing on website: please fix.  
**Importance:** High

Dear Lee-Ann:

Thanks for the prompt changes to the Eventbrite site. I notice that there is some HTML code appearing on the page. A screen shot is attached. Can you please fix it.

Also, as we discussed yesterday, on the Registration Information box, is it at all possible to add a line break in front of the headers—DRIVING DIRECTIONS, SECURITY REQUIREMENTS, etc, so that they are at the left margin. Right now, all the text runs together. If this is not possible, at the very least can you make the titles uppercase and underlined: DRIVING DIRECTIONS, SECURITY REQUIREMENTS, etc .

I'd like to make the site public tomorrow if possible. I'm working from home today and tomorrow: please call me at 703-329-6272 if you need to speak to me.

Thanks!

Tony Nesky  
Center for Radiation Information and Outreach  
Tel: 202-343-9597  
[nesky.tony@epa.gov](mailto:nesky.tony@epa.gov)

---

**From:** Tracy, Lee-Ann [[mailto:Lee-Ann\\_Tracy@sra.com](mailto:Lee-Ann_Tracy@sra.com)]  
**Sent:** Thursday, July 17, 2014 3:22 PM  
**To:** Nesky, Anthony  
**Cc:** Apostolico, Mary  
**Subject:** RE: Did you get my registration or test e-mail from Eventbrite?

Text has been changed.

Thanks,  
Lee-Ann

---

**From:** Nesky, Anthony [<mailto:Nesky.Tony@epa.gov>]  
**Sent:** Thursday, July 17, 2014 2:55 PM  
**To:** Tracy, Lee-Ann  
**Subject:** RE: Did you get my registration or test e-mail from Eventbrite?

Thanks. And here is one last (hopefully!) change. In the description on the first page:

“The public is invited to provide testimony or verbal comments on the proposed rulemaking at public hearings on September 3 and 4, 2014 at the EPA Region 8 Headquarters in Denver, CO. Two sessions will be held on each day...”

please delete testimony or, so that it reads as follows—

The public is invited to provide verbal comments on the proposed rulemaking at public hearings on September 3 and 4, 2014 at the EPA Region 8 Headquarters in Denver, CO. Two sessions will be held on each day

Tony Nesky  
Center for Radiation Information and Outreach  
Tel: 202-343-9597  
[nesky.tony@epa.gov](mailto:nesky.tony@epa.gov)

---

**From:** Tracy, Lee-Ann [[mailto:Lee-Ann\\_Tracy@sra.com](mailto:Lee-Ann_Tracy@sra.com)]  
**Sent:** Thursday, July 17, 2014 2:51 PM  
**To:** Nesky, Anthony  
**Subject:** RE: Did you get my registration or test e-mail from Eventbrite?

I'll work on that (i.e., Facebook link removal).

Thanks,  
Lee-Ann

---

**From:** Nesky, Anthony [<mailto:Nesky.Tony@epa.gov>]  
**Sent:** Thursday, July 17, 2014 2:17 PM  
**To:** Tracy, Lee-Ann  
**Subject:** RE: Did you get my registration or test e-mail from Eventbrite?

Dear Lee-Ann:

I received your registration, a test message from Eventbrite, and a question from.

I did see the language on the website that I thought was missing—the description of the Subpart W rule. Is it possible to delete the “Who’s Going” box and all links to Facebook?

Thanks!

Tony Nesky  
Center for Radiation Information and Outreach  
Tel: 202-343-9597  
[nesky.tony@epa.gov](mailto:nesky.tony@epa.gov)

---

**From:** Tracy, Lee-Ann [[mailto:Lee-Ann\\_Tracy@sra.com](mailto:Lee-Ann_Tracy@sra.com)]  
**Sent:** Thursday, July 17, 2014 2:01 PM  
**To:** Nesky, Anthony  
**Subject:** Did you get my registration or test e-mail from Eventbrite?

Thanks,  
Lee-Ann Tracy  
SRA International, Inc.  
3434 Washington Boulevard  
Arlington, VA 22201

703.284.5056

Please consider the environment before printing this email or any attachments.

This electronic message transmission contains information from SRA International, Inc. which may be confidential, privileged or proprietary. The information is intended for the use of the individual or entity named above. If you are not the intended recipient, be aware that any disclosure, copying, distribution, or use of the contents of this information is strictly prohibited. If you have received this electronic information in error, please notify us immediately by telephone at 866-584-2143.

## Thornton, Marisa

---

**From:** Rosnick, Reid  
**Sent:** Tuesday, September 02, 2014 3:01 PM  
**To:** Thornton, Marisa  
**Subject:** FW: Some HTML code is appearing on website: please fix.

---

**From:** Tracy, Lee-Ann [[mailto:Lee-Ann\\_Tracy@sra.com](mailto:Lee-Ann_Tracy@sra.com)]  
**Sent:** Monday, July 21, 2014 4:34 PM  
**To:** Nesky, Anthony  
**Subject:** RE: Some HTML code is appearing on website: please fix.

You didn't do anything to inactivate the registration questions. Do you want me to give you a call now to discuss?

Thanks,  
Lee-Ann

---

**From:** Nesky, Anthony [<mailto:Nesky.Tony@epa.gov>]  
**Sent:** Monday, July 21, 2014 4:33 PM  
**To:** Tracy, Lee-Ann  
**Subject:** RE: Some HTML code is appearing on website: please fix.

Thanks! I apologize if I inadvertently did something to inactivate it. I have one little change—for those registering to speak, there is an extra line break before "All remarks and submissions become part of the official public record."

Please make the above change. I then have one change I would like to discuss with you before proceeding; is possible to include the affiliation and address under Your Information, not other information. And is it possible to display the speaker information only once, since we are only allowing people to speak once. Let's discuss before proceeding with these 2 changes.

Tony Nesky  
Center for Radiation Information and Outreach  
Tel: 202-343-9597  
[nesky.tony@epa.gov](mailto:nesky.tony@epa.gov)

---

**From:** Tracy, Lee-Ann [[mailto:Lee-Ann\\_Tracy@sra.com](mailto:Lee-Ann_Tracy@sra.com)]  
**Sent:** Monday, July 21, 2014 4:08 PM  
**To:** Nesky, Anthony  
**Cc:** Apostolico, Mary  
**Subject:** RE: Some HTML code is appearing on website: please fix.

It should be there now. Sorry about that. I just re-saved it and it showed up on the view screen (even though the questions were already on the design page). Let me know if there is anything else.

Thanks,  
Lee-Ann

---

**From:** Nesky, Anthony [<mailto:Nesky.Tony@epa.gov>]  
**Sent:** Monday, July 21, 2014 3:44 PM  
**To:** Tracy, Lee-Ann  
**Cc:** Apostolico, Mary  
**Subject:** RE: Some HTML code is appearing on website: please fix.  
**Importance:** High

Dear Lee-Ann:

Thanks, the changes look great, but we seem to have lost some functionality. Before this set of changes, we asked for people's affiliations and whether they wanted to speak. We also asked if they had If they wanted to speak, they had to select their arrival time and were told that they could only speak at one event. Could you please restore this function for speakers, and ask all participants for their affiliation and whether they had special needs? I'm pretty sure the previous registration page had all of that.

Please call me at home at 703-329-6272 if you need to discuss this with me.

Tony Nesky  
Center for Radiation Information and Outreach  
Tel: 202-343-9597  
[nesky.tony@epa.gov](mailto:nesky.tony@epa.gov)

---

**From:** Tracy, Lee-Ann [[mailto:Lee-Ann\\_Tracy@sra.com](mailto:Lee-Ann_Tracy@sra.com)]  
**Sent:** Monday, July 21, 2014 11:37 AM  
**To:** Nesky, Anthony  
**Cc:** Apostolico, Mary; Miller, Beth  
**Subject:** RE: Some HTML code is appearing on website: please fix.

Requested changes have been made. Please check and confirm and let me know if you want any other changes and what time tomorrow you would like the site to go live.

Thanks,  
Lee-Ann

---

**From:** Nesky, Anthony [<mailto:Nesky.Tony@epa.gov>]  
**Sent:** Monday, July 21, 2014 11:09 AM  
**To:** Tracy, Lee-Ann  
**Cc:** Apostolico, Mary; Miller, Beth  
**Subject:** Some HTML code is appearing on website: please fix.  
**Importance:** High

Dear Lee-Ann:

Thanks for the prompt changes to the Eventbrite site. I notice that there is some HTML code appearing on the page. A screen shot is attached. Can you please fix it.

Also, as we discussed yesterday, on the Registration Information box, is it at all possible to add a line break in front of the headers—DRIVING DIRECTIONS, SECURITY REQUIREMENTS, etc, so that they are at the left margin. Right now, all the text runs together. If this is not possible, at the very least can you make the titles uppercase and underlined: DRIVING DIRECTIONS, SECURITY REQUIREMENTS, etc .

I'd like to make the site public tomorrow if possible. I'm working from home today and tomorrow: please call me at 703-329-6272 if you need to speak to me.

Thanks!

Tony Nesky  
Center for Radiation Information and Outreach  
Tel: 202-343-9597  
[nesky.tony@epa.gov](mailto:nesky.tony@epa.gov)

---

**From:** Tracy, Lee-Ann [[mailto:Lee-Ann\\_Tracy@sra.com](mailto:Lee-Ann_Tracy@sra.com)]  
**Sent:** Thursday, July 17, 2014 3:22 PM  
**To:** Nesky, Anthony  
**Cc:** Apostolico, Mary  
**Subject:** RE: Did you get my registration or test e-mail from Eventbrite?

Text has been changed.

Thanks,  
Lee-Ann

---

**From:** Nesky, Anthony [<mailto:Nesky.Tony@epa.gov>]  
**Sent:** Thursday, July 17, 2014 2:55 PM  
**To:** Tracy, Lee-Ann  
**Subject:** RE: Did you get my registration or test e-mail from Eventbrite?

Thanks. And here is one last (hopefully!) change. In the description on the first page:  
“The public is invited to provide testimony or verbal comments on the proposed rulemaking at public hearings on September 3 and 4, 2014 at the EPA Region 8 Headquarters in Denver, CO. Two sessions will be held on each day...”

please delete testimony or, so that it reads as follows—

The public is invited to provide verbal comments on the proposed rulemaking at public hearings on September 3 and 4, 2014 at the EPA Region 8 Headquarters in Denver, CO. Two sessions will be held on each day

Tony Nesky  
Center for Radiation Information and Outreach  
Tel: 202-343-9597  
[nesky.tony@epa.gov](mailto:nesky.tony@epa.gov)

---

**From:** Tracy, Lee-Ann [[mailto:Lee-Ann\\_Tracy@sra.com](mailto:Lee-Ann_Tracy@sra.com)]  
**Sent:** Thursday, July 17, 2014 2:51 PM  
**To:** Nesky, Anthony  
**Subject:** RE: Did you get my registration or test e-mail from Eventbrite?

I'll work on that (i.e., Facebook link removal).

Thanks,  
Lee-Ann

---

**From:** Nesky, Anthony [<mailto:Nesky.Tony@epa.gov>]  
**Sent:** Thursday, July 17, 2014 2:17 PM

**To:** Tracy, Lee-Ann  
**Subject:** RE: Did you get my registration or test e-mail from Eventbrite?

Dear Lee-Ann:

I received your registration, a test message from Eventbrite, and a question from.

I did see the language on the website that I thought was missing—the description of the Subpart W rule. Is it possible to delete the “Who’s Going” box and all links to Facebook?

Thanks!

Tony Nesky  
Center for Radiation Information and Outreach  
Tel: 202-343-9597  
[nesky.tony@epa.gov](mailto:nesky.tony@epa.gov)

---

**From:** Tracy, Lee-Ann [[mailto:Lee-Ann\\_Tracy@sra.com](mailto:Lee-Ann_Tracy@sra.com)]  
**Sent:** Thursday, July 17, 2014 2:01 PM  
**To:** Nesky, Anthony  
**Subject:** Did you get my registration or test e-mail from Eventbrite?

Thanks,  
Lee-Ann Tracy  
SRA International, Inc.  
3434 Washington Boulevard  
Arlington, VA 22201  
703.284.5056

Please consider the environment before printing this email or any attachments.

This electronic message transmission contains information from SRA International, Inc. which may be confidential, privileged or proprietary. The information is intended for the use of the individual or entity named above. If you are not the intended recipient, be aware that any disclosure, copying, distribution, or use of the contents of this information is strictly prohibited. If you have received this electronic information in error, please notify us immediately by telephone at 866-584-2143.

## Thornton, Marisa

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**From:** Rosnick, Reid  
**Sent:** Tuesday, September 02, 2014 3:03 PM  
**To:** Thornton, Marisa  
**Subject:** FW: Registration Confirmation for Subpart W Hearings  
**Attachments:** 1408042493-319240071-registration.pdf

---

**From:** Eventbrite [mailto:orders@eventbrite.com]  
**Sent:** Monday, July 21, 2014 3:29 PM  
**To:** Diaz, Angelique  
**Subject:** Registration Confirmation for Subpart W Hearings



Find events My Tickets

Hi Angelique, this is your registration confirmation for  
**Subpart W Hearings**

Organized by [U.S. Environmental Protection Agency](#)

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### Registration summary



**Mobile Summary**



...or...



**Paper Summary**

Open the email attachment  
or [download here](#)

# Message from U.S. Environmental Protection Agency

You are registered to attend the Subpart W Hearing.  
Please read the following before attending:

## BUILDING LOCATION

The EPA Region 8 office is at 1595 Wynkoop Street, Denver, CO80202-1129. The building is located along the 16th Street Mall in downtown Denver, adjacent to Union Station and across from the Tattered Cover bookstore.

## PARKING

The City of Denver provides information on parking here:

<http://www.denvergov.org/tabid/437781/Default.aspx>><http://www.denvergov.org/tabid/437781/Default.aspx>

## DRIVING DIRECTIONS

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Follow the "Airport Exit" signs to proceed south and west on Pena Boulevard for about 9 miles. Keep following the natural turn to the right as Pena Blvd. turns into Interstate 70 West, heading toward downtown. Follow I-70 West for 10 miles before exiting onto I-25 South. Two miles after turning south on I-25, take the Speer Avenue South exit and make a left towards downtown and the Pepsi Center. Upon crossing the Interstate, you will see the Pepsi Center on your right. Stay left and make a left at the stop light on Wewatta Street (there is a lefthand turn lane provided). Head across a small bridge and go straight until you reach 15th Street. Make a right on 15th Street, and your first left on Wynkoop Street. The EPA building is on the left, with the building entrance off of 16th Street.

If coming from the north, south or west--

Take Interstate 25 to the Speer Boulevard South exit and follow the directions two paragraphs above.

## SECURITY REQUIREMENTS

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**Video, as well as photos of any kind, are not allowed. Also, NO weapons of any kind are allowed in the building. This includes mace, knives, guns, etc. You will not be permitted in the building if you have any of these items.**

## TO GET TO THE HEARING ROOM

**After going through security, please proceed to the 2nd Floor Conference Center via the elevator. Conference Center attendees are not allowed above the 2nd floor without having an EPA escort. Outside of the meeting room, there will be a registration table where you will check-in and receive a temporary badge that must be worn at all times while in the building. Any visitor exiting the building during breaks or lunch will be required to pass through security screening upon return each time. At the conclusion of the conference, please return to the registration table to be checked out and turn in your temporary visitor badge.**

## SPEAKERS

**Speakers will be allotted 5 minutes to testify at the hearing. Speakers will be assigned a speaker number upon arriving, and will be called to give their testimony: Submission of written remarks is not**

required, but will be gladly accepted. All remarks and submissions become part of the official public record.

Please print and bring your ticket with you.

Have a question? Contact the organizer at [nesky.tony@epa.gov](mailto:nesky.tony@epa.gov)

## Order Summary

July 21, 2014

Order #: 319240071

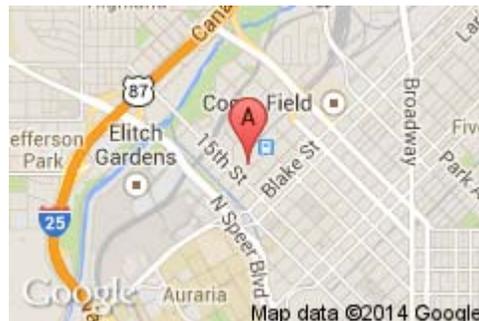
Name	Type	Quantity
Angelique Diaz	Subpart W Hearings - September 3, 2014, 9:00 AM - 12:00 PM MDT	1
Angelique Diaz	Subpart W Hearings - September 3, 2014, 1:00 PM - 5:00 PM MDT	1
Angelique Diaz	Subpart W Hearings - September 4, 2014, 9:00 AM - 12:00 PM MDT	1
Angelique Diaz	Subpart W Hearings - September 4, 2014, 1:00 PM - 5:00 PM MDT	1

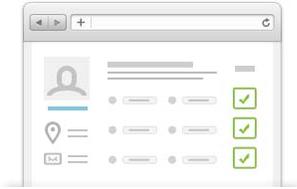
This order is subject to Eventbrite [Terms of Service](#), [Privacy Policy](#), and [Cookie Policy](#)

## About this event



EPA Region 8 Office  
1595 Wynkoop Street  
Denver, CO 80202-1129





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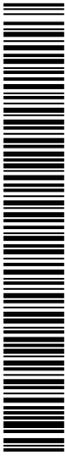
This email was sent to [diaz.angelique@epa.gov](mailto:diaz.angelique@epa.gov).

Eventbrite | 155 5th St, 7th Floor | San Francisco, CA 94103

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Please print and bring with you to the event

 319240071403524497001	Event <h1>Subpart W Hearings</h1>		
	Date+Time	Location EPA Region 8 Office 1595 Wynkoop Street Denver, CO 80202-1129	Payment Status Free Order
	Order Info Order #319240071. Ordered by Angelique Diaz on July 21, 2014 12:27 PM		
	Type Subpart W Hearings - September 4, 2014, 1:00 PM - 5:00 PM MDT		

You are registered to attend the Subpart W Hearing.  
Please read the following before attending:

#### BUILDING LOCATION

The EPA Region 8 office is at 1595 Wynkoop Street, Denver, CO80202-1129. The building is located along the 16th Street Mall in downtown Denver, adjacent to Union Station and across from the Tattered Cover bookstore.

#### PARKING

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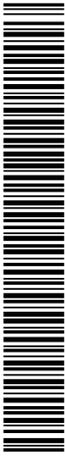
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		EPA Region 8 Office 1595 Wynkoop Street Denver, CO 80202-1129		Free Order
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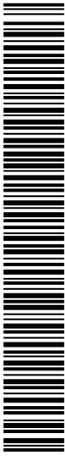
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		EPA Region 8 Office 1595 Wynkoop Street Denver, CO 80202-1129		Free Order
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Type	Subpart W Hearings - September 3, 2014, 1:00 PM - 5:00 PM MDT			

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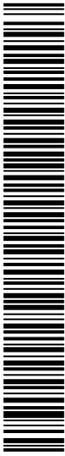
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319240071403524503001

**Eventbrite**

**Do you organize events?**

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## Thornton, Marisa

---

**From:** Rosnick, Reid  
**Sent:** Tuesday, September 02, 2014 3:03 PM  
**To:** Thornton, Marisa  
**Subject:** FW: Hearing Registration is working: please check it out to see that it meets Region 8 needs  
**Attachments:** 1408042493-318067891-registration.pdf  
**Importance:** High

---

**From:** Nesky, Anthony  
**Sent:** Monday, July 21, 2014 3:11 PM  
**To:** Diaz, Angelique; Trulove-Cranor, Whitney  
**Cc:** Rosnick, Reid  
**Subject:** Hearing Registration is working: please check it out to see that it meets Region 8 needs  
**Importance:** High

Dear Angelique and Whitney:

I have tested the registration website for the Subpart W hearings, and it seems to work well. Please check it out to make sure it meets your needs. A example ticket and registration receipt is attached. Feel free to test the registration yourselves! Id appreciate your feedback today if possible, so that we can launch the site tomorrow.

The registration website is at:

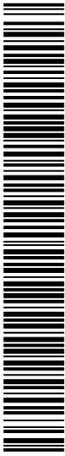
<https://www.eventbrite.com/e/subpart-w-hearings-registration-1408042493>

Password: SRA

Please note that the password requirement will be removed when we make the site public.

Tony Nesky  
Center for Radiation Information and Outreach  
Tel: 202-343-9597  
[nesky.tony@epa.gov](mailto:nesky.tony@epa.gov)

Please print and bring with you to the event

 318067891402057457001	Event <h1>Subpart W Hearings</h1>		
	Date+Time	Location EPA Region 8 Office 1595 Wynkoop Street Denver, CO 80202-1129	Name Lee-Ann Tracy
	Order Info Order #318067891. Ordered by Lee-Ann Tracy on July 17, 2014 10:49 AM		Payment Status Free Order
	Type Subpart W Hearings - September 3, 2014, 9:00 AM - 12:00 PM MDT		

You are registered to attend the Subpart W Hearing.  
Please read the following before attending:

#### BUILDING LOCATION

The EPA Region 8 office is at 1595 Wynkoop Street, Denver, CO80202-1129. The building is located along the 16th Street Mall in downtown Denver, adjacent to Union Station and across from the Tattered Cover bookstore.

#### PARKING

The City of Denver provides information on parking here: <http://www.denvergov.org/tabid/437781/Default.aspx>><http://www.denvergov.org/tabid/437781/Default.aspx>

#### DRIVING DIRECTIONS

If coming from Denver International Airport--  
Follow the "Airport Exit" signs to proceed south and west on Pena Boulevard for about 9 miles. Keep following the natural turn to the right as Pena Blvd. turns into Interstate 70 West, heading toward downtown. Follow I-70 West for 10 miles before exiting onto I-25 South. Two miles after turning south on I-25, take the Speer Avenue South exit and make a left towards downtown and the Pepsi Center. Upon crossing the Interstate, you will see the Pepsi Center on your right. Stay left and make a left at the stop light on Wewatta Street (there is a lefthand turn lane provided). Head across a small bridge and go straight until you reach 15th Street. Make a right on 15th Street, and your first left on Wynkoop Street. The EPA building is on the left, with the building entrance off of 16th Street.

If coming from the north, south or west--

Take Interstate 25 to the Speer Boulevard South exit and follow the directions two paragraphs above.

#### SECURITY REQUIREMENTS

Visitors to EPA's regional office must show identification and pass through security screening at the building entrance. The EPA Region 8 office building is a Level-4-security building, similar to what you experience at the airport. All visitors need to bring a government-issued photo ID (i.e., a driver's license). You will be asked to show this ID as you enter the lobby.

Please arrive at the building 15 minutes before any talks or events you have scheduled. Our security screening process is similar to screening at the airport: you will be asked to walk through a magnetometer (removing metal objects from your pockets), and your coats, bags etc. will be x-rayed. We regret that we do not have facilities to check coats or bags. You will be provided with a visitor badge after you pass through security. Please wear this at all times while you are in the building.

Video, as well as photos of any kind, are not allowed. Also, NO weapons of any kind are allowed in the building. This includes mace, knives, guns, etc. You will not be permitted in the building if you have any of these items.

#### TO GET TO THE HEARING ROOM

After going through security, please proceed to the 2nd Floor Conference Center via the elevator. Conference Center attendees are not allowed above the 2nd floor without having an EPA escort. Outside of the meeting room, there will be a registration table where you will check-in and receive a temporary badge that must be worn at all times while in the building. Any visitor exiting the building during breaks or lunch will be required to pass through security screening upon return each time. At the conclusion of the conference, please return to the registration table to be checked out and turn in your temporary visitor badge.

#### SPEAKERS

Speakers will be allotted 5 minutes to testify at the hearing. Speakers will be assigned a speaker number upon arriving, and will be called to give their testimony; Submission of written remarks is not required, but will be gladly accepted. All remarks and submissions become part of the official public record.

Please print and bring your ticket with you.



318067891402057457001

**Eventbrite**

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[www.eventbrite.com](http://www.eventbrite.com)

## Thornton, Marisa

---

**From:** Rosnick, Reid  
**Sent:** Tuesday, September 02, 2014 3:03 PM  
**To:** Thornton, Marisa  
**Subject:** FW: Some HTML code is appearing on website: please fix.

---

**From:** Tracy, Lee-Ann [[mailto:Lee-Ann\\_Tracy@sra.com](mailto:Lee-Ann_Tracy@sra.com)]  
**Sent:** Monday, July 21, 2014 11:37 AM  
**To:** Nesky, Anthony  
**Cc:** Apostolico, Mary; Miller, Beth  
**Subject:** RE: Some HTML code is appearing on website: please fix.

Requested changes have been made. Please check and confirm and let me know if you want any other changes and what time tomorrow you would like the site to go live.

Thanks,  
Lee-Ann

---

**From:** Nesky, Anthony [<mailto:Nesky.Tony@epa.gov>]  
**Sent:** Monday, July 21, 2014 11:09 AM  
**To:** Tracy, Lee-Ann  
**Cc:** Apostolico, Mary; Miller, Beth  
**Subject:** Some HTML code is appearing on website: please fix.  
**Importance:** High

Dear Lee-Ann:

Thanks for the prompt changes to the Eventbrite site. I notice that there is some HTML code appearing on the page. A screen shot is attached. Can you please fix it.

Also, as we discussed yesterday, on the Registration Information box, is it at all possible to add a line break in front of the headers—DRIVING DIRECTIONS, SECURITY REQUIREMENTS, etc, so that they are at the left margin. Right now, all the text runs together. If this is not possible, at the very least can you make the titles uppercase and underlined: DRIVING DIRECTIONS, SECURITY REQUIREMENTS, etc .

I'd like to make the site public tomorrow if possible. I'm working from home today and tomorrow: please call me at 703-329-6272 if you need to speak to me.

Thanks!

Tony Nesky  
Center for Radiation Information and Outreach  
Tel: 202-343-9597  
[nesky.tony@epa.gov](mailto:nesky.tony@epa.gov)

---

**From:** Tracy, Lee-Ann [[mailto:Lee-Ann\\_Tracy@sra.com](mailto:Lee-Ann_Tracy@sra.com)]  
**Sent:** Thursday, July 17, 2014 3:22 PM  
**To:** Nesky, Anthony

**Cc:** Apostolico, Mary

**Subject:** RE: Did you get my registration or test e-mail from Eventbrite?

Text has been changed.

Thanks,  
Lee-Ann

---

**From:** Nesky, Anthony [<mailto:Nesky.Tony@epa.gov>]

**Sent:** Thursday, July 17, 2014 2:55 PM

**To:** Tracy, Lee-Ann

**Subject:** RE: Did you get my registration or test e-mail from Eventbrite?

Thanks. And here is one last (hopefully!) change. In the description on the first page:

“The public is invited to provide testimony or verbal comments on the proposed rulemaking at public hearings on September 3 and 4, 2014 at the EPA Region 8 Headquarters in Denver, CO. Two sessions will be held on each day...”

please delete testimony or, so that it reads as follows—

The public is invited to provide verbal comments on the proposed rulemaking at public hearings on September 3 and 4, 2014 at the EPA Region 8 Headquarters in Denver, CO. Two sessions will be held on each day

Tony Nesky  
Center for Radiation Information and Outreach  
Tel: 202-343-9597  
[nesky.tony@epa.gov](mailto:nesky.tony@epa.gov)

---

**From:** Tracy, Lee-Ann [[mailto:Lee-Ann\\_Tracy@sra.com](mailto:Lee-Ann_Tracy@sra.com)]

**Sent:** Thursday, July 17, 2014 2:51 PM

**To:** Nesky, Anthony

**Subject:** RE: Did you get my registration or test e-mail from Eventbrite?

I'll work on that (i.e., Facebook link removal).

Thanks,  
Lee-Ann

---

**From:** Nesky, Anthony [<mailto:Nesky.Tony@epa.gov>]

**Sent:** Thursday, July 17, 2014 2:17 PM

**To:** Tracy, Lee-Ann

**Subject:** RE: Did you get my registration or test e-mail from Eventbrite?

Dear Lee-Ann:

I received your registration, a test message from Eventbrite, and a question from.

I did see the language on the website that I thought was missing—the description of the Subpart W rule. Is it possible to delete the “Who’s Going” box and all links to Facebook?

Thanks!

Tony Nesky  
Center for Radiation Information and Outreach  
Tel: 202-343-9597  
[nesky.tony@epa.gov](mailto:nesky.tony@epa.gov)

---

**From:** Tracy, Lee-Ann [[mailto:Lee-Ann\\_Tracy@sra.com](mailto:Lee-Ann_Tracy@sra.com)]  
**Sent:** Thursday, July 17, 2014 2:01 PM  
**To:** Nesky, Anthony  
**Subject:** Did you get my registration or test e-mail from Eventbrite?

Thanks,  
Lee-Ann Tracy  
SRA International, Inc.  
3434 Washington Boulevard  
Arlington, VA 22201  
703.284.5056

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## Thornton, Marisa

---

**From:** Rosnick, Reid  
**Sent:** Tuesday, September 02, 2014 3:03 PM  
**To:** Thornton, Marisa  
**Subject:** FW: Consultation WAR  
**Attachments:** WAR UMU Subpart W Consultation 07102014\_SJ.doc

---

**From:** Jackson, Scott  
**Sent:** Friday, July 18, 2014 1:02 PM  
**To:** Diaz, Angelique  
**Subject:** RE: Consultation WAR

I like the changes. I made some more though ☺ We can discuss on Monday if you'd like. Or, I'm in the office until noon today. Meeting w/ Phil Strobel at 11:30 though.

---

Scott Jackson, Unit Chief  
Indoor Air, Toxics and Transportation Unit  
U.S. EPA Region 8  
1595 Wynkoop Street (8P-AR)  
Denver, CO 80202-1129  
(303) 312-6107

---

**From:** Diaz, Angelique  
**Sent:** Friday, July 18, 2014 9:09 AM  
**To:** Jackson, Scott  
**Subject:** RE: Consultation WAR

[Here is a revised version.](#)

Angelique D. Diaz, Ph.D.  
Environmental Engineer  
Air Program, USEPA/Region 8  
1595 Wynkoop Street (8P-AR)  
Denver, CO 80202-1129  
Office: 303.312.6344  
Fax: 303.312.6064  
[diaz.angelique@epa.gov](mailto:diaz.angelique@epa.gov)

---

**From:** Jackson, Scott  
**Sent:** Thursday, July 17, 2014 3:36 PM  
**To:** Diaz, Angelique  
**Subject:** RE: Consultation WAR

That's fine. My main point is to just be a bit more descriptive to a reader like the RA about what the meeting was related to. He may not remember what Subpart W is or the CFR reference might not be as informative to him.

Thanks again for doing this.

Scott

---

Scott Jackson, Unit Chief  
Indoor Air, Toxics and Transportation Unit  
U.S. EPA Region 8  
1595 Wynkoop Street (8P-AR)  
Denver, CO 80202-1129  
(303) 312-6107

---

**From:** Diaz, Angelique  
**Sent:** Thursday, July 17, 2014 3:05 PM  
**To:** Jackson, Scott  
**Subject:** RE: Consultation WAR

Let me think about this some more. I'm not sure how to generally address the many issues that were brought up, and I don't want to mislead the reader into thinking they were all related to radon emissions.

Thanks,  
Angelique

Angelique D. Diaz, Ph.D.  
Environmental Engineer  
Air Program, USEPA/Region 8  
1595 Wynkoop Street (8P-AR)  
Denver, CO 80202-1129  
Office: 303.312.6344  
Fax: 303.312.6064  
[diaz.angelique@epa.gov](mailto:diaz.angelique@epa.gov)

---

**From:** Jackson, Scott  
**Sent:** Thursday, July 17, 2014 2:59 PM  
**To:** Diaz, Angelique  
**Subject:** RE: Consultation WAR

Thanks for doing this. Can you change "Subpart W" in the title to something that is more descriptive...more like "consultation on radon emissions proposed rule." Then, along the same lines, change the "40 CFR Part 61 Subpart W rulemaking" in the body to something more descriptive of the issues that were discussed. Since the title already says that the consultation is on the rule, we don't have to repeat that in the body.

---

Scott Jackson, Unit Chief  
Indoor Air, Toxics and Transportation Unit  
U.S. EPA Region 8  
1595 Wynkoop Street (8P-AR)  
Denver, CO 80202-1129

(303) 312-6107

---

**From:** Diaz, Angelique  
**Sent:** Thursday, July 17, 2014 2:40 PM  
**To:** Jackson, Scott  
**Subject:** Consultation WAR

What do you think?

Angelique D. Diaz, Ph.D.  
Environmental Engineer  
Air Program, USEPA/Region 8  
1595 Wynkoop Street (8P-AR)  
Denver, CO 80202-1129  
Office: 303.312.6344  
Fax: 303.312.6064  
[diaz.angelique@epa.gov](mailto:diaz.angelique@epa.gov)

## Thornton, Marisa

---

**From:** Rosnick, Reid  
**Sent:** Tuesday, September 02, 2014 3:06 PM  
**To:** Thornton, Marisa  
**Subject:** FW: Subpart W Hearing - Registration

---

**From:** Diaz, Angelique  
**Sent:** Thursday, July 17, 2014 1:59 PM  
**To:** Nesky, Anthony  
**Cc:** Rosnick, Reid  
**Subject:** Subpart W Hearing - Registration

Tony, I don't recall, does the registration process identify if an attendee will requires a translator? Thanks.

Any idea on timing for getting the hearing dates published on the website?

Thank you,  
Angelique

Angelique D. Diaz, Ph.D.  
Environmental Engineer  
Air Program, USEPA/Region 8  
1595 Wynkoop Street (8P-AR)  
Denver, CO 80202-1129  
Office: 303.312.6344  
Fax: 303.312.6064  
[diaz.angelique@epa.gov](mailto:diaz.angelique@epa.gov)

## Thornton, Marisa

---

**From:** Rosnick, Reid  
**Sent:** Tuesday, September 02, 2014 3:06 PM  
**To:** Thornton, Marisa  
**Subject:** FW: Subpart W Hearing - Registration

---

**From:** Nesky, Anthony  
**Sent:** Thursday, July 17, 2014 2:04 PM  
**To:** Diaz, Angelique  
**Cc:** Rosnick, Reid  
**Subject:** RE: Subpart W Hearing - Registration

Yes, the registration will ask there are special needs—I'll make sure that translator appears as an option. We are testing the registration website now. I was hoping to have it ready this week, but it will probably be Monday.,

Tony Nesky  
Center for Radiation Information and Outreach  
Tel: 202-343-9597  
[nesky.tony@epa.gov](mailto:nesky.tony@epa.gov)

---

**From:** Diaz, Angelique  
**Sent:** Thursday, July 17, 2014 1:59 PM  
**To:** Nesky, Anthony  
**Cc:** Rosnick, Reid  
**Subject:** Subpart W Hearing - Registration

Tony, I don't recall, does the registration process identify if an attendee will requires a translator? Thanks.

Any idea on timing for getting the hearing dates published on the website?

Thank you,  
Angelique

Angelique D. Diaz, Ph.D.  
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Denver, CO 80202-1129  
Office: 303.312.6344  
Fax: 303.312.6064  
[diaz.angelique@epa.gov](mailto:diaz.angelique@epa.gov)

## Thornton, Marisa

---

**From:** Rosnick, Reid  
**Sent:** Tuesday, September 02, 2014 3:06 PM  
**To:** Thornton, Marisa  
**Subject:** FW: Did you get my registration or test e-mail from Eventbrite?

---

**From:** Tracy, Lee-Ann [[mailto:Lee-Ann\\_Tracy@sra.com](mailto:Lee-Ann_Tracy@sra.com)]  
**Sent:** Thursday, July 17, 2014 2:51 PM  
**To:** Nesky, Anthony  
**Subject:** RE: Did you get my registration or test e-mail from Eventbrite?

I'll work on that (i.e., Facebook link removal).

Thanks,  
Lee-Ann

---

**From:** Nesky, Anthony [<mailto:Nesky.Tony@epa.gov>]  
**Sent:** Thursday, July 17, 2014 2:17 PM  
**To:** Tracy, Lee-Ann  
**Subject:** RE: Did you get my registration or test e-mail from Eventbrite?

Dear Lee-Ann:

I received your registration, a test message from Eventbrite, and a question from.

I did see the language on the website that I thought was missing—the description of the Subpart W rule. Is it possible to delete the “Who’s Going” box and all links to Facebook?

Thanks!

Tony Nesky  
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[nesky.tony@epa.gov](mailto:nesky.tony@epa.gov)

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**From:** Tracy, Lee-Ann [[mailto:Lee-Ann\\_Tracy@sra.com](mailto:Lee-Ann_Tracy@sra.com)]  
**Sent:** Thursday, July 17, 2014 2:01 PM  
**To:** Nesky, Anthony  
**Subject:** Did you get my registration or test e-mail from Eventbrite?

Thanks,  
Lee-Ann Tracy  
SRA International, Inc.  
3434 Washington Boulevard  
Arlington, VA 22201

703.284.5056

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## Thornton, Marisa

---

**From:** Snodgrass, Gary  
**Sent:** Tuesday, September 02, 2014 3:05 PM  
**To:** Snodgrass, Gary  
**Cc:** Lynch, Margaret  
**Subject:** EAS Notification: System Maintenance (9/4/2014)

The EPA Acquisition System (EAS) will be undergoing a time sensitive mandatory regulatory update on Thursday, September 4, 2014 from 6:30 AM (ET) to 12:00 PM (ET). The system will be unavailable during that period. Please be sure to log out of EAS before the start of the update and stay out of the system until you are informed that update is complete.

Best Regards,  
Gary

Gary Snodgrass  
ITSC EAS Application Team Lead/EAS Service Desk Manager  
Information Technology Service Center | Office of Acquisition Management | U.S. EPA  
RRB: 61120 | MS: 3801R  
202-564-2143 (w) | 202-565-2473 (f)  
EAS Service Desk: 202-564-2327 [Online Service Desk](#)

## Thornton, Marisa

---

**From:** Rosnick, Reid  
**Sent:** Tuesday, September 02, 2014 3:06 PM  
**To:** Thornton, Marisa  
**Subject:** FW: Did you get my registration or test e-mail from Eventbrite?

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**From:** Nesky, Anthony  
**Sent:** Thursday, July 17, 2014 2:55 PM  
**To:** Tracy, Lee-Ann  
**Subject:** RE: Did you get my registration or test e-mail from Eventbrite?

Thanks. And here is one last (hopefully!) change. In the description on the first page:

“The public is invited to provide testimony or verbal comments on the proposed rulemaking at public hearings on September 3 and 4, 2014 at the EPA Region 8 Headquarters in Denver, CO. Two sessions will be held on each day...”

please delete testimony or, so that it reads as follows—

The public is invited to provide verbal comments on the proposed rulemaking at public hearings on September 3 and 4, 2014 at the EPA Region 8 Headquarters in Denver, CO. Two sessions will be held on each day

Tony Nesky  
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**To:** Nesky, Anthony  
**Subject:** RE: Did you get my registration or test e-mail from Eventbrite?

I'll work on that (i.e., Facebook link removal).

Thanks,  
Lee-Ann

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**From:** Nesky, Anthony [<mailto:Nesky.Tony@epa.gov>]  
**Sent:** Thursday, July 17, 2014 2:17 PM  
**To:** Tracy, Lee-Ann  
**Subject:** RE: Did you get my registration or test e-mail from Eventbrite?

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## Thornton, Marisa

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**Sent:** Tuesday, September 02, 2014 3:06 PM  
**To:** Thornton, Marisa  
**Subject:** FW: Subpart W Hearing - Registration

---

**From:** Nesky, Anthony  
**Sent:** Thursday, July 17, 2014 2:57 PM  
**To:** Diaz, Angelique  
**Subject:** RE: Subpart W Hearing - Registration

We are definitely asking about language needs in the registration process. Did you ask because you are anticipating a need for a translator? If so, what language(s). Maybe we should start inquiring about translators now.

Tony Nesky  
Center for Radiation Information and Outreach  
Tel: 202-343-9597  
[nesky.tony@epa.gov](mailto:nesky.tony@epa.gov)

---

**From:** Diaz, Angelique  
**Sent:** Thursday, July 17, 2014 1:59 PM  
**To:** Nesky, Anthony  
**Cc:** Rosnick, Reid  
**Subject:** Subpart W Hearing - Registration

Tony, I don't recall, does the registration process identify if an attendee will require a translator? Thanks.

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Thank you,  
Angelique

Angelique D. Diaz, Ph.D.  
Environmental Engineer  
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Office: 303.312.6344  
Fax: 303.312.6064  
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**Cc:** Apostolico, Mary  
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Text has been changed.

Thanks,  
Lee-Ann

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**From:** Nesky, Anthony [<mailto:Nesky.Tony@epa.gov>]  
**Sent:** Thursday, July 17, 2014 2:55 PM  
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**Subject:** RE: Did you get my registration or test e-mail from Eventbrite?

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**To:** Nesky, Anthony  
**Subject:** RE: Did you get my registration or test e-mail from Eventbrite?

I'll work on that (i.e., Facebook link removal).

Thanks,

Lee-Ann

---

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**Sent:** Thursday, July 17, 2014 2:17 PM  
**To:** Tracy, Lee-Ann  
**Subject:** RE: Did you get my registration or test e-mail from Eventbrite?

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Thanks!

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Tel: 202-343-9597  
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---

**From:** Tracy, Lee-Ann [[mailto:Lee-Ann\\_Tracy@sra.com](mailto:Lee-Ann_Tracy@sra.com)]  
**Sent:** Thursday, July 17, 2014 2:01 PM  
**To:** Nesky, Anthony  
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Lee-Ann Tracy  
SRA International, Inc.  
3434 Washington Boulevard  
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703.284.5056

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## Thornton, Marisa

---

**From:** Rosnick, Reid  
**Sent:** Tuesday, September 02, 2014 3:05 PM  
**To:** Thornton, Marisa  
**Subject:** FW: Subpart W Hearing - Registration

---

**From:** Diaz, Angelique  
**Sent:** Thursday, July 17, 2014 4:23 PM  
**To:** Nesky, Anthony  
**Subject:** RE: Subpart W Hearing - Registration

I am not anticipating a need, but want to make sure there is a system in place to identify if one is needed.

Thanks,  
Angelique

Angelique D. Diaz, Ph.D.  
Environmental Engineer  
Air Program, USEPA/Region 8  
1595 Wynkoop Street (8P-AR)  
Denver, CO 80202-1129  
Office: 303.312.6344  
Fax: 303.312.6064  
[diaz.angelique@epa.gov](mailto:diaz.angelique@epa.gov)

---

**From:** Nesky, Anthony  
**Sent:** Thursday, July 17, 2014 12:57 PM  
**To:** Diaz, Angelique  
**Subject:** RE: Subpart W Hearing - Registration

We are definitely asking about language needs in the registration process. Did you ask because you are anticipating a need for a translator? If so, what language(s). Maybe we should start inquiring about translators now.

Tony Nesky  
Center for Radiation Information and Outreach  
Tel: 202-343-9597  
[nesky.tony@epa.gov](mailto:nesky.tony@epa.gov)

---

**From:** Diaz, Angelique  
**Sent:** Thursday, July 17, 2014 1:59 PM  
**To:** Nesky, Anthony  
**Cc:** Rosnick, Reid  
**Subject:** Subpart W Hearing - Registration

Tony, I don't recall, does the registration process identify if an attendee will requires a translator? Thanks.

Any idea on timing for getting the hearing dates published on the website?

Thank you,  
Angelique

Angelique D. Diaz, Ph.D.  
Environmental Engineer  
Air Program, USEPA/Region 8  
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Office: 303.312.6344  
Fax: 303.312.6064  
[diaz.angelique@epa.gov](mailto:diaz.angelique@epa.gov)

## Thornton, Marisa

---

**From:** Rosnick, Reid  
**Sent:** Tuesday, September 02, 2014 3:05 PM  
**To:** Thornton, Marisa  
**Subject:** FW: Consultation WAR

---

**From:** Jackson, Scott  
**Sent:** Thursday, July 17, 2014 4:59 PM  
**To:** Diaz, Angelique  
**Subject:** RE: Consultation WAR

Thanks for doing this. Can you change "Subpart W" in the title to something that is more descriptive...more like "consultation on radon emissions proposed rule." Then, along the same lines, change the "40 CFR Part 61 Subpart W rulemaking" in the body to something more descriptive of the issues that were discussed. Since the title already says that the consultation is on the rule, we don't have to repeat that in the body.

---

Scott Jackson, Unit Chief  
Indoor Air, Toxics and Transportation Unit  
U.S. EPA Region 8  
1595 Wynkoop Street (8P-AR)  
Denver, CO 80202-1129  
(303) 312-6107

---

**From:** Diaz, Angelique  
**Sent:** Thursday, July 17, 2014 2:40 PM  
**To:** Jackson, Scott  
**Subject:** Consultation WAR

What do you think?

Angelique D. Diaz, Ph.D.  
Environmental Engineer  
Air Program, USEPA/Region 8  
1595 Wynkoop Street (8P-AR)  
Denver, CO 80202-1129  
Office: 303.312.6344  
Fax: 303.312.6064  
[diaz.angelique@epa.gov](mailto:diaz.angelique@epa.gov)

## Thornton, Marisa

---

**From:** Rosnick, Reid  
**Sent:** Tuesday, September 02, 2014 3:05 PM  
**To:** Thornton, Marisa  
**Subject:** FW: Public Hearing in Region 8 for Subpart W

---

**From:** McPhilliamy, Marisa  
**Sent:** Thursday, July 17, 2014 5:34 PM  
**To:** Nesky, Anthony  
**Subject:** RE: Public Hearing in Region 8 for Subpart W

Sounds good! Are you going to need volunteers here in the Region to assist with registration and other logistics?

Thanks!

Marisa McPhilliamy  
Air Program  
US EPA Region 8  
1595 Wynkoop St. (8P-AR)  
Denver, CO 80202

p: 303.312.6965  
f: 303.312.6064

---

**From:** Nesky, Anthony  
**Sent:** Thursday, July 17, 2014 11:48 AM  
**To:** McPhilliamy, Marisa  
**Subject:** RE: Public Hearing in Region 8 for Subpart W

Let's pursue getting a court reporter through our contract vehicle. I'm pretty sure the contractor already has one lined up. If not, I may ask you for the name of the company that Region 8 has used before.

Tony Nesky  
Center for Radiation Information and Outreach  
Tel: 202-343-9597  
[nesky.tony@epa.gov](mailto:nesky.tony@epa.gov)

---

**From:** McPhilliamy, Marisa  
**Sent:** Thursday, July 17, 2014 1:45 PM  
**To:** Nesky, Anthony  
**Subject:** RE: Public Hearing in Region 8 for Subpart W

Hi Tony-

No, we do not have one under contract. We weren't sure if you all were doing the contracting or we were. Sounds like you are, is that correct? If that is the case, that seems like the biggest piece of the puzzle. As I mentioned I have no experience in this, so I don't want to drop the ball on anything we should be doing! That said, what do you need from me/us? How can we help?

Thanks!

Marisa McPhilliamy  
Air Program  
US EPA Region 8  
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Denver, CO 80202

p: 303.312.6965  
f: 303.312.6064

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**From:** Nesky, Anthony  
**Sent:** Thursday, July 17, 2014 11:41 AM  
**To:** McPhilliamy, Marisa  
**Subject:** RE: Public Hearing in Region 8 for Subpart W

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This is my first time dealing with this, so I'm not sure what else I need to ask! I will be in the office today and working from home tomorrow until noon. After that I am out until the 28<sup>th</sup>. If you have some time to chat, I would appreciate it.

Thanks!  
Marisa

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## Thornton, Marisa

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**From:** Rosnick, Reid  
**Sent:** Tuesday, September 02, 2014 3:04 PM  
**To:** Thornton, Marisa  
**Subject:** FW: Public Hearing in Region 8 for Subpart W

---

**From:** McPhilliamy, Marisa  
**Sent:** Thursday, July 17, 2014 5:35 PM  
**To:** Jackson, Scott; Diaz, Angelique  
**Subject:** FW: Public Hearing in Region 8 for Subpart W

FYI.....

Marisa McPhilliamy  
Air Program  
US EPA Region 8  
1595 Wynkoop St. (8P-AR)  
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Thanks!

**Marisa McPhilliamy**  
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This is my first time dealing with this, so I'm not sure what else I need to ask! I will be in the office today and working from home tomorrow until noon. After that I am out until the 28<sup>th</sup>. If you have some time to chat, I would appreciate it.

Thanks!  
Marisa

**Marisa McPhilliamy**  
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US EPA Region 8  
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## Thornton, Marisa

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**Sent:** Tuesday, September 02, 2014 3:04 PM  
**To:** Thornton, Marisa  
**Subject:** FW: Public Hearing in Region 8 for Subpart W

---

**From:** McPhilliamy, Marisa  
**Sent:** Thursday, July 17, 2014 5:56 PM  
**To:** Jackson, Scott  
**Subject:** RE: Public Hearing in Region 8 for Subpart W

Yes! I am happy to assist but if they do the heavy lifting that is fine by me!!!

Marisa McPhilliamy  
Air Program  
US EPA Region 8  
1595 Wynkoop St. (8P-AR)  
Denver, CO 80202

p: 303.312.6965  
f: 303.312.6064

---

**From:** Jackson, Scott  
**Sent:** Thursday, July 17, 2014 3:48 PM  
**To:** McPhilliamy, Marisa  
**Subject:** RE: Public Hearing in Region 8 for Subpart W

Thanks. Let's hope they can organize everything through their contractor.

---

Scott Jackson, Unit Chief  
Indoor Air, Toxics and Transportation Unit  
U.S. EPA Region 8  
1595 Wynkoop Street (8P-AR)  
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(303) 312-6107

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**From:** McPhilliamy, Marisa  
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## Thornton, Marisa

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**From:** Rosnick, Reid  
**Sent:** Tuesday, September 02, 2014 3:04 PM  
**To:** Thornton, Marisa  
**Subject:** FW: Public Hearing in Region 8 for Subpart W

---

**From:** Diaz, Angelique  
**Sent:** Friday, July 18, 2014 8:29 AM  
**To:** McPhilliamy, Marisa  
**Subject:** RE: Public Hearing in Region 8 for Subpart W

Thanks for updating me. Enjoy your time off!

Angelique D. Diaz, Ph.D.  
Environmental Engineer  
Air Program, USEPA/Region 8  
1595 Wynkoop Street (8P-AR)  
Denver, CO 80202-1129  
Office: 303.312.6344  
Fax: 303.312.6064  
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**To:** Jackson, Scott; Diaz, Angelique  
**Subject:** FW: Public Hearing in Region 8 for Subpart W

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**Subject:** Public Hearing in Region 8 for Subpart W

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US EPA Region 8  
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Denver, CO 80202

p: 303.312.6965  
f: 303.312.6064

## Thornton, Marisa

---

**From:** Rosnick, Reid  
**Sent:** Tuesday, September 02, 2014 3:04 PM  
**To:** Thornton, Marisa  
**Subject:** FW: FR Dailies: Revisions to National Emission Standards for Radon Emissions from Operating Mill Tailings is about to publish in the FR.

**Importance:** High

---

**From:** Rosnick, Reid  
**Sent:** Friday, July 18, 2014 8:52 AM  
**To:** Edwards, Jonathan; Perrin, Alan; Peake, Tom; Schultheisz, Daniel  
**Subject:** FW: FR Dailies: Revisions to National Emission Standards for Radon Emissions from Operating Mill Tailings is about to publish in the FR.  
**Importance:** High

FYI, Monday in the FR.

---

**From:** Stephanie Washington [<mailto:Washington.Stephanie@epamail.epa.gov>]  
**Sent:** Thursday, July 17, 2014 11:20 AM  
**To:** Rosnick, Reid; Lee, Raymond; Brooks, Patricia  
**Subject:** FR Dailies: Revisions to National Emission Standards for Radon Emissions from Operating Mill Tailings is about to publish in the FR.  
**Importance:** High

Your document is about to publish in the Federal Register. This publication date has been confirmed with the Office of the Federal Register.

Title: Revisions to National Emission Standards for Radon Emissions from Operating Mill Tailings

FRL #: 9914-06-OAR

Docket #: EPA-HQ-OAR-2008-0218

Published Date: 07/21/2014

## Thornton, Marisa

---

**From:** Rosnick, Reid  
**Sent:** Tuesday, September 02, 2014 3:04 PM  
**To:** Thornton, Marisa  
**Subject:** FW: FR Dailies: Revisions to National Emission Standards for Radon Emissions from Operating Mill Tailings is about to publish in the FR.

---

**From:** Rosnick, Reid  
**Sent:** Friday, July 18, 2014 8:57 AM  
**To:** Thornton, Marisa; Miller, Beth  
**Subject:** RE: FR Dailies: Revisions to National Emission Standards for Radon Emissions from Operating Mill Tailings is about to publish in the FR.

Thanks Marisa,

It probably won't be till late Monday or Tuesday.

---

**From:** Thornton, Marisa  
**Sent:** Friday, July 18, 2014 8:56 AM  
**To:** Rosnick, Reid; Miller, Beth  
**Subject:** RE: FR Dailies: Revisions to National Emission Standards for Radon Emissions from Operating Mill Tailings is about to publish in the FR.

Hey Reid,

Ok. I'm working at home today until 3:30pm. Just give me a holler when you're ready.

Marisa  
301-367-7778

---

**From:** Rosnick, Reid  
**Sent:** Friday, July 18, 2014 8:53 AM  
**To:** Miller, Beth; Thornton, Marisa  
**Subject:** FW: FR Dailies: Revisions to National Emission Standards for Radon Emissions from Operating Mill Tailings is about to publish in the FR.  
**Importance:** High

FYI,

We'll need to change the Subpart W website after confirmation in the FR.

Reid

---

**From:** Stephanie Washington [<mailto:Washington.Stephanie@epamail.epa.gov>]  
**Sent:** Thursday, July 17, 2014 11:20 AM  
**To:** Rosnick, Reid; Lee, Raymond; Brooks, Patricia

**Subject:** FR Dailies: Revisions to National Emission Standards for Radon Emissions from Operating Mill Tailings is about to publish in the FR.

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**From:** Rosnick, Reid  
**Sent:** Tuesday, September 02, 2014 3:03 PM  
**To:** Thornton, Marisa  
**Subject:** FW: FR Dailies: Revisions to National Emission Standards for Radon Emissions from Operating Mill Tailings is about to publish in the FR.

---

**From:** Edwards, Jonathan  
**Sent:** Friday, July 18, 2014 9:10 AM  
**To:** Flynn, Mike  
**Cc:** Perrin, Alan; Cherepy, Andrea  
**Subject:** Fwd: FR Dailies: Revisions to National Emission Standards for Radon Emissions from Operating Mill Tailings is about to publish in the FR.

Mike- FYI ...comment period extension due in FR Monday.

Sent from my iPhone

Begin forwarded message:

**From:** "Rosnick, Reid" <[Rosnick.Reid@epa.gov](mailto:Rosnick.Reid@epa.gov)>  
**Date:** July 18, 2014 at 8:51:31 AM EDT  
**To:** "Edwards, Jonathan" <[Edwards.Jonathan@epa.gov](mailto:Edwards.Jonathan@epa.gov)>, "Perrin, Alan" <[Perrin.Alan@epa.gov](mailto:Perrin.Alan@epa.gov)>, "Peake, Tom" <[Peake.Tom@epa.gov](mailto:Peake.Tom@epa.gov)>, "Schultheisz, Daniel" <[Schultheisz.Daniel@epa.gov](mailto:Schultheisz.Daniel@epa.gov)>  
**Subject:** FW: FR Dailies: Revisions to National Emission Standards for Radon Emissions from Operating Mill Tailings is about to publish in the FR.

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Docket #: EPA-HQ-OAR-2008-0218  
Published Date: 07/21/2014

## Thornton, Marisa

---

**From:** Rosnick, Reid  
**Sent:** Tuesday, September 02, 2014 3:07 PM  
**To:** Thornton, Marisa  
**Subject:** FW: Registration Notification for Subpart W Hearings  
**Attachments:** 1408042493-318067891-registration.pdf

---

**From:** Eventbrite [mailto:orders@eventbrite.com]  
**Sent:** Thursday, July 17, 2014 1:50 PM  
**To:** Nesky, Anthony  
**Subject:** Registration Notification for Subpart W Hearings



Find events My Tickets

Good news! A registration for [Subpart W Hearings](#) just came through. Below, you'll find a copy of the registration confirmation email for:

**Lee-Ann Tracy**  
[lee-ann\\_tracy@sra.com](mailto:lee-ann_tracy@sra.com)  
Order #318067891

Cheers!  
Eventbrite

P.S. You can turn off this notification anytime on your [email preferences page](#).

---

Hi Lee-Ann, this is your registration confirmation for  
[Subpart W Hearings](#)

Organized by [U.S. Environmental Protection Agency](#)

---

## Registration summary



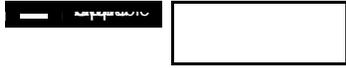
**Mobile Summary**

or



**Paper Summary**

Open the email attachment  
or [download here](#)



## Message from [U.S. Environmental Protection Agency](#)

You are registered to attend the Subpart W Hearing.  
Please read the following before attending:

### BUILDING LOCATION

The EPA Region 8 office is at 1595 Wynkoop Street, Denver, CO80202-1129. The building is located along the 16th Street Mall in downtown Denver, adjacent to Union Station and across from the Tattered Cover bookstore.

### PARKING

The City of Denver provides information on parking here:  
<http://www.denvergov.org/tabid/437781/Default.aspx>><http://www.denvergov.org/tabid/437781/Default.aspx>

### DRIVING DIRECTIONS

If coming from Denver International Airport--  
Follow the "Airport Exit" signs to proceed south and west on Pena Boulevard for about 9 miles. Keep following the natural turn to the right as Pena Blvd. turns into Interstate 70 West, heading toward downtown. Follow I-70 West for 10 miles before exiting onto I-25 South. Two miles after turning south on I-25, take the Speer Avenue South exit and make a left towards downtown and the Pepsi Center. Upon crossing the Interstate, you will see the Pepsi Center on your right. Stay left and make a left at the stop light on Wewatta Street (there is a lefthand turn lane provided). Head across a small bridge and go straight until you reach 15th Street. Make a right on 15th Street, and your first left on Wynkoop Street. The EPA building is on the left, with the building entrance off of 16th Street.

If coming from the north, south or west--

Take Interstate 25 to the Speer Boulevard South exit and follow the directions two paragraphs above.

### SECURITY REQUIREMENTS

Visitors to EPA's regional office must show identification and pass through security screening at the building entrance. The EPA Region 8 office building is a Level-4-security building, similar to what you experience at the airport. All visitors need to bring a government-issued photo ID (i.e., a driver's license). You will be asked to show this ID as you enter the lobby.

**Please arrive at the building 15 minutes before any talks or events you have scheduled. Our security screening process is similar to screening at the airport: you will be asked to walk through a magnetometer (removing metal objects from your pockets), and your coats, bags etc. will be x-rayed. We regret that we do not have facilities to check coats or bags. You will be provided with a visitor badge after you pass through security. Please wear this at all times while you are in the building.**

Video, as well as photos of any kind, are not allowed. Also, NO weapons of any kind are allowed in the building. This includes mace, knives, guns, etc. You will not be permitted in the building if you have any of these items.

**TO GET TO THE HEARING ROOM**

After going through security, please proceed to the 2nd Floor Conference Center via the elevator. Conference Center attendees are not allowed above the 2nd floor without having an EPA escort. Outside of the meeting room, there will be a registration table where you will check-in and receive a temporary badge that must be worn at all times while in the building. Any visitor exiting the building during breaks or lunch will be required to pass through security screening upon return each time. At the conclusion of the conference, please return to the registration table to be checked out and turn in your temporary visitor badge.

**SPEAKERS**

Speakers will be allotted 5 minutes to testify at the hearing. Speakers will be assigned a speaker number upon arriving, and will be called to give their testimony: Submission of written remarks is not required, but will be gladly accepted. All remarks and submissions become part of the official public record.

Please print and bring your ticket with you.

Have a question? Contact the organizer at [nesky.tony@epa.gov](mailto:nesky.tony@epa.gov)



## Order Summary

July 17, 2014

Order #: 318067891

Name	Type	Quantity
Lee-Ann Tracy	Subpart W Hearings - September 3, 2014, 9:00 AM - 12:00 PM MDT	1

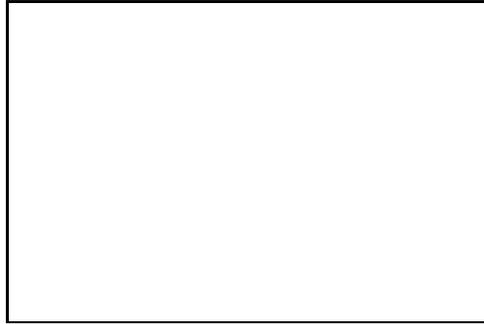
This order is subject to Eventbrite [Terms of Service](#), [Privacy Policy](#), and [Cookie Policy](#)



## About this event



EPA Region 8 Office  
1595 Wynkoop Street  
Denver, CO 80202-1129



---

## Registration Information

Registration #1 — Subpart W Hearings - September 3, 2014, 9:00 AM - 12:00 PM MDT

Name:

**Lee-Ann Tracy**

Email:

**lee-ann\_tracy@sra.com**

Contact Address

**test**

Who are you representing?

**test**

Which of the following sessions will you be attending? You may select more than one session to attend.

**September 3 9:00 AM - 12:00 PM MDT**

Do you wish to speak at one of the sessions?

**No**

What time do you intend to arrive?

**test**



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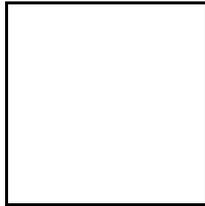
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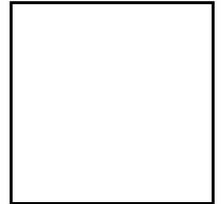
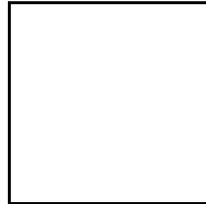
[MY ACCOUNT](#)

[CONTACT US](#)

[PRIVACY](#)

[TERMS](#)

[BLOG](#)



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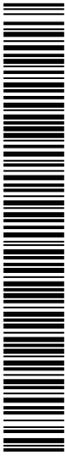
This email was sent to [lee-ann\\_tracy@sra.com](mailto:lee-ann_tracy@sra.com).

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Please print and bring with you to the event

 318067891402057457001	Event <h1>Subpart W Hearings</h1>		
	Date+Time	Location EPA Region 8 Office 1595 Wynkoop Street Denver, CO 80202-1129	Name Lee-Ann Tracy
	Order Info Order #318067891. Ordered by Lee-Ann Tracy on July 17, 2014 10:49 AM		Payment Status Free Order
	Type Subpart W Hearings - September 3, 2014, 9:00 AM - 12:00 PM MDT		

You are registered to attend the Subpart W Hearing.  
Please read the following before attending:

#### BUILDING LOCATION

The EPA Region 8 office is at 1595 Wynkoop Street, Denver, CO80202-1129. The building is located along the 16th Street Mall in downtown Denver, adjacent to Union Station and across from the Tattered Cover bookstore.

#### PARKING

The City of Denver provides information on parking here: <http://www.denvergov.org/tabid/437781/Default.aspx>><http://www.denvergov.org/tabid/437781/Default.aspx>

#### DRIVING DIRECTIONS

If coming from Denver International Airport--  
Follow the "Airport Exit" signs to proceed south and west on Pena Boulevard for about 9 miles. Keep following the natural turn to the right as Pena Blvd. turns into Interstate 70 West, heading toward downtown. Follow I-70 West for 10 miles before exiting onto I-25 South. Two miles after turning south on I-25, take the Speer Avenue South exit and make a left towards downtown and the Pepsi Center. Upon crossing the Interstate, you will see the Pepsi Center on your right. Stay left and make a left at the stop light on Wewatta Street (there is a lefthand turn lane provided). Head across a small bridge and go straight until you reach 15th Street. Make a right on 15th Street, and your first left on Wynkoop Street. The EPA building is on the left, with the building entrance off of 16th Street.

If coming from the north, south or west--

Take Interstate 25 to the Speer Boulevard South exit and follow the directions two paragraphs above.

#### SECURITY REQUIREMENTS

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Please print and bring your ticket with you.



318067891402057457001

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## Thornton, Marisa

---

**From:** Rosnick, Reid  
**Sent:** Tuesday, September 02, 2014 3:07 PM  
**To:** Thornton, Marisa  
**Subject:** FW: Public Hearing in Region 8 for Subpart W

---

**From:** McPhilliamy, Marisa  
**Sent:** Thursday, July 17, 2014 1:39 PM  
**To:** Nesky, Anthony  
**Subject:** Public Hearing in Region 8 for Subpart W

Hi-

Angelique Diaz asked that I contact you to get some more information on the upcoming public hearings to be held in Region 8. Is the expectation that the Region make the arrangements with a court reporter for the hearing? I understand the dates are 9/3 and 9/4. What are the times for the hearing? Do you have any expectations on the number of people you would be expecting?

This is my first time dealing with this, so I'm not sure what else I need to ask! I will be in the office today and working from home tomorrow until noon. After that I am out until the 28<sup>th</sup>. If you have some time to chat, I would appreciate it.

Thanks!  
Marisa

Marisa McPhilliamy  
Air Program  
US EPA Region 8  
1595 Wynkoop St. (8P-AR)  
Denver, CO 80202

p: 303.312.6965  
f: 303.312.6064

## Thornton, Marisa

---

**From:** Rosnick, Reid  
**Sent:** Tuesday, September 02, 2014 3:07 PM  
**To:** Thornton, Marisa  
**Subject:** FW: Public Hearing in Region 8 for Subpart W

---

**From:** McPhilliamy, Marisa  
**Sent:** Thursday, July 17, 2014 1:45 PM  
**To:** Nesky, Anthony  
**Subject:** RE: Public Hearing in Region 8 for Subpart W

Hi Tony-

No, we do not have one under contract. We weren't sure if you all were doing the contracting or we were. Sounds like you are, is that correct? If that is the case, that seems like the biggest piece of the puzzle. As I mentioned I have no experience in this, so I don't want to drop the ball on anything we should be doing! That said, what do you need from me/us? How can we help?

Thanks!

Marisa McPhilliamy  
Air Program  
US EPA Region 8  
1595 Wynkoop St. (8P-AR)  
Denver, CO 80202

p: 303.312.6965  
f: 303.312.6064

---

**From:** Nesky, Anthony  
**Sent:** Thursday, July 17, 2014 11:41 AM  
**To:** McPhilliamy, Marisa  
**Subject:** RE: Public Hearing in Region 8 for Subpart W

Thanks for contacting me! Right now we are pursuing a contract for a court reporter for 9/3 and 9/4. Does Region 8 already have a court reporter under contact?

Tony Nesky  
Center for Radiation Information and Outreach  
Tel: 202-343-9597  
[nesky.tony@epa.gov](mailto:nesky.tony@epa.gov)

---

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**Sent:** Thursday, July 17, 2014 1:39 PM  
**To:** Nesky, Anthony  
**Subject:** Public Hearing in Region 8 for Subpart W

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**To:** Thornton, Marisa  
**Subject:** FW: Public Hearing in Region 8 for Subpart W

---

**From:** Nesky, Anthony  
**Sent:** Thursday, July 17, 2014 1:48 PM  
**To:** McPhilliamy, Marisa  
**Subject:** RE: Public Hearing in Region 8 for Subpart W

Let's pursue getting a court reporter through our contract vehicle. I'm pretty sure the contractor already has one lined up. If not, I may ask you for the name of the company that Region 8 has used before.

Tony Nesky  
Center for Radiation Information and Outreach  
Tel: 202-343-9597  
[nesky.tony@epa.gov](mailto:nesky.tony@epa.gov)

---

**From:** McPhilliamy, Marisa  
**Sent:** Thursday, July 17, 2014 1:45 PM  
**To:** Nesky, Anthony  
**Subject:** RE: Public Hearing in Region 8 for Subpart W

Hi Tony-

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US EPA Region 8  
1595 Wynkoop St. (8P-AR)  
Denver, CO 80202

p: 303.312.6965  
f: 303.312.6064

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## Thornton, Marisa

---

**From:** Rosnick, Reid  
**Sent:** Tuesday, September 02, 2014 3:07 PM  
**To:** Thornton, Marisa  
**Subject:** FW: Language for website  
**Attachments:** websitelanguageRJR+tn.docx

---

**From:** Tracy, Lee-Ann [mailto:Lee-Ann\_Tracy@sra.com]  
**Sent:** Thursday, July 17, 2014 1:27 PM  
**To:** Nesky, Anthony  
**Subject:** RE: Language for website

Tony,

Everything that is in the attached document is on the registration website. So not sure what text you want added.

Thanks,  
Lee-Ann

---

**From:** Nesky, Anthony [mailto:Nesky.Tony@epa.gov]  
**Sent:** Thursday, July 17, 2014 12:14 PM  
**To:** Tracy, Lee-Ann  
**Subject:** Language for website  
**Importance:** High

Tony Nesky  
Center for Radiation Information and Outreach  
Tel: 202-343-9597  
[nesky.tony@epa.gov](mailto:nesky.tony@epa.gov)

---

**From:** Nesky, Anthony  
**Sent:** Monday, July 14, 2014 11:50 AM  
**To:** 'Apostolico, Mary'  
**Cc:** Beth Miller; Rosnick, Reid  
**Subject:** Revisions to Registration Website  
**Importance:** High

Dear Mary:

Attached is a document with new text for the hearing registration website. Please replace the "About the Organizer" sidebar with the sidebar provided in the text. Although we are changing the text of the website to encourage people to register by August 22, please leave the registration functional until COB August 29—that is our deadline to the EPA Security folks.

When you revise the website, could you please activate it, but not make it public. We'd like to test the registration.

I would like to open registration for real this week.

Please feel free to call me with questions

Tony Nesky  
Center for Radiation Information and Outreach  
Tel: 202-343-9597  
[nesky.tony@epa.gov](mailto:nesky.tony@epa.gov)

## Event Details

"National Emission Standards for Radon Emissions from Operating Uranium Mill Tailings," Subpart W of 40 CFR Part 61 sets limits on radon emissions from tailings at operating uranium mills. In accordance with the Clean Air Act Amendments of 1990, EPA formed a workgroup to review the standard and is proposing revisions to the rule.

The proposed rule would require the use of generally available control technology (GACT) to limit radon emissions from tailings at all uranium recovery facilities. Specific control technologies would be required at conventional tailings impoundments, evaporation ponds and heap leach piles. The proposed rule and background information can be found at:

<http://www.epa.gov/radiation/neshaps/subpartw/rulemaking-activity.html>

The public is invited to provide testimony or verbal comments on the proposed rulemaking at public hearings on September 3 and 4, 2014 at the EPA Region 8 Headquarters in Denver, CO. Two sessions will be held on each day:

**September 3: Session 1: 9:00 AM – 12:00 PM MDT**

**Session 2: 1:00 PM – 5:00 PM MDT**

**September 4: Session 3: 9:00 AM – 12:00 PM MDT**

**Session 4: 1:00 PM – 5:00 PM MDT**

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## Sidebar:

### About Hearings and Comments

Remarks made during the hearing will be transcribed and entered into the public docket. Each speaker will be allotted 5 minutes to present verbal remarks.

Attendance at the hearing is not necessary to comment on this proposed rulemaking. EPA also welcomes written comments. Instructions on how to submit written comments can be found at:

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No one method for submission of comments is “better” than another. EPA will review and respond to all substantive comments in the rulemaking docket, whether they were submitted in writing or verbally during this hearing.

## Thornton, Marisa

---

**From:** Rosnick, Reid  
**Sent:** Tuesday, September 02, 2014 3:08 PM  
**To:** Thornton, Marisa  
**Subject:** FW: Consultation Attendees  
**Attachments:** UMUConsultationAttendees.docx

---

**From:** Diaz, Angelique  
**Sent:** Thursday, July 17, 2014 1:15 PM  
**To:** Mitre, Alfreda  
**Subject:** Consultation Attendees

Here you go. Sorry again for excluding you from the original list.

-Angelique

Angelique D. Diaz, Ph.D.  
Environmental Engineer  
Air Program, USEPA/Region 8  
1595 Wynkoop Street (8P-AR)  
Denver, CO 80202-1129  
Office: 303.312.6344  
Fax: 303.312.6064  
[diaz.angelique@epa.gov](mailto:diaz.angelique@epa.gov)

## Ute Mountain Ute/EPA Consultation Re: Subpart W Rulemaking

### Attendees

NAME	AFFILIATION
Manual Heart	Ute Mountain Ute – Chairman
Priscilla BlackHawk Rentz	Ute Mountain Ute – Secretary
Deanne Wall	Ute Mountain Ute – Council Woman
Celene Hawkins	Ute Mountain Ute – General Counsel’s Office
Scott Clow	Ute Mountain Ute – Environmental Programs
Michael King	Ute Mountain Ute – Environmental Programs
Colin Larrick	Ute Mountain Ute – Environmental Programs
Tomoe Natori	Ute Mountain Ute – Environmental Programs
H. Michael Keller	Ute Mountain Ute – Utah Legal Counsel (VanCott firm)
Reid Rosnick	U.S. EPA Office of Radiation and Indoor Air (by phone)
Mike Flynn	U.S. EPA Office of Radiation and Indoor Air (by phone)
Jonathan Edwards	U.S. EPA Office of Radiation and Indoor Air (by phone)
Tom Peake	U.S. EPA Office of Radiation and Indoor Air (by phone)
Ingrid Rosencrantz	U.S. EPA Office of Radiation and Indoor Air (by phone)
Jed Harrison	U.S. EPA Office of Radiation and Indoor Air (by phone)
Pat Childers	U.S. EPA Office of Air and Radiation (by phone)
Alfreda Mitre	U.S. EPA Region 8 Tribal Assistance Program/Senior Policy Advisor
Deb Thomas	U.S. EPA Region 8 Office of Partnerships and Regulatory Affairs
Angelique Diaz	U.S. EPA Region 8 Air Program
Art Palomares	U.S. EPA Region 8 Water Enforcement Program (by phone)
Paul Logan	U.S. EPA Region 8 Office of Regional Counsel (by phone)

## Thornton, Marisa

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**Sent:** Tuesday, September 02, 2014 3:08 PM  
**To:** Thornton, Marisa  
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**Attachments:** websitelanguageRJR+tn.docx

**Importance:** High

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**From:** Nesky, Anthony  
**Sent:** Thursday, July 17, 2014 12:14 PM  
**To:** lee-Ann\_Tracy@sra.com  
**Subject:** Language for website  
**Importance:** High

Tony Nesky  
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**Cc:** Beth Miller; Rosnick, Reid  
**Subject:** Revisions to Registration Website  
**Importance:** High

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## Thornton, Marisa

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**From:** Rosnick, Reid  
**Sent:** Tuesday, September 02, 2014 3:08 PM  
**To:** Thornton, Marisa  
**Subject:** FW: Hearing Registration Website

---

**From:** Apostolico, Mary [mailto:Mary\_Apostolico@sra.com]  
**Sent:** Thursday, July 17, 2014 11:18 AM  
**To:** Nesky, Anthony  
**Cc:** lee-Ann\_Tracy@sra.com; Miller, Beth  
**Subject:** RE: Hearing Registration Website

Thanks for the comments Tony. We will make the revisions and notify you when you can review today.

---

**From:** Nesky, Anthony [mailto:Nesky.Tony@epa.gov]  
**Sent:** Thursday, July 17, 2014 10:12 AM  
**To:** Apostolico, Mary  
**Cc:** Tracy, Lee-Ann; Miller, Beth  
**Subject:** RE: Hearing Registration Website

Thanks, Mary. I hope you are feeling better.

Here is some feedback on the website—

1. On the previous website, there was a very good write-up on the home page about Subpart W. Is it possible to put it back? Is it simply obscured by the password box?
2. In the “Organizer” sidebar, there is an extra space in front of the word “No...”
3. In the registration information section, is it possible to add a blank line between the sections: BUILDING LOCATION, DIRECTIONS, SECURITY REQUIREMENTS, etc.
4. On the registration confirmation page, the text doesn’t fit in the sidebar. See the PDF file attached. It would be OK to move that text out of the sidebar, placing under the confirmation information if that is possible.
5. Please drop the link to Facebook, if possible.

I am teleworking today. Please call my personal cell phone at 703-403-7014 if you need to discuss this with me.

Tony Nesky  
Center for Radiation Information and Outreach  
Tel: 202-343-9597  
[nesky.tony@epa.gov](mailto:nesky.tony@epa.gov)

---

**From:** Apostolico, Mary [mailto:Mary\_Apostolico@sra.com]  
**Sent:** Thursday, July 17, 2014 12:11 AM  
**To:** Nesky, Anthony  
**Subject:** RE: Hearing Registration Website

Hi Tony

Website is ready to go. It can be viewed at:

The site is live <https://www.eventbrite.com/e/subpart-w-hearings-registration-1408042493> and the password is SRA (it should not be viewable without the password).

I was out sick today but if all goes well I will be back in tomorrow. If you have the time I would like to go over a few options with you about the website.

Thanks

Mary

---

**From:** Nesky, Anthony [<mailto:Nesky.Tony@epa.gov>]

**Sent:** Wednesday, July 16, 2014 7:29 PM

**To:** Apostolico, Mary

**Subject:** Hearing Registration Website

Dear Mary:

Please let me know how things are proceeding with the Eventbrite site for the Denver hearings in September. Thanks!

Tony Nesky  
Center for Radiation Information and Outreach  
Tel: 202-343-9597  
[nesky.tony@epa.gov](mailto:nesky.tony@epa.gov)

## Thornton, Marisa

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**Sent:** Tuesday, September 02, 2014 3:08 PM  
**To:** Thornton, Marisa  
**Subject:** FW: Hearing Registration Website  
**Attachments:** RegistrationPageView.pdf

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**Cc:** Tracy, Lee-Ann; Beth Miller  
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Thanks, Mary. I hope you are feeling better.

Here is some feedback on the website—

1. On the previous website, there was a very good write-up on the home page about Subpart W. Is it possible to put it back? Is it simply obscured by the password box?
2. In the “Organizer” sidebar, there is an extra space in front of the word “No...”
3. In the registration information section, is it possible to add a blank line between the sections: BUILDING LOCATION, DIRECTIONS, SECURITY REQUIREMENTS, etc.
4. On the registration confirmation page, the text doesn’t fit in the sidebar. See the PDF file attached. It would be OK to move that text out of the sidebar, placing under the confirmation information if that is possible.
5. Please drop the link to Facebook, if possible.

I am teleworking today. Please call my personal cell phone at 703-403-7014 if you need to discuss this with me.

Tony Nesky  
Center for Radiation Information and Outreach  
Tel: 202-343-9597  
[nesky.tony@epa.gov](mailto:nesky.tony@epa.gov)

---

**From:** Apostolico, Mary [[mailto:Mary\\_Apostolico@sra.com](mailto:Mary_Apostolico@sra.com)]  
**Sent:** Thursday, July 17, 2014 12:11 AM  
**To:** Nesky, Anthony  
**Subject:** RE: Hearing Registration Website

Hi Tony

Website is ready to go. It can be viewed at:  
The site is live <https://www.eventbrite.com/e/subpart-w-hearings-registration-1408042493> and the password is SRA (it should not be viewable without the password).

I was out sick today but if all goes well I will be back in tomorrow. If you have the time I would like to go over a few options with you about the website.

Thanks  
Mary

---

**From:** Nesky, Anthony [<mailto:Nesky.Tony@epa.gov>]  
**Sent:** Wednesday, July 16, 2014 7:29 PM  
**To:** Apostolico, Mary  
**Subject:** Hearing Registration Website

Dear Mary:

Please let me know how things are proceeding with the Eventbrite site for the Denver hearings in September. Thanks!

Tony Nesky  
Center for Radiation Information and Outreach  
Tel: 202-343-9597  
[nesky.tony@epa.gov](mailto:nesky.tony@epa.gov)

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## You're going to Subpart W Hearings!

### Your registration has been saved to Current Orders

[Order #3179596334](#) registrations

Confirmation emails have been sent to [nesky.tony@epa.gov](mailto:nesky.tony@epa.gov) and each attendee

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### Registration Information

#### Registration #1 — Subpart W Hearings - September 4, 2014, 1:00 PM - 5:00 PM MDT

Name: Tony Nesky

Email: [nesky.tony@epa.gov](mailto:nesky.tony@epa.gov)

Contact Address: 1200 Pennsylvania AV

Who are you representing?: self

Which of the following sessions will you be attending? You may select more than one session to attend.: September 3 9:00 AM - 12:00 PM MDT | September 3 1:00 PM - 4:00 PM MDT | September 4 9:00 AM - 12:00 PM MDT | September 4 1:00 PM - 4:00 PM MDT

Do you wish to speak at one of the sessions? : Yes

At which of the following sessions would you like to speak? You may select only one.: September 3 1:00 PM - 4:00 PM MDT

What time do you intend to arrive?: 2 PM

#### Registration #2 — Subpart W Hearings - September 3, 2014, 9:00 AM - 12:00 PM MDT

Name: Tony Nesky

Email: [nesky.tony@epa.gov](mailto:nesky.tony@epa.gov)

Contact Address: 1200 Pennsylvania AV

Who are you representing?: self

Which of the following sessions will you be attending? You may select more than one session to attend.: September 3 9:00 AM - 12:00 PM MDT | September 3 1:00 PM - 4:00 PM MDT | September 4 9:00 AM - 12:00 PM MDT | September 4 1:00 PM - 4:00 PM MDT

Do you wish to speak at one of the sessions? : Yes

At which of the following sessions would you like to speak? You may select only one.: September 3 1:00 PM - 4:00 PM MDT

#### Hi Tony,

You are registered to attend the Subpart W Hearing. Please read the following before attending:

#### BUILDING LOCATION

The EPA Region 8 office is at 1595 Wynkoop Street, Denver, CO80202-1129. The building is located along the 16th Street Mall in downtown Denver, adjacent to Union Station and across from the Tattered Cover bookstore.

#### PARKING

The City of Denver provides information on parking here:

<http://www.denvergov.org/tabid/437781/Default.aspx>

#### DRIVING DIRECTIONS

If coming from Denver International Airport--

Follow the "Airport Exit" signs to proceed south and west on Pena Boulevard for about 9 miles. Keep following the natural turn to the right as Pena Blvd. turns into Interstate 70 West, heading toward downtown.

Follow I-70 West for 10 miles before exiting onto I-25 South. Two miles after turning south on I-25, take the Speer Avenue South exit and make a left towards downtown and the Pepsi Center. Upon crossing the Interstate, you will see the Pepsi Center on your right. Stay left and make a left at the stop light on Wewatta Street (there is a lefthand turn lane provided). Head across a small bridge and go straight until you reach 15th Street. Make a right on 15th Street, and your first left on Wynkoop Street. The EPA building is on the left, with the building entrance off of 16th Street. If coming from the north, south or west--

Take Interstate 25 to the Speer Boulevard South exit and follow the directions two paragraphs above.

#### SECURITY REQUIREMENTS

Visitors to EPA's regional office must show identification and pass through security screening at the building entrance. The EPA Region 8 office building is a Level-4-security building, similar to what you experience at the airport. All visitors need to bring a government-issued photo ID (i.e., a driver's license). You will be asked to show this ID as you enter the lobby.

Please arrive at the building 15 minutes before any talks or events you have scheduled. Our security screening process is similar to screening at the airport: you will be asked to walk through a magnetometer (removing metal objects from your pockets), and your coats, bags etc. will be x-rayed. We regret that we do not have facilities to check coats or bags. You will be provided with a visitor badge after you pass through security. Please

What time do you intend to arrive?: 2 PM

**Registration #3 — Subpart W Hearings - September 3, 2014, 1:00 PM - 5:00 PM MDT**

Name: Tony Nesky

Email: nesky.tony@epa.gov

Contact Address: 1200 Pennsylvania AV

Who are you representing?: self

Which of the following sessions will you be attending? You may select more than one session to attend.: September 3 9:00 AM - 12:00 PM MDT | September 3 1:00 PM - 4:00 PM MDT | September 4 9:00 AM - 12:00 PM MDT | September 4 1:00 PM - 4:00 PM MDT

Do you wish to speak at one of the sessions? : Yes

At which of the following sessions would you like to speak? You may select only one.: September 3 1:00 PM - 4:00 PM MDT

What time do you intend to arrive?: 2 PM

**Registration #4 — Subpart W Hearings - September 4, 2014, 9:00 AM - 12:00 PM MDT**

Name: Tony Nesky

Email: nesky.tony@epa.gov

Contact Address: 1200 Pennsylvania AV

Who are you representing?: self

Which of the following sessions will you be attending? You may select more than one session to attend.: September 3 9:00 AM - 12:00 PM MDT | September 3 1:00 PM - 4:00 PM MDT | September 4 9:00 AM - 12:00 PM MDT | September 4 1:00 PM - 4:00 PM MDT

Do you wish to speak at one of the sessions? : Yes

At which of the following sessions would you like to speak? You may select only one.: September 3 1:00 PM - 4:00 PM MDT

What time do you intend to arrive?: 2 PM

wear this at all times while you are in the building. Video, as well as photos of any kind, are not allowed. Also, NO weapons of any kind are allowed in the building. This includes mace, knives, guns, etc. You will not be permitted in the building if you have any of these items.

**TO GET TO THE HEARING ROOM**  
After going through security, please proceed to the 2nd Floor Conference Center via the elevator. Conference Center attendees are not allowed above the 2nd floor without having an EPA escort. Outside of the meeting room, there will be a registration table where you will check-in and receive a temporary badge that must be worn at all times while in the building. Any visitor exiting the building during breaks or lunch will be required to pass through security screening upon return each time. At the conclusion of the conference, please return to the registration table to be checked out and turn in your temporary visitor badge.

**SPEAKERS**

Speakers will be allotted 5 minutes to testify at the hearing. Speakers will be assigned a speaker number upon arriving, and will be called to give their testimony: Submission of written remarks is not required, but will be gladly accepted. All remarks and submissions become part of the official public record. Please print and bring your ticket with you.

Thanks,  
U.S. Environmental  
Protection Agency

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## Thornton, Marisa

---

**From:** Rosnick, Reid  
**Sent:** Tuesday, September 02, 2014 3:10 PM  
**To:** Thornton, Marisa  
**Subject:** FW: Additional Reference

---

**From:** Nesky, Anthony  
**Sent:** Monday, July 14, 2014 1:42 PM  
**To:** Thornton, Marisa  
**Cc:** Romero, Carmen  
**Subject:** RE: Additional Reference

Dear Marissa:

On this page, that you efficiently and efficaciously put together—

<http://epastage.epa.gov/staging1/rpd/neshaps/subpartw/eiareferences.html>

There are a number of references where the links need to be replaced. They are as follows. Please replace the links in the titles with the links provided. Thanks!

- 40 CFR 192, Title 40 of the Code of Federal Regulations, Part 192, "[Health and Environmental Protection Standards for Uranium and Thorium Mill Tailings.](#)"  
[http://www.ecfr.gov/cgi-bin/text-idx?tpl=/ecfrbrowse/Title40/40cfr192\\_main\\_02.tpl](http://www.ecfr.gov/cgi-bin/text-idx?tpl=/ecfrbrowse/Title40/40cfr192_main_02.tpl)
- DOL (U.S. Department of Labor) 2012. "Consumer Price Index," Bureau of Labor Statistics, <ftp://ftp.bls.gov/pub/special.requests/cpi/cpi.ai.txt>, January 19, 2012.  
<http://www.bls.gov/cpi/>
- Earth Tech, Inc. 2002. "Cost Estimates for Various Base Liner Systems and GIA," prepared for Bureau of Land, Illinois Environmental Protection Agency, December 3, 2002.  
<http://www.epa.state.il.us/land/regulatory-programs/permits-and-management/alternate-landfill-liner-study/alternate-landfill-liner-study.pdf>
- EPA (Environmental Protection Agency) 1983. "[Background Information Document Proposed Standards for Radionuclides.](#)" Draft Report, EPA 520/1-83-001, Office of Radiation Programs, Environmental Protection Agency, March 1983.  
<http://nepis.epa.gov/Exe/ZyPURL.cgi?Dockkey=91019RZ3.txt>  
  
EPA (Environmental Protection Agency) 2010. "[Guidelines for Preparing Economic Analyses.](#)" EPA 240-R-10-001, December 2010. (297 pp, 3.85 MB) [About PDF](#)  
<http://yosemite.epa.gov/ee/epa/eed.nsf/pages/Guidelines.html>

- RK Consulting 2010a. ["Powertech Uranium Corp., NI 43-101 Preliminary Assessment, Dewey-Burdock Project, Custer and Fall River Counties, South Dakota,"](http://www.powertechuranium.com/i/pdf/DB_PEA_SRK_RPT_20100706.pdf) July 6, 2010.  
[http://www.powertechuranium.com/i/pdf/DB\\_PEA\\_SRK\\_RPT\\_20100706.pdf](http://www.powertechuranium.com/i/pdf/DB_PEA_SRK_RPT_20100706.pdf)
- Sandia National Laboratories 1998. ["Construction Costs of Six Landfill Cover Designs,"](http://www.osti.gov/scitech/servlets/purl/2604) Stephen F. Dwyer, Environmental Restoration Technology Department, SAND98-1988, September 1998  
<http://www.osti.gov/scitech/servlets/purl/2604>
- SC&A (S. Cohen and Associates) 2011. ["Risk Assessment Revision for 40 CFR Part 61 Subpart W – Radon Emissions from Operating Mill Tailings,](http://www.epa.gov/radiation/docs/neshaps/subpart-w/historical-rulemakings/subpart-w-risk.pdf) Task 4 – Detailed Risk Estimates," Contract Number EP-D-10-042, Work Assignment No. 1-04, Task 4, SC&A, Inc., Vienna, Virginia, March 25, 2011. (14 pp, 4.18 MB) [About PDF](http://www.epa.gov/radiation/docs/neshaps/subpart-w/historical-rulemakings/subpart-w-risk.pdf)  
<http://www.epa.gov/radiation/docs/neshaps/subpart-w/historical-rulemakings/subpart-w-risk.pdf>

Tony Nesky  
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Tel: 202-343-9597  
[nesky.tony@epa.gov](mailto:nesky.tony@epa.gov)

---

**From:** Thornton, Marisa  
**Sent:** Tuesday, July 08, 2014 2:39 PM  
**To:** Nesky, Anthony  
**Subject:** RE: Additional Reference

Done -

---

**From:** Nesky, Anthony  
**Sent:** Tuesday, July 08, 2014 2:09 PM  
**To:** Thornton, Marisa  
**Subject:** Additional Reference

Dear Marisa:

Here is one more reference for that page. It already appears on the webpage as follows--

SC&A (S. Cohen and Associates) 2011. "Risk Assessment Revision for 40 CFR Part 61 Subpart W – Radon Emissions from Operating Mill Tailings, Task 4 – Detailed Risk Estimates," Contract Number EP-D-10-042, Work Assignment No. 1-04, Task 4, SC&A, Inc., Vienna, Virginia, March 25, 2011.

**Metadata:**

**Title:** "Risk Assessment Revision for 40 CFR Part 61 Subpart W – Radon Emissions from Operating Mill Tailings, Task 4 – Detailed Risk Estimates  
**Author:** USEPA/OAR/Office of Air and Radiation  
**Subject:** Detailed Risk Estimates for Subpart W Revision  
**Keywords:** "NESHAP", "Subpart W", "Risk Assessment" "Risk Estimates"

Tony Nesky  
Center for Radiation Information and Outreach  
Tel: 202-343-9597  
[nesky.tony@epa.gov](mailto:nesky.tony@epa.gov)

---

**From:** Thornton, Marisa  
**Sent:** Tuesday, July 08, 2014 2:02 PM  
**To:** Nesky, Anthony  
**Subject:** RE: References 2.0 - Readable!??

I'm basically done but I'm in a mtg until 3:30pm. Just send the corrections.

---

**From:** Nesky, Anthony  
**Sent:** Tuesday, July 08, 2014 2:00 PM  
**To:** Thornton, Marisa  
**Subject:** RE: References 2.0 - Readable!??

Please keep working on it, and I'll check the whole web page.

Tony Nesky  
Center for Radiation Information and Outreach  
Tel: 202-343-9597  
[nesky.tony@epa.gov](mailto:nesky.tony@epa.gov)

---

**From:** Thornton, Marisa  
**Sent:** Tuesday, July 08, 2014 1:58 PM  
**To:** Nesky, Anthony  
**Subject:** RE: References 2.0 - Readable!??

I didn't check the other files. This one just stood out.

---

**From:** Nesky, Anthony  
**Sent:** Tuesday, July 08, 2014 1:57 PM  
**To:** Thornton, Marisa  
**Subject:** RE: References 2.0 - Readable!??

No, we'll need to rescan it.

Tony Nesky  
Center for Radiation Information and Outreach  
Tel: 202-343-9597  
[nesky.tony@epa.gov](mailto:nesky.tony@epa.gov)

---

**From:** Thornton, Marisa  
**Sent:** Tuesday, July 08, 2014 1:28 PM  
**To:** Nesky, Anthony  
**Subject:** RE: References 2.0 - Readable!??

Should this file be only 1 page? Which is the cover page? What's the correct number for this file FR153865 or FR15385?

- FR (Federal Register) 1985b. EPA established a work practice standard for Underground Uranium Mines, Volume 50, p. 15385, April 17, 1985.
  - **FR153865.PDF**
- Metadata:

- **Title:** Work practice standard for Underground Uranium Mines
- **Author:** EPA/OAR/Office of Radiation and Indoor Air
- **Subject:** Work practice standard for Underground Uranium Mines
- **Keywords:** "FR153865" "EPA" "work practice standards" "underground uranium mines"

**From:** Nesky, Anthony  
**Sent:** Tuesday, July 08, 2014 12:24 PM  
**To:** Thornton, Marisa  
**Subject:** FW: References 2.0 - Readable!!??

OK, let's try this again--

- FR (Federal Register) 1977. EPA established environmental protection standards for nuclear power operations pursuant to its authority under the Atomic Energy Act (AEA), Volume 42, p. 2858, January 13, 1977.
  - **FR2858.PDF**

**Metadata:**

**Title:** EPA established environmental protection standards

**Author:** EPA/OAR/Office of Radiation and Indoor Air

**Subject:** environmental protection standards for nuclear power operations;

**Keywords:** "FR2858" "EPA" "environmental protection standards," "Atomic Energy Act"

- FR (Federal Register) 1984. EPA withdrew the proposed NESHAPs for Elemental Phosphorus Plants, DOE-Facilities, and NRC-Licensed Facilities. Volume 49, p. 43906. October 23, 1984.
    - **FR43906.PDF**
  - **Metadata:**
  - **Title:** NESHAPS for Elemental Phosphorous Plants withdrawn"
  - **Author:** EPA/OAR/Office of Radiation and Indoor Air
  - **Subject:** Withdrawal of NESHAPS for Elemental Phosphorous Plants environmental protection standards for nuclear power operations;
  - **Keywords:** "FR43906" "EPA" "NESHAPS" "Phosphorous Plants"
- 
- FR (Federal Register) 1985a. EPA promulgated final standards for Elemental Phosphorus Plants, DOE-Facilities, and NRC-Licensed Facilities, Volume 50, p. 7280, February 8, 1985.
    - **FR7280.PDF**
  - **Metadata:**
  - **Title:** Final Standards for Elemental Phosphorous Plants DOE-Facilities, and NRC-Licensed Facilities"
  - **Author:** EPA/OAR/Office of Radiation and Indoor Air
  - **Subject:** Withdrawal of NESHAPS for Elemental Phosphorous Plants environmental protection standards for nuclear power operations;
  - **Keywords:** "FR7280" "EPA" "standards" "Phosphorous Plants" "DOE-Facilities" "NRC-Licensed Facilities"

- FR (Federal Register) 1985b. EPA established a work practice standard for Underground Uranium Mines, Volume 50, p. 15385, April 17, 1985.
  - **FR153865.PDF**
- **Metadata:**
- **Title:** Work practice standard for Underground Uranium Mines
- **Author:** EPA/OAR/Office of Radiation and Indoor Air
- **Subject:** Work practice standard for Underground Uranium Mines
- **Keywords:** "FR153865" "EPA" "work practice standards" "underground uranium mines"
  
- FR (Federal Register) 1986. 40 CFR Part 61, National Emission Standards for Hazardous Air Pollutants, Standards for Radon-222 Emissions from Licensed Uranium Mill Tailings; Final Rule, Volume 51, p. 34056, September 24, 1986.
  - **FR34056.PDF**
- **Metadata:**
- **Title:** National Emission Standards for Hazardous Air Pollutants, Standards for Radon-222 Emissions from Licensed Uranium Mill Tailings; Final Rule
- **Author:** EPA/OAR/Office of Radiation and Indoor Air
- **Subject:** NESHAP for Radon-222 Emissions from Licensed Uranium Mill Tailings"
- **Keywords:** "FR34056" "EPA" "NESHAP " "Radon-222" "Uranium" " Tailings"
  
- FR (Federal Register) 1989a. National Emission Standards for Hazardous Air Pollutants; Regulation of Radionuclides; Proposed Rule and Notice of Public Hearing, Volume 54, pp. 9612–9668, March 7, 1989.
  - **FR9612.PDF**
- **Metadata:**
- **Title:** National Emission Standards for Hazardous Air Pollutants; Regulation of Radionuclides; Proposed Rule
- **Author:** EPA/OAR/Office of Radiation and Indoor Air
- **Subject:** Proposed NESHAP for Radionuclides
- **Keywords:** "FR9612" "EPA" "NESHAP " "radionuclides"
  
- FR (Federal Register) 1989b. National Emission Standards for Hazardous Air Pollutants; Radionuclides, Volume 54, p. 51654, December 15, 1989.
  - **FR51654.PDF**
- **Metadata:**
- **Title:** National Emission Standards for Hazardous Air Pollutants; Regulation of Radionuclides
- **Author:** EPA/OAR/Office of Radiation and Indoor Air
- **Subject:** NESHAP for Radionuclides
- **Keywords:** "FR51654" "EPA" "NESHAP " "radionuclides"
  
- FR (Federal Register) 1994. National Emission Standards for Hazardous Air Pollutants; Final Rule, Volume 59, p. 36280, July 15, 1994.

- **FR36280.PDF**
- **Metadata:**
- **Title:** National Emission Standards for Hazardous Air Pollutants; Regulation of Radionuclides
- **Author:** EPA/OAR/Office of Radiation and Indoor Air
- **Subject:** Final NESHAP for Radionuclides
- **Keywords:** "FR36280." "EPA" "NESHAP" "radionuclides" "final" "rule"

Tony Nesky  
Center for Radiation Information and Outreach  
Tel: 202-343-9597  
[nesky.tony@epa.gov](mailto:nesky.tony@epa.gov)

---

**From:** Rosnick, Andrew  
**Sent:** Tuesday, July 08, 2014 12:14 PM  
**To:** Nesky, Anthony  
**Subject:** References 2.0 - Readable!!??

These should work but let me know if there is something wrong!!!

Andrew

---

- FR (Federal Register) 1977. EPA established environmental protection standards for nuclear power operations pursuant to its authority under the Atomic Energy Act (AEA), Volume 42, p. 2858, January 13, 1977.
  - **FR2858.PDF**
- FR (Federal Register) 1984. EPA withdrew the proposed NESHAPs for Elemental Phosphorus Plants, DOE-Facilities, and NRC-Licensed Facilities. Volume 49, p. 43906. October 23, 1984.
  - **FR43906.PDF**
- FR (Federal Register) 1985a. EPA promulgated final standards for Elemental Phosphorus Plants, DOE-Facilities, and NRC-Licensed Facilities, Volume 50, p. 7280, February 8, 1985.
  - **FR7280.PDF**
- FR (Federal Register) 1985b. EPA established a work practice standard for Underground Uranium Mines, Volume 50, p. 15385, April 17, 1985.
  - **FR153865.PDF**
- FR (Federal Register) 1986. 40 CFR Part 61, National Emission Standards for Hazardous Air Pollutants, Standards for Radon-222 Emissions from Licensed Uranium Mill Tailings; Final Rule, Volume 51, p. 34056, September 24, 1986.
  - **FR34056.PDF**

- FR (Federal Register) 1989a. National Emission Standards for Hazardous Air Pollutants; Regulation of Radionuclides; Proposed Rule and Notice of Public Hearing, Volume 54, pp. 9612–9668, March 7, 1989.
  - **FR9612.PDF**
  
- FR (Federal Register) 1989b. National Emission Standards for Hazardous Air Pollutants; Radionuclides, Volume 54, p. 51654, December 15, 1989.
  - **FR51654.PDF**
  
- FR (Federal Register) 1994. National Emission Standards for Hazardous Air Pollutants; Final Rule, Volume 59, p. 36280, July 15, 1994.
  - **FR36280.PDF**

## Thornton, Marisa

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**From:** Rosnick, Reid  
**Sent:** Tuesday, September 02, 2014 3:10 PM  
**To:** Thornton, Marisa  
**Subject:** FW: Missing or Incorrect References

**Importance:** High

---

**From:** Nesky, Anthony  
**Sent:** Monday, July 14, 2014 1:46 PM  
**To:** Rosnick, Andrew  
**Subject:** Missing or Incorrect References  
**Importance:** High

Dear Andrew:

I went through all the references and found a couple that were missing or incorrect. Can you please find the following:

FR (Federal Register) 1985a. [EPA promulgated final standards for Elemental Phosphorus Plants, DOE-Facilities, and NRC-Licensed Facilities](#), Volume 50, p. 7280, February 8, 1985. (8 pp, 4.02 MB) [About PDF](#)

*Note: This reference is incorrect in the document. Please find 40 FR 15706, April 6, 1983 and scan.*

BDC (Behre Dolbear & Company) 2011. "Scoping Study of the Strathmore Resources (US), LTD, Church Rock Deposit, McKinley County, New Mexico," April 4, 2011. (*Note THE COMPANY RETRACTED THIS REPORT*)

FR (Federal Register) 1979. EPA determination that radionuclides constitute a hazardous air pollutant within the meaning of section 112(a)(1), Volume 44, p. 78738, December 27, 1979.

SC&A (S. Cohen and Associates) 2010. ["Risk Assessment Revision for 40 CFR Part 61 Subpart W – Radon Emissions from Operating Mill Tailings, Task 5 – Radon Emission from Evaporation Ponds."](#)  
Contract Number EP-D-10-042, Work Assignment No. 1-04, Task 5, SC&A, Inc., Vienna, Virginia, November 2010. (80 pp, 2.02 MB) [About PDF](#)

VDEQ (Virginia Department of Environmental Quality) 2000. "Landfill Cost Estimate Form."

Tony Nesky  
Center for Radiation Information and Outreach  
Tel: 202-343-9597  
[nesky.tony@epa.gov](mailto:nesky.tony@epa.gov)

## Thornton, Marisa

---

**From:** Rosnick, Reid  
**Sent:** Tuesday, September 02, 2014 3:10 PM  
**To:** Thornton, Marisa  
**Subject:** FW: Blurb for NESHAP (Subpart W) Comment Period Extension FR

---

**From:** Hambrick, Amy  
**Sent:** Monday, July 14, 2014 5:39 PM  
**To:** Knapp, Kristien  
**Subject:** RE: Blurb for NESHAP (Subpart W) Comment Period Extension FR

Heads up sent. Thanks.

Amy

Amy Hambrick  
Special Assistant, Office of the Administrator  
U.S. Environmental Protection Agency  
(202)564-2234 (Office)  
(202)380-5116 (Cell)

---

**From:** Knapp, Kristien  
**Sent:** Monday, July 14, 2014 11:28 AM  
**To:** Hambrick, Amy  
**Cc:** Stewart, Lori  
**Subject:** FW: Blurb for NESHAP (Subpart W) Comment Period Extension FR

Amy – This is a simple, straightforward extension of a comment period. Janet signed it on Friday. It hadn't been identified in SCOUT, so it wasn't on the radar. ORIA drafted an Administrator's Report blurb for the notice's publication in the Federal Register, but we usually submit entries for signature (not publication). Instead of including this with next week's report, I wonder if you could run it by the folks who prepare the report to give them a heads up? It shouldn't get much attention.

---

**From:** Lee, Raymond  
**Sent:** Thursday, July 10, 2014 12:16 PM  
**To:** Knapp, Kristien  
**Cc:** Cherepy, Andrea; Rosnick, Reid  
**Subject:** Blurb for NESHAP (Subpart W) Comment Period Extension FR

Hi Kristien,

Here is the blurb for the NESHAP Subpart W FR extension you asked for. I took what we had submitted for the proposed rule and then tweaked it just a bit to talk about the comment period.

Please let us know if you need anything further.

Thanks!

Ray

**Statement for the White House Notification message:**

As early as the third week in July, EPA will publish a Federal Register notice that will extend the comment period for the proposed revisions to the “National Emission Standards for Operating Uranium Mill Tailings,” Subpart W of 40 CFR part 61. In the proposed rulemaking, EPA would require the use of generally available control technology (GACT) to limit radon emissions from tailings at all uranium recovery facilities. The Agency agreed to issue this proposed rulemaking through a settlement agreement with two groups: Colorado Citizens Against Toxic Waste and the Rocky Mountain Clean Air Action. The proposed action will add and refine definitions, as well as confirm its applicability to all facilities that manage uranium byproduct material/tailings, including conventional mills, in-situ leach facilities and heap leach piles.

The proposed rule was published on May 2, 2014, with the initial 90-day comment period ending on July 31, 2014. In response to formal requests from environmental organizations requesting extensions and to ensure that all our stakeholders are able to review the proposal and submit comments, EPA is officially extending public comment period for an additional 90 days (to October 29, 2014) with this notice.

## Thornton, Marisa

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**From:** Rosnick, Reid  
**Sent:** Tuesday, September 02, 2014 3:10 PM  
**To:** Thornton, Marisa  
**Subject:** FW: Additional Reference

---

**From:** Thornton, Marisa  
**Sent:** Tuesday, July 15, 2014 8:44 AM  
**To:** Nesky, Anthony  
**Cc:** Romero, Carmen  
**Subject:** RE: Additional Reference

Done!

---

**From:** Nesky, Anthony  
**Sent:** Monday, July 14, 2014 1:42 PM  
**To:** Thornton, Marisa  
**Cc:** Romero, Carmen  
**Subject:** RE: Additional Reference

Dear Marissa:

On this page, that you efficiently and efficaciously put together—

<http://epastage.epa.gov/staging1/rpd/neshaps/subpartw/eiareferences.html>

There are a number of references where the links need to be replaced. They are as follows. Please replace the links in the titles with the links provided. Thanks!

- 40 CFR 192, Title 40 of the Code of Federal Regulations, Part 192, "[Health and Environmental Protection Standards for Uranium and Thorium Mill Tailings.](#)"  
[http://www.ecfr.gov/cgi-bin/text-idx?tpl=/ecfrbrowse/Title40/40cfr192\\_main\\_02.tpl](http://www.ecfr.gov/cgi-bin/text-idx?tpl=/ecfrbrowse/Title40/40cfr192_main_02.tpl)
- DOL (U.S. Department of Labor) 2012. "Consumer Price Index," Bureau of Labor Statistics, <ftp://ftp.bls.gov/pub/special.requests/cpi/cpi.ai.txt>, January 19, 2012.  
<http://www.bls.gov/cpi/>
- Earth Tech, Inc. 2002. "Cost Estimates for Various Base Liner Systems and GIA," prepared for Bureau of Land, Illinois Environmental Protection Agency, December 3, 2002.  
<http://www.epa.state.il.us/land/regulatory-programs/permits-and-management/alternate-landfill-liner-study/alternate-landfill-liner-study.pdf>
- EPA (Environmental Protection Agency) 1983. "[Background Information Document Proposed Standards for Radionuclides.](#)" Draft Report, EPA 520/1-83-001, Office of Radiation Programs, Environmental Protection

Agency, March 1983.

<http://nepis.epa.gov/Exe/ZyPURL.cgi?Dockkey=91019RZ3.txt>

EPA (Environmental Protection Agency) 2010. "[Guidelines for Preparing Economic Analyses.](#)" EPA 240-R-10-001, December 2010. (297 pp, 3.85 MB) [About PDF](#)

<http://yosemite.epa.gov/ee/epa/eed.nsf/pages/Guidelines.html>

- RK Consulting 2010a. "[Powertech Uranium Corp., NI 43-101 Preliminary Assessment, Dewey-Burdock Project, Custer and Fall River Counties, South Dakota.](#)" July 6, 2010.

[http://www.powertechuranium.com/i/pdf/DB\\_PEA\\_SRK\\_RPT\\_20100706.pdf](http://www.powertechuranium.com/i/pdf/DB_PEA_SRK_RPT_20100706.pdf)

- Sandia National Laboratories 1998. "[Construction Costs of Six Landfill Cover Designs.](#)" Stephen F. Dwyer, Environmental Restoration Technology Department, SAND98-1988, September 1998

<http://www.osti.gov/scitech/servlets/purl/2604>

- SC&A (S. Cohen and Associates) 2011. "[Risk Assessment Revision for 40 CFR Part 61 Subpart W – Radon Emissions from Operating Mill Tailings](#), Task 4 – Detailed Risk Estimates," Contract Number EP-D-10-042, Work Assignment No. 1-04, Task 4, SC&A, Inc., Vienna, Virginia, March 25, 2011. (14 pp, 4.18 MB) [About PDF](#) <http://www.epa.gov/radiation/docs/neshaps/subpart-w/historical-rulemakings/subpart-w-risk.pdf>

Tony Nesky  
Center for Radiation Information and Outreach  
Tel: 202-343-9597  
[nesky.tony@epa.gov](mailto:nesky.tony@epa.gov)

---

**From:** Thornton, Marisa  
**Sent:** Tuesday, July 08, 2014 2:39 PM  
**To:** Nesky, Anthony  
**Subject:** RE: Additional Reference

Done -

---

**From:** Nesky, Anthony  
**Sent:** Tuesday, July 08, 2014 2:09 PM  
**To:** Thornton, Marisa  
**Subject:** Additional Reference

Dear Marisa:

Here is one more reference for that page. It already appears on the webpage as follows--

SC&A (S. Cohen and Associates) 2011. "Risk Assessment Revision for 40 CFR Part 61 Subpart W – Radon Emissions from Operating Mill Tailings, Task 4 – Detailed Risk Estimates," Contract Number EP-D-10-042, Work Assignment No. 1-04, Task 4, SC&A, Inc., Vienna, Virginia, March 25, 2011.

**Metadata:**

**Title:** "Risk Assessment Revision for 40 CFR Part 61 Subpart W – Radon Emissions from Operating Mill Tailings, Task 4 – Detailed Risk Estimates  
**Author:** USEPA/OAR/Office of Air and Radiation  
**Subject:** Detailed Risk Estimates for Subpart W Revision

Keywords: "NESHAP", "Subpart W", "Risk Assessment" "Risk Estimates"

Tony Nesky  
Center for Radiation Information and Outreach  
Tel: 202-343-9597  
[nesky.tony@epa.gov](mailto:nesky.tony@epa.gov)

---

**From:** Thornton, Marisa  
**Sent:** Tuesday, July 08, 2014 2:02 PM  
**To:** Nesky, Anthony  
**Subject:** RE: References 2.0 - Readable!??

I'm basically done but I'm in a mtg until 3:30pm. Just send the corrections.

---

**From:** Nesky, Anthony  
**Sent:** Tuesday, July 08, 2014 2:00 PM  
**To:** Thornton, Marisa  
**Subject:** RE: References 2.0 - Readable!??

Please keep working on it, and I'll check the whole web page.

Tony Nesky  
Center for Radiation Information and Outreach  
Tel: 202-343-9597  
[nesky.tony@epa.gov](mailto:nesky.tony@epa.gov)

---

**From:** Thornton, Marisa  
**Sent:** Tuesday, July 08, 2014 1:58 PM  
**To:** Nesky, Anthony  
**Subject:** RE: References 2.0 - Readable!??

I didn't check the other files. This one just stood out.

---

**From:** Nesky, Anthony  
**Sent:** Tuesday, July 08, 2014 1:57 PM  
**To:** Thornton, Marisa  
**Subject:** RE: References 2.0 - Readable!??

No, we'll need to rescan it.

Tony Nesky  
Center for Radiation Information and Outreach  
Tel: 202-343-9597  
[nesky.tony@epa.gov](mailto:nesky.tony@epa.gov)

---

**From:** Thornton, Marisa  
**Sent:** Tuesday, July 08, 2014 1:28 PM  
**To:** Nesky, Anthony  
**Subject:** RE: References 2.0 - Readable!??

Should this file be only 1 page? Which is the cover page? What's the correct number for this file FR153865 or FR15385?

- FR (Federal Register) 1985b. EPA established a work practice standard for Underground Uranium Mines, Volume 50, p. 15385, April 17, 1985.
  - **FR153865.PDF**
- **Metadata:**
- **Title:** Work practice standard for Underground Uranium Mines
- **Author:** EPA/OAR/Office of Radiation and Indoor Air
- **Subject:** Work practice standard for Underground Uranium Mines
- **Keywords:** "FR153865" "EPA" "work practice standards" "underground uranium mines"

**From:** Nesky, Anthony  
**Sent:** Tuesday, July 08, 2014 12:24 PM  
**To:** Thornton, Marisa  
**Subject:** FW: References 2.0 - Readable!!??

OK, let's try this again--

- FR (Federal Register) 1977. EPA established environmental protection standards for nuclear power operations pursuant to its authority under the Atomic Energy Act (AEA), Volume 42, p. 2858, January 13, 1977.
  - **FR2858.PDF**

**Metadata:**

**Title:** EPA established environmental protection standards

**Author:** EPA/OAR/Office of Radiation and Indoor Air

**Subject:** environmental protection standards for nuclear power operations;

**Keywords:** "FR2858" "EPA" "environmental protection standards," "Atomic Energy Act"

- FR (Federal Register) 1984. EPA withdrew the proposed NESHAPs for Elemental Phosphorus Plants, DOE-Facilities, and NRC-Licensed Facilities. Volume 49, p. 43906. October 23, 1984.
    - **FR43906.PDF**
  - **Metadata:**
  - **Title:** NESHAPS for Elemental Phosphorous Plants withdrawn"
  - **Author:** EPA/OAR/Office of Radiation and Indoor Air
  - **Subject:** Withdrawal of NESHAPS for Elemental Phosphorous Plants environmental protection standards for nuclear power operations;
  - **Keywords:** "FR43906" "EPA" "NESHAPS" "Phosphorous Plants"
- 
- FR (Federal Register) 1985a. EPA promulgated final standards for Elemental Phosphorus Plants, DOE-Facilities, and NRC-Licensed Facilities, Volume 50, p. 7280, February 8, 1985.
    - **FR7280.PDF**

- **Metadata:**
  - **Title:** Final Standards for Elemental Phosphorous Plants DOE-Facilities, and NRC-Licensed Facilities”
  - **Author:** EPA/OAR/Office of Radiation and Indoor Air
  - **Subject:** Withdrawal of NESHAPS for Elemental Phosphorous Plants environmental protection standards for nuclear power operations;
  - **Keywords:** “FR7280” “EPA” “standards” “Phosphorous Plants” “DOE-Facilities” “NRC-Licensed Facilities”
- 
- FR (Federal Register) 1985b. EPA established a work practice standard for Underground Uranium Mines, Volume 50, p. 15385, April 17, 1985.
    - **FR153865.PDF**
  - **Metadata:**
  - **Title:** Work practice standard for Underground Uranium Mines
  - **Author:** EPA/OAR/Office of Radiation and Indoor Air
  - **Subject:** Work practice standard for Underground Uranium Mines
  - **Keywords:** “FR153865” “EPA” “work practice standards” “underground uranium mines”
- 
- FR (Federal Register) 1986. 40 CFR Part 61, National Emission Standards for Hazardous Air Pollutants, Standards for Radon-222 Emissions from Licensed Uranium Mill Tailings; Final Rule, Volume 51, p. 34056, September 24, 1986.
    - **FR34056.PDF**
  - **Metadata:**
  - **Title:** National Emission Standards for Hazardous Air Pollutants, Standards for Radon-222 Emissions from Licensed Uranium Mill Tailings; Final Rule
  - **Author:** EPA/OAR/Office of Radiation and Indoor Air
  - **Subject:** NESHAP for Radon-222 Emissions from Licensed Uranium Mill Tailings”
  - **Keywords:** “FR34056” “EPA” “NESHAP” “Radon-222” “Uranium” “Tailings”
- 
- FR (Federal Register) 1989a. National Emission Standards for Hazardous Air Pollutants; Regulation of Radionuclides; Proposed Rule and Notice of Public Hearing, Volume 54, pp. 9612–9668, March 7, 1989.
    - **FR9612.PDF**
  - **Metadata:**
  - **Title:** National Emission Standards for Hazardous Air Pollutants; Regulation of Radionuclides; Proposed Rule
  - **Author:** EPA/OAR/Office of Radiation and Indoor Air
  - **Subject:** Proposed NESHAP for Radionuclides
  - **Keywords:** “FR9612” “EPA” “NESHAP” “radionuclides”
- 
- FR (Federal Register) 1989b. National Emission Standards for Hazardous Air Pollutants; Radionuclides, Volume 54, p. 51654, December 15, 1989.
    - **FR51654.PDF**
  - **Metadata:**
  - **Title:** National Emission Standards for Hazardous Air Pollutants; Regulation of Radionuclides
  - **Author:** EPA/OAR/Office of Radiation and Indoor Air
  - **Subject:** NESHAP for Radionuclides
  - **Keywords:** “FR51654” “EPA” “NESHAP” “radionuclides”

- FR (Federal Register) 1994. National Emission Standards for Hazardous Air Pollutants; Final Rule, Volume 59, p. 36280, July 15, 1994.
  - **FR36280.PDF**
- **Metadata:**
- **Title:** National Emission Standards for Hazardous Air Pollutants; Regulation of Radionuclides
- **Author:** EPA/OAR/Office of Radiation and Indoor Air
- **Subject:** Final NESHAP for Radionuclides
- **Keywords:** "FR36280." "EPA" "NESHAP" "radionuclides" "final" "rule"

Tony Nesky  
 Center for Radiation Information and Outreach  
 Tel: 202-343-9597  
[nesky.tony@epa.gov](mailto:nesky.tony@epa.gov)

---

**From:** Rosnick, Andrew  
**Sent:** Tuesday, July 08, 2014 12:14 PM  
**To:** Nesky, Anthony  
**Subject:** References 2.0 - Readable!?!?

These should work but let me know if there is something wrong!!!

Andrew

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- FR (Federal Register) 1977. EPA established environmental protection standards for nuclear power operations pursuant to its authority under the Atomic Energy Act (AEA), Volume 42, p. 2858, January 13, 1977.
  - **FR2858.PDF**
- FR (Federal Register) 1984. EPA withdrew the proposed NESHAPs for Elemental Phosphorus Plants, DOE-Facilities, and NRC-Licensed Facilities. Volume 49, p. 43906. October 23, 1984.
  - **FR43906.PDF**
- FR (Federal Register) 1985a. EPA promulgated final standards for Elemental Phosphorus Plants, DOE-Facilities, and NRC-Licensed Facilities, Volume 50, p. 7280, February 8, 1985.
  - **FR7280.PDF**
- FR (Federal Register) 1985b. EPA established a work practice standard for Underground Uranium Mines, Volume 50, p. 15385, April 17, 1985.
  - **FR153865.PDF**

- FR (Federal Register) 1986. 40 CFR Part 61, National Emission Standards for Hazardous Air Pollutants, Standards for Radon-222 Emissions from Licensed Uranium Mill Tailings; Final Rule, Volume 51, p. 34056, September 24, 1986.
  - **FR34056.PDF**
  
- FR (Federal Register) 1989a. National Emission Standards for Hazardous Air Pollutants; Regulation of Radionuclides; Proposed Rule and Notice of Public Hearing, Volume 54, pp. 9612–9668, March 7, 1989.
  - **FR9612.PDF**
  
- FR (Federal Register) 1989b. National Emission Standards for Hazardous Air Pollutants; Radionuclides, Volume 54, p. 51654, December 15, 1989.
  - **FR51654.PDF**
  
- FR (Federal Register) 1994. National Emission Standards for Hazardous Air Pollutants; Final Rule, Volume 59, p. 36280, July 15, 1994.
  - **FR36280.PDF**

## Thornton, Marisa

---

**From:** Rosnick, Reid  
**Sent:** Tuesday, September 02, 2014 3:10 PM  
**To:** Thornton, Marisa  
**Subject:** FW: 40 CFR 192 requirements

-----Original Message-----

From: Palomares, Art  
Sent: Tuesday, July 15, 2014 10:28 AM  
To: Rosnick, Reid; Diaz, Angelique  
Subject: Re: 40 CFR 192 requirements

It does. Thanks.

---

From: Rosnick, Reid  
Sent: Tuesday, July 15, 2014 8:23:01 AM  
To: Palomares, Art; Diaz, Angelique  
Subject: RE: 40 CFR 192 requirements

Hi Art,

Thanks very much. In answer to your question, no impoundments were grandfathered in with the 1989 rulemaking. From 54 FR 51680 (December 15, 1989

"EPA recognizes in the case of a tailings pile which is not synthetically or clay lined ( The clay lining can be the result of the conditions at the site)water placed on the tailings in an amount necessary to reduce radon levels, can result in ground-water contamination. In addition, in certain situations the water can run off and contaminate surface water. EPA cannot allow a situation where the reduction of radon emissions comes at the expense of increased pollution of the ground or surface water. Therefore, all piles will be required to meet the requirements of 40 CFR 192.32(a), which protects water supplies from contamination. Under the current rule, existing piles are exempt from these provisions, this rule will end that exemption."

Hope this helps.

Reid

-----Original Message-----

From: Palomares, Art  
Sent: Tuesday, July 15, 2014 10:07 AM  
To: Rosnick, Reid; Diaz, Angelique  
Cc: Palomares, Art  
Subject: 40 CFR 192 requirements

Hi Reid,

Great job on the call, last week. I do have a question for you. The liner requirements and leak detection system requirement apply only after 1989, correct?. Anything constructed prior to 1989, would not have to meet those requirements, correct?

## Thornton, Marisa

---

**From:** Rosnick, Reid  
**Sent:** Tuesday, September 02, 2014 3:10 PM  
**To:** Thornton, Marisa  
**Subject:** FW: 40 CFR 192 requirements

-----Original Message-----

From: Palomares, Art  
Sent: Tuesday, July 15, 2014 11:24 AM  
To: Rosnick, Reid; Diaz, Angelique  
Subject: RE: 40 CFR 192 requirements

Thanks. I hope the Tribe did not walk away from the conversation thinking that the requirements apply to all (including pre-1989) impoundments. I am not an Air person, so I am learning on the go, but I do have a concern that we will need to clarify this point.

Art Palomares, Director  
Water Technical Enforcement Program  
Office of Enforcement, Compliance  
And Environmental Justice

-----Original Message-----

From: Rosnick, Reid  
Sent: Tuesday, July 15, 2014 8:23 AM  
To: Palomares, Art; Diaz, Angelique  
Subject: RE: 40 CFR 192 requirements

Hi Art,

Thanks very much. In answer to your question, no impoundments were grandfathered in with the 1989 rulemaking. From 54 FR 51680 (December 15, 1989

"EPA recognizes in the case of a tailings pile which is not synthetically or clay lined ( The clay lining can be the result of the conditions at the site)water placed on the tailings in an amount necessary to reduce radon levels, can result in ground-water contamination. In addition, in certain situations the water can run off and contaminate surface water. EPA cannot allow a situation where the reduction of radon emissions comes at the expense of increased pollution of the ground or surface water. Therefore, all piles will be required to meet the requirements of 40 CFR 192.32(a), which protects water supplies from contamination. Under the current rule, existing piles are exempt from these provisions, this rule will end that exemption."

Hope this helps.

Reid

-----Original Message-----

From: Palomares, Art  
Sent: Tuesday, July 15, 2014 10:07 AM  
To: Rosnick, Reid; Diaz, Angelique  
Cc: Palomares, Art  
Subject: 40 CFR 192 requirements

Hi Reid,

Great job on the call, last week. I do have a question for you. The liner requirements and leak detection system requirement apply only after 1989, correct?. Anything constructed prior to 1989, would not have to meet those requirements, correct?

## Thornton, Marisa

---

**From:** Rosnick, Reid  
**Sent:** Tuesday, September 02, 2014 3:09 PM  
**To:** Thornton, Marisa  
**Subject:** FW: Questions Regarding Proposed Update to Part 61 NESHAP W

---

**From:** Dye, Robert  
**Sent:** Tuesday, July 15, 2014 2:59 PM  
**To:** Yarina, Adam  
**Subject:** RE: Questions Regarding Proposed Update to Part 61 NESHAP W

I sent your questions to HQ for their response and it follows. Hope this answers your questions.

The choice of the term “continuous” was meant to imply that the depth of the liquid covering byproduct material in the pond must be at least one meter **all the time**, regardless of the depth of the sludge in the pond. In the proposal we asked for comment on how an operator could show the requirement was being met because, frankly, we weren’t entirely certain of a sure-fire method to show compliance. While we require continuous one meter depth, we also recognize that the facility might not be continuously staffed. However, it should be noted that the one meter requirement is a minimum depth requirement. The liquid level could be raised above one meter for nights/weekends, etc. if there is concern that evaporation will reduce the level below the one meter requirement.

Robert Dye  
Radiation & Indoor Air  
EPA Region 7  
11201 Renner Blvd  
Lenexa, KS 66219  
913-551-7605  
[dye.robert@epa.gov](mailto:dye.robert@epa.gov)

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**From:** Yarina, Adam [<mailto:adam.yarina@nebraska.gov>]  
**Sent:** Monday, July 14, 2014 4:41 PM  
**To:** Dye, Robert  
**Subject:** Questions Regarding Proposed Update to Part 61 NESHAP W

Good afternoon Robert,

My name is Adam Yarina, and I’m the Air Toxics Coordinator for the Nebraska Department of Environmental Quality. I’ve been reviewing [EPA’s proposed update to Part 61 NESHAP W](#) – Radon Emissions from Operating Uranium Mill Tailings, and I was hoping you could clarify a few issues for me.

- On 79 FR 25399, second column, EPA states that it is proposing recordkeeping requirements for nonconventional impoundments (e.g., evaporation ponds at ISL facilities) that include “...records showing compliance with the **continuous one meter of liquid** in the impoundment.”
  - What is meant by “continuous”? This language would seem to imply that the liquid level must be measured on an around-the-clock basis to verify compliance. This appears to be at odds with other

examples and language used in the preamble (e.g., recording liquid levels during daily inspections; stating that measuring devices “need not be highly technical,” and can include “measuring sticks,” etc).

- On 79 FR 25399, third column, EPA describes methods for keeping records “to provide confirmation that water to a depth of one meter is maintained above the byproduct material...”
  - This language seems to state that one meter of liquid must be maintained above the level of solids in the pond (e.g., three inches of solids at the bottom of the pond would require a liquid level of at least 1 meter plus three inches). This is at odds with language throughout the rest of the preamble and in the proposed rule text, which state simply that one meter of liquid must be maintained in the impoundment, with no mention of the level of solids. What is EPA’s intent regarding the appropriate liquid level for nonconventional impoundments?

Please let me know if I can provide further clarification regarding these questions. I look forward to hearing from you!

Adam Yarina  
Air Toxics Coordinator  
Air Quality Division - Grants, Planning, and Outreach Unit  
Nebraska Department of Environmental Quality  
402-471-3139  
[adam.yarina@nebraska.gov](mailto:adam.yarina@nebraska.gov)

## Thornton, Marisa

---

**From:** Rosnick, Reid  
**Sent:** Tuesday, September 02, 2014 3:09 PM  
**To:** Thornton, Marisa  
**Subject:** FW: Questions Regarding Proposed Update to Part 61 NESHAP W

---

**From:** Rosnick, Reid  
**Sent:** Tuesday, July 15, 2014 2:31 PM  
**To:** Dye, Robert  
**Subject:** RE: Questions Regarding Proposed Update to Part 61 NESHAP W

The choice of the term “continuous” was meant to imply that the depth of the liquid covering byproduct material in the pond must be at least one meter **all the time**, regardless of the depth of the sludge in the pond. In the proposal we asked for comment on how an operator could show the requirement was being met because, frankly, we weren’t entirely certain of a sure-fire method to show compliance. While we require continuous one meter depth, we also recognize that the facility might not be continuously staffed. However, it should be noted that the one meter requirement is a minimum depth requirement. The liquid level could be raised above one meter for nights/weekends, etc. if there is concern that evaporation will reduce the level below the one meter requirement.

---

**From:** Dye, Robert  
**Sent:** Tuesday, July 15, 2014 12:11 PM  
**To:** Rosnick, Reid  
**Subject:** FW: Questions Regarding Proposed Update to Part 61 NESHAP W

Can you send me a response to these questions that I can forward to Nebraska? thanks

Robert Dye  
Radiation & Indoor Air  
EPA Region 7  
11201 Renner Blvd  
Lenexa, KS 66219  
913-551-7605  
[dye.robert@epa.gov](mailto:dye.robert@epa.gov)

---

**From:** Yarina, Adam [<mailto:adam.yarina@nebraska.gov>]  
**Sent:** Monday, July 14, 2014 4:41 PM  
**To:** Dye, Robert  
**Subject:** Questions Regarding Proposed Update to Part 61 NESHAP W

Good afternoon Robert,

My name is Adam Yarina, and I’m the Air Toxics Coordinator for the Nebraska Department of Environmental Quality. I’ve been reviewing [EPA’s proposed update to Part 61 NESHAP W](#) – Radon Emissions from Operating Uranium Mill Tailings, and I was hoping you could clarify a few issues for me.

- On 79 FR 25399, second column, EPA states that it is proposing recordkeeping requirements for nonconventional impoundments (e.g., evaporation ponds at ISL facilities) that include “...records showing compliance with the **continuous one meter of liquid** in the impoundment.”
  - What is meant by “continuous”? This language would seem to imply that the liquid level must be measured on an around-the-clock basis to verify compliance. This appears to be at odds with other examples and language used in the preamble (e.g., recording liquid levels during daily inspections; stating that measuring devices “need not be highly technical,” and can include “measuring sticks,” etc).
- On 79 FR 25399, third column, EPA describes methods for keeping records “to provide confirmation that water to a depth of one meter is **maintained above the byproduct material...**”
  - This language seems to state that one meter of liquid must be maintained above the level of solids in the pond (e.g., three inches of solids at the bottom of the pond would require a liquid level of at least 1 meter plus three inches). This is at odds with language throughout the rest of the preamble and in the proposed rule text, which state simply that one meter of liquid must be maintained in the impoundment, with no mention of the level of solids. What is EPA’s intent regarding the appropriate liquid level for nonconventional impoundments?

Please let me know if I can provide further clarification regarding these questions. I look forward to hearing from you!

Adam Yarina  
Air Toxics Coordinator  
Air Quality Division - Grants, Planning, and Outreach Unit  
Nebraska Department of Environmental Quality  
402-471-3139  
[adam.yarina@nebraska.gov](mailto:adam.yarina@nebraska.gov)

## Thornton, Marisa

---

**From:** Rosnick, Reid  
**Sent:** Tuesday, September 02, 2014 3:09 PM  
**To:** Thornton, Marisa  
**Subject:** FW: Missing or Incorrect References

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**From:** Rosnick, Andrew  
**Sent:** Wednesday, July 16, 2014 10:38 AM  
**To:** Nesky, Anthony  
**Subject:** RE: Missing or Incorrect References

- 1.) 40 FR 15706, April 6, 1983 does not exist, Volume 40 is 1975, and only goes to p.60224.
- 2.) How am I supposed to find the report if the company retracted it?
- 3.) 44 FR 78738, December 27, 1989 does not exist, only goes to p.77498.
- 4.) <http://www.epa.gov/radiation/docs/neshaps/subpart-w/riskassessmentrevision.pdf>
- 5.) [http://www.deq.virginia.gov/Portals/0/DEQ/Land/Forms/20120705\\_DEQ%20Form%20CE%20SWDF-protected.pdf](http://www.deq.virginia.gov/Portals/0/DEQ/Land/Forms/20120705_DEQ%20Form%20CE%20SWDF-protected.pdf)

I found the last two, do you want me to print those out and scan them?

Andrew

---

**From:** Nesky, Anthony  
**Sent:** Monday, July 14, 2014 1:46 PM  
**To:** Rosnick, Andrew  
**Subject:** Missing or Incorrect References  
**Importance:** High

Dear Andrew:

I went through all the references and found a couple that were missing or incorrect. Can you please find the following:

FR (Federal Register) 1985a. [EPA promulgated final standards for Elemental Phosphorus Plants, DOE-Facilities, and NRC-Licensed Facilities](#), Volume 50, p. 7280, February 8, 1985. (8 pp, 4.02 MB) [About PDF](#)

*Note: This reference is incorrect in the document. Please find 40 FR 15706, April 6, 1983 and scan.*

BDC (Behre Dolbear & Company) 2011. "Scoping Study of the Strathmore Resources (US), LTD, Church Rock Deposit, McKinley County, New Mexico," April 4, 2011. (*Note THE COMPANY RETRACTED THIS REPORT*)

FR (Federal Register) 1979. EPA determination that radionuclides constitute a hazardous air pollutant within the meaning of section 112(a)(1), Volume 44, p. 78738, December 27, 1979.

SC&A (S. Cohen and Associates) 2010. ["Risk Assessment Revision for 40 CFR Part 61 Subpart W – Radon Emissions from Operating Mill Tailings, Task 5 – Radon Emission from Evaporation Ponds."](#)  
Contract Number EP-D-10-042, Work Assignment No. 1-04, Task 5, SC&A, Inc., Vienna, Virginia, November 2010. (80 pp, 2.02 MB) [About PDF](#)

VDEQ (Virginia Department of Environmental Quality) 2000. "Landfill Cost Estimate Form."

Tony Nesky  
Center for Radiation Information and Outreach  
Tel: 202-343-9597  
[nesky.tony@epa.gov](mailto:nesky.tony@epa.gov)

## Thornton, Marisa

---

**From:** Rosnick, Reid  
**Sent:** Tuesday, September 02, 2014 3:09 PM  
**To:** Thornton, Marisa  
**Subject:** FW: Checking in on status FR notice for extending public comment period for Subpart W proposal

---

**From:** Peake, Tom  
**Sent:** Wednesday, July 16, 2014 12:03 PM  
**To:** Stahle, Susan  
**Subject:** RE: Checking in on status FR notice for extending public comment period for Subpart W proposal

Yes. We got word yesterday that it had been sent to the Federal Register.

Tom Peake  
US EPA Radiation Protection Division  
Director, Center for Waste Management and Regulations  
phone: 202-343-9765

---

**From:** Stahle, Susan  
**Sent:** Wednesday, July 16, 2014 12:01 PM  
**To:** Peake, Tom  
**Cc:** Perrin, Alan  
**Subject:** Checking in on status FR notice for extending public comment period for Subpart W proposal

Hi –

Can you let me know the status of this FR notice? Is it signed yet?

Thanks,

Susan Stahle  
Attorney-Advisor  
Air and Radiation Law Office  
Office of General Counsel  
U.S. Environmental Protection Agency  
202-564-1272 (ph)  
202-564-5603 (fax)  
[stahle.susan@epa.gov](mailto:stahle.susan@epa.gov)

## Thornton, Marisa

---

**From:** Rosnick, Reid  
**Sent:** Tuesday, September 02, 2014 3:08 PM  
**To:** Thornton, Marisa  
**Subject:** FW: Hearing Registration Website

---

**From:** Apostolico, Mary [mailto:Mary\_Apostolico@sra.com]  
**Sent:** Thursday, July 17, 2014 12:11 AM  
**To:** Nesky, Anthony  
**Subject:** RE: Hearing Registration Website

Hi Tony

Website is ready to go. It can be viewed at:  
The site is live <https://www.eventbrite.com/e/subpart-w-hearings-registration-1408042493> and the password is SRA (it should not be viewable without the password).

I was out sick today but if all goes well I will be back in tomorrow. If you have the time I would like to go over a few options with you about the website.

Thanks  
Mary

---

**From:** Nesky, Anthony [mailto:Nesky.Tony@epa.gov]  
**Sent:** Wednesday, July 16, 2014 7:29 PM  
**To:** Apostolico, Mary  
**Subject:** Hearing Registration Website

Dear Mary:

Please let me know how things are proceeding with the Eventbrite site for the Denver hearings in September. Thanks!

Tony Nesky  
Center for Radiation Information and Outreach  
Tel: 202-343-9597  
[nesky.tony@epa.gov](mailto:nesky.tony@epa.gov)

## Thornton, Marisa

---

**From:** Rosnick, Reid  
**Sent:** Tuesday, September 02, 2014 3:11 PM  
**To:** Thornton, Marisa  
**Subject:** FW: Revisions to Registration Website  
**Attachments:** websitelanguageRJR+tn.docx

**Importance:** High

---

**From:** Nesky, Anthony  
**Sent:** Monday, July 14, 2014 11:50 AM  
**To:** Apostolico, Mary  
**Cc:** Beth Miller; Rosnick, Reid  
**Subject:** Revisions to Registration Website  
**Importance:** High

Dear Mary:

Attached is a document with new text for the hearing registration website. Please replace the "About the Organizer" sidebar with the sidebar provided in the text. Although we are changing the text of the website to encourage people to register by August 22, please leave the registration functional until COB August 29—that is our deadline to the EPA Security folks.

When you revise the website, could you please activate it, but not make it public. We'd like to test the registration.

I would like to open registration for real this week.

Please feel free to call me with questions

Tony Nesky  
Center for Radiation Information and Outreach  
Tel: 202-343-9597  
[nesky.tony@epa.gov](mailto:nesky.tony@epa.gov)

## Event Details

"National Emission Standards for Radon Emissions from Operating Uranium Mill Tailings," Subpart W of 40 CFR Part 61 sets limits on radon emissions from tailings at operating uranium mills. In accordance with the Clean Air Act Amendments of 1990, EPA formed a workgroup to review the standard and is proposing revisions to the rule.

The proposed rule would require the use of generally available control technology (GACT) to limit radon emissions from tailings at all uranium recovery facilities. Specific control technologies would be required at conventional tailings impoundments, evaporation ponds and heap leach piles. The proposed rule and background information can be found at:

<http://www.epa.gov/radiation/neshaps/subpartw/rulemaking-activity.html>

The public is invited to provide testimony or verbal comments on the proposed rulemaking at public hearings on September 3 and 4, 2014 at the EPA Region 8 Headquarters in Denver, CO. Two sessions will be held on each day:

**September 3: Session 1: 9:00 AM – 12:00 PM MDT**

**Session 2: 1:00 PM – 5:00 PM MDT**

**September 4: Session 3: 9:00 AM – 12:00 PM MDT**

**Session 4: 1:00 PM – 5:00 PM MDT**

You are welcome to attend multiple sessions, but each person may only present testimony at one session. - Speakers are strongly encouraged to register by August 22, 2014. [For questions, contact Anthony Nesky of EPA at 202-343-9597](#)

## Sidebar:

### About Hearings and Comments

Remarks made during the hearing will be transcribed and entered into the public docket. Each speaker will be allotted 5 minutes to present verbal remarks.

Attendance at the hearing is not necessary to comment on this proposed rulemaking. EPA also welcomes written comments. Instructions on how to submit written comments can be found at:

<http://www.epa.gov/radiation/neshaps/subpartw/rulemaking-activity.html>

No one method for submission of comments is “better” than another. EPA will review and respond to all substantive comments in the rulemaking docket, whether they were submitted in writing or verbally during this hearing.

## Thornton, Marisa

---

**From:** Rosnick, Reid  
**Sent:** Tuesday, September 02, 2014 3:11 PM  
**To:** Thornton, Marisa  
**Subject:** FW: Text for Registration Website and Ad for the Denver Post  
**Attachments:** PUBLIC HEARING NOTICE.docx; websitelanguage.docx  
  
**Importance:** High

---

**From:** Nesky, Anthony  
**Sent:** Monday, July 14, 2014 11:08 AM  
**To:** Rosnick, Reid  
**Subject:** Text for Registration Website and Ad for the Denver Post  
**Importance:** High

Dear Reid:

Attached are updated language for the registration website, and an a notice to be published in the Denver Post. Please take a look at them and give me any edits. I would like to forward the website language to the contractor right away.

We'll have them fix the website, make sure it's OK with Region 8, and then we'll be ready to go live.

Thanks!

Tony Nesky  
Center for Radiation Information and Outreach  
Tel: 202-343-9597  
[nesky.tony@epa.gov](mailto:nesky.tony@epa.gov)

## Event Details

"National Emission Standards for Radon Emissions from Operating Uranium Mill Tailings," Subpart W of 40 CFR Part 61 sets limits on radon emissions from tailings at operating uranium mills. In accordance with the Clean Air Act Amendments of 1990, EPA formed a workgroup to review the standard and is proposing revisions to the rule.

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<http://www.epa.gov/radiation/neshaps/subpartw/rulemaking-activity.html>

The public is invited to provide testimony or verbal comments on the proposed rulemaking at public hearings on September 3 and 4, 2014 at the EPA Region 8 Headquarters in Denver, CO. Two sessions will be held on each day:

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Sidebar:

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<http://www.epa.gov/radiation/neshaps/subpartw/rulemaking-activity.html>

No one method for submission of comments is “better” than another. EPA will review and respond to all substantive comments in the rulemaking docket, whether they were submitted in writing or verbally during this hearing.

EPA TO CONDUCT PUBLIC HEARING ON PROPOSED REVISION OF NESHAP SUBPART W. The U.S. Environmental Protection Agency (EPA) is proposing to revise “National Emission Standards for Radon Emissions for Operating Uranium Mill Tailings,” Subpart W of 40 CFR Part 61. EPA will hold a public hearing to allow the public to speak about the proposed revisions. The hearing will be held September 3 and 4, 2014 at the EPA Region 8 Office, 1595 Wynkoop Street, Denver, CO 80202-1129. Sessions will be held both days from 9AM-12 PM and from 1PM to 5PM. Participants are strongly encouraged to register by August 22, 2014. Attendance at the hearing is not necessary to comment on this proposed rulemaking. EPA also welcomes written comments. To register for the hearing, provide written comments, or obtain additional information, see <http://www.epa.gov/radiation/neshaps/subpartw/rulemaking-activity.html>.

For questions, contact Anthony Nesky of EPA at 202-343-9597.

## Thornton, Marisa

---

**From:** Rosnick, Reid  
**Sent:** Tuesday, September 02, 2014 3:11 PM  
**To:** Thornton, Marisa  
**Subject:** FW: words  
**Attachments:** Subpart W Stakeholders Conference Call 7\_3\_14.docx

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**From:** Rosnick, Reid  
**Sent:** Monday, July 14, 2014 10:00 AM  
**To:** Nesky, Anthony  
**Subject:** words

---

Reid J. Rosnick  
US Environmental Protection Agency  
Radiation Protection Division  
202.343.9563  
[rosnick.reid@epa.gov](mailto:rosnick.reid@epa.gov)

## **Subpart W Stakeholders Conference Call July 3, 2014**

### **ATTENDEES**

**EPA:** Reid Rosnick, Tom Peake, Susan Stahle (OGC), Angelique Diaz (Region 8)

**Environmental Groups/Tribes:** Sarah Fields, Uranium Watch; Aaron Mintzes, Earthworks; Jennifer Thurston, INFORM; Susan Gorgon, Multicultural Alliance for a Safe Environment; Kathy Van Dam, Wasatch Coalition; Janet Johnson; Buffalo Bruce, NE

**Uranium Industry/Other:** Jim Cain, John Hamrick, Cotter; Jen Morrison, Energy Fuels; Jay Morris, UT Division of Air Quality

### **UPDATE**

Reid began the call with a welcome and by taking attendance. Reid had a couple of items to share.

Since our last call, the proposed rule was published in the Federal Register, May 2, 2014. The proposal stated that the comment period would be 90 days, and end on July 31, 2014. We received a number of requests from stakeholders to extend the comment period, anywhere from 60-120 days. We will be extending the comment period. Nothing is official yet, but we will announce it on the Subpart W website and it will also be published in the Federal Register. Public hearings have also been requested by stakeholders. We are still in the process of identifying times/dates/venues for hearings. Stakeholders have requested that hearings take place in numerous locations. We are attempting to balance venues with resources available. It's also worth noting that EPA accepts comments in most media, such as letters, emails, etc. No one method for submission of comments is "better" than another. All comments are included in the public docket. We will review and respond to all substantive comments we receive, whether they are vocal, written, or emailed.

Additionally, the Ute Mountain Ute tribe has requested consultation with EPA on the proposed rule, as well as several issues related to the White Mesa mill. Consultation is a formal, government to government process of meaningful communication and coordination between EPA and tribal officials prior to EPA taking actions or implementing decisions that may affect tribes. We take the consultation process with our tribal partners very seriously. Our consultation is scheduled for July 10.

### **DISCUSSION**

Jennifer T. – The NMA presentation discussed opening a new subpart for the regulations at 40 CFR 192. How does this connect with Subpart W? Also, why were the monitoring requirements eliminated? Elimination of this requirement is a great concern, wishes EPA will reconsider.

Reid – The proposed new subpart in 40 CFR 192 will be for ground water issues at ISL facilities and is not really connected to Subpart W, a radon standard for operating facilities. As for

reconsideration of monitoring requirements, make sure you state that in formal comments submitted to the Agency.

Janet J – It is difficult to show proof that a double liner system will work, especially with the record of legacy impoundments.

Sarah F. – Requested additional information and attachments from a 2009 response from Denison Mines section 114 letter. Where is the response from May 2009 regarding the company's evaporation ponds? Where are the Section 114 letters to Sweetwater and Shootaring Canyon? A general comment is that I am disturbed by the quality of the Federal Register notice. EPA is attempting to regulate radon, not eliminate it. There is no mention of section 112(h) of the Clean Air Act Amendments. Why? OGC, can you answer that? You have no authority to replace an emission standard with a work practice standard without the approval of the Administrator.

Kathy Van D – I would like to see the calculations that show work practice standards are as good as an emissions standard. Exactly how much does it cost to run monitoring systems? Reid – That information is in the preamble and the Economic Impact Analysis. Any intention to make the standards applicable to ore piles, crushers, etc? Angelique D. - Not at this time, we regulate byproduct material in the impoundments.

Sarah F. – Disturbed that there are no emission requirements for cell 1 at White Mesa or at other evaporation ponds. Angelique D. – Flux testing is difficult on ponds, but with a liquid cover, radon emissions will be close to zero.

Aaron M. – Thanks for extending the comment period. What can you tell us about the 40 CFR 192 rule? Tom P. – The proposed rule is currently being reviewed by OMB. We expect it to be published in late summer/early fall. Aaron M. – I think the Subpart W comment period should be extended to conform to the comment period for 192. EPA should not have notices of proposed rulemakings that conflict with each other. Each rule could have implications for the regulation of air and water.

Jennifer T. – It is not easy to find information of the 40 CFR 192 proposal. I suggest that you delay the Subpart W rule until the 192 rule is proposed. (Sarah F. agreed). Jennifer also asked how the choice was made to use GACT standards rather than MACT standards. Reid explained that the GACT standard was outlined in the preamble. He also noted that the double liner system used for uranium recovery facilities are the same as those required for hazardous waste land disposal facilities regulated under RCRA.

Janet J. – As a resident of Grand Junction, CO I can tell you that the regulations have to be right the first time. In my area there are billions of dollars of cleanup of legacy sites.

**Next call: Thursday, October 2, 2014 at 11 AM Eastern Time.**

---

end

**Thornton, Marisa**

---

**From:** Rosnick, Reid  
**Sent:** Tuesday, September 02, 2014 3:13 PM  
**To:** Thornton, Marisa  
**Subject:** FW: Subpart W Conference Call Notes

---

**From:** Miller, Beth  
**Sent:** Thursday, July 10, 2014 8:33 AM  
**To:** Rosnick, Reid; Thornton, Marisa  
**Subject:** RE: Subpart W Conference Call Notes

Docketed!

**Success!**

You have created a new document with the following

**Docket ID:** [EPA-HQ-OAR-2008-0218](#)

**Document ID:** [EPA-HQ-OAR-2008-0218-DRAFT-0113](#)

**Title:** Subpart W Stakeholders Conference Call

**Document Type:** SUPPORTING & RELATED MATERIALS

**Status:** Metadata\_Ready

**Current Assignee:** Akram, Assem (EPA)



Please consider the environment before printing this e-mail.

*Beth Miller*  
202-343-9223

---

**From:** Rosnick, Reid  
**Sent:** Wednesday, July 09, 2014 4:21 PM

**To:** Thornton, Marisa; Miller, Beth  
**Subject:** Subpart W Conference Call Notes

Marisa/Beth:

Attached is the July 3, 2014 minutes for the Subpart W stakeholders conference call. Will you please post it to the Subpart W website and the docket? Thanks!

Reid

---

Reid J. Rosnick  
US Environmental Protection Agency  
Radiation Protection Division  
202.343.9563  
[rosnick.reid@epa.gov](mailto:rosnick.reid@epa.gov)

## Thornton, Marisa

---

**From:** Rosnick, Reid  
**Sent:** Tuesday, September 02, 2014 3:13 PM  
**To:** Thornton, Marisa  
**Subject:** FW: Example Desk Statement

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**From:** Nesky, Anthony  
**Sent:** Thursday, July 10, 2014 9:59 AM  
**To:** Wieder, Jessica  
**Subject:** Example Desk Statement

### **Desk Statement: Proposed Rulemaking for “National Emission Standards for Operating Uranium Mill Tailings.”**

EPA has released a Notice of Proposed Rulemaking that would revise “National Emission Standards for Operating Uranium Mill Tailings,” Subpart W of 40 CFR part 61. In the proposed rulemaking, EPA would require the use of generally available control technology (GACT) to limit radon emissions from tailings at all uranium recovery facilities. Specific control technologies would be required at conventional tailings impoundments, evaporation ponds and heap leach piles.

The notice’s publication in the Federal Register begins a 90-day public comment period.

The proposed rule and additional information can be found at:

[www.epa.gov/radiation/](http://www.epa.gov/radiation/)

Tony Nesky  
Center for Radiation Information and Outreach  
Tel: 202-343-9597  
[nesky.tony@epa.gov](mailto:nesky.tony@epa.gov)

## Thornton, Marisa

---

**From:** Rosnick, Reid  
**Sent:** Tuesday, September 02, 2014 3:13 PM  
**To:** Thornton, Marisa  
**Subject:** FW: Subpart W Conference Call Notes

---

**From:** Thornton, Marisa  
**Sent:** Thursday, July 10, 2014 10:21 AM  
**To:** Rosnick, Reid; Miller, Beth  
**Subject:** RE: Subpart W Conference Call Notes

Done - <http://www.epa.gov/radiation/neshaps/subpartw/rulemaking-activity.html>

---

**From:** Rosnick, Reid  
**Sent:** Wednesday, July 09, 2014 4:21 PM  
**To:** Thornton, Marisa; Miller, Beth  
**Subject:** Subpart W Conference Call Notes

Marisa/Beth:

Attached is the July 3, 2014 minutes for the Subpart W stakeholders conference call. Will you please post it to the Subpart W website and the docket? Thanks!

Reid

---

Reid J. Rosnick  
US Environmental Protection Agency  
Radiation Protection Division  
202.343.9563  
[rosnick.reid@epa.gov](mailto:rosnick.reid@epa.gov)

## Thornton, Marisa

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**From:** Rosnick, Reid  
**Sent:** Tuesday, September 02, 2014 3:12 PM  
**To:** Thornton, Marisa  
**Subject:** FW: Blurb for NESHAP (Subpart W) Comment Period Extension FR

---

**From:** Lee, Raymond  
**Sent:** Thursday, July 10, 2014 12:16 PM  
**To:** Knapp, Kristien  
**Cc:** Cherepy, Andrea; Rosnick, Reid  
**Subject:** Blurb for NESHAP (Subpart W) Comment Period Extension FR

Hi Kristien,

Here is the blurb for the NESHAP Subpart W FR extension you asked for. I took what we had submitted for the proposed rule and then tweaked it just a bit to talk about the comment period.

Please let us know if you need anything further.

Thanks!

Ray

### [Statement for the White House Notification message:](#)

As early as the third week in July, EPA will publish a Federal Register notice that will extend the comment period for the proposed revisions to the “National Emission Standards for Operating Uranium Mill Tailings,” Subpart W of 40 CFR part 61. In the proposed rulemaking, EPA would require the use of generally available control technology (GACT) to limit radon emissions from tailings at all uranium recovery facilities. The Agency agreed to issue this proposed rulemaking through a settlement agreement with two groups: Colorado Citizens Against Toxic Waste and the Rocky Mountain Clean Air Action. The proposed action will add and refine definitions, as well as confirm its applicability to all facilities that manage uranium byproduct material/tailings, including conventional mills, in-situ leach facilities and heap leach piles.

The proposed rule was published on May 2, 2014, with the initial 90-day comment period ending on July 31, 2014. In response to formal requests from environmental organizations requesting extensions and to ensure that all our stakeholders are able to review the proposal and submit comments, EPA is officially extending public comment period for an additional 90 days (to October 29, 2014) with this notice.

## Thornton, Marisa

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**From:** Rosnick, Reid  
**Sent:** Tuesday, September 02, 2014 3:12 PM  
**To:** Thornton, Marisa  
**Subject:** FW: References--Last Batch

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**From:** Thornton, Marisa  
**Sent:** Thursday, July 10, 2014 12:24 PM  
**To:** Nesky, Anthony  
**Subject:** RE: References--Last Batch

Done - <http://epastage.epa.gov/staging1/rpd/neshaps/subpartw/eiareferences.html>

---

**From:** Nesky, Anthony  
**Sent:** Wednesday, July 09, 2014 3:26 PM  
**To:** Thornton, Marisa; Romero, Carmen  
**Subject:** References--Last Batch

- FR (Federal Register) 1984. EPA withdrew the proposed NESHAPs for Elemental Phosphorus Plants, DOE-Facilities, and NRC-Licensed Facilities. Volume 49, p. 43906. October 23, 1984.
    - **FR43906.PDF**
  - **Metadata:**
  - **Title:** NESHAPS for Elemental Phosphorous Plants withdrawn"
  - **Author:** EPA/OAR/Office of Radiation and Indoor Air
  - **Subject:** Withdrawal of NESHAPS for Elemental Phosphorous Plants environmental protection standards for nuclear power operations;
  - **Keywords:** "FR43906" "EPA" "NESHAPS" "Phosphorous Plants"
- 
- FR (Federal Register) 1986. 40 CFR Part 61, National Emission Standards for Hazardous Air Pollutants, Standards for Radon-222 Emissions from Licensed Uranium Mill Tailings; Final Rule, Volume 51, p. 34056, September 24, 1986.
    - **FR34056.PDF**
  - **Metadata:**
  - **Title:** National Emission Standards for Hazardous Air Pollutants, Standards for Radon-222 Emissions from Licensed Uranium Mill Tailings; Final Rule
  - **Author:** EPA/OAR/Office of Radiation and Indoor Air
  - **Subject:** NESHAP for Radon-222 Emissions from Licensed Uranium Mill Tailings"
  - **Keywords:** "FR34056" "EPA" "NESHAP" "Radon-222" "Uranium" "Tailings"

- FR (Federal Register) 1994. National Emission Standards for Hazardous Air Pollutants; Final Rule, Volume 59, p. 36280, July 15, 1994.
  - **FR36280.PDF**
- **Metadata:**
- **Title:** National Emission Standards for Hazardous Air Pollutants; Regulation of Radionuclides
- **Author:** EPA/OAR/Office of Radiation and Indoor Air
- **Subject:** Final NESHAP for Radionuclides
- **Keywords:** "**FR36280.**" "EPA" "NESHAP" "radionuclides" "final" "rule"

## Thornton, Marisa

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**From:** Rosnick, Reid  
**Sent:** Tuesday, September 02, 2014 3:12 PM  
**To:** Thornton, Marisa  
**Subject:** FW: great job Reid (existing enforcement issues seem to be the sticky wicket)

---

**From:** Childers, Pat  
**Sent:** Thursday, July 10, 2014 2:26 PM  
**To:** Flynn, Mike; Rosnick, Reid  
**Subject:** great job Reid (existing enforcement issues seem to be the sticky wicket)

Let me know if you are going to have debrief/next steps.

Thanks again

## Thornton, Marisa

---

**From:** Rosnick, Reid  
**Sent:** Tuesday, September 02, 2014 3:12 PM  
**To:** Thornton, Marisa  
**Subject:** FW: great job Reid (existing enforcement issues seem to be the sticky wicket)

---

**From:** Flynn, Mike  
**Sent:** Thursday, July 10, 2014 5:12 PM  
**To:** Childers, Pat; Rosnick, Reid  
**Cc:** Edwards, Jonathan; Harrison, Jed  
**Subject:** Re: great job Reid (existing enforcement issues seem to be the sticky wicket)

Agreed, excellent job by Reid! We do plan to have a debrief and, as part of that, discuss next steps on the consultation. It sounds like the Tribe has pretty high expectations for our consultation.

---

**From:** Childers, Pat  
**Sent:** Thursday, July 10, 2014 2:25:52 PM  
**To:** Flynn, Mike; Rosnick, Reid  
**Subject:** great job Reid (existing enforcement issues seem to be the sticky wicket)

Let me know if you are going to have debrief/next steps.

Thanks again

## Thornton, Marisa

---

**From:** Rosnick, Reid  
**Sent:** Tuesday, September 02, 2014 3:12 PM  
**To:** Thornton, Marisa  
**Subject:** FW: consultation

---

**From:** Logan, Paul  
**Sent:** Thursday, July 10, 2014 6:34 PM  
**To:** Rosnick, Reid  
**Subject:** consultation

Reid,

Good work leading the consultation today. You fielded a lot of detailed questions, and I thought that you properly noted (repeatedly) that enforcement questions need to be answered in a separate forum, given that this consultation was about the proposed revisions to Subpart W rules as opposed to enforcement, and that enforcement matters should also be discussed with the state, etc.

If you'd like, I can follow up with Sue at OGC; or you can, or someone else in your office can. Just let me know. Sue will likely need to be alerted that question 4 was identified for a follow up legal conversation, as well as the enforcement questions.

If you need any follow up from me, please let me know. I'm in all day tomorrow and next week.

**Paul Logan**  
Deputy Regional Counsel | EPA Region 8  
303.312.6854 | [logan.paul@epa.gov](mailto:logan.paul@epa.gov)

## Thornton, Marisa

---

**From:** Rosnick, Reid  
**Sent:** Tuesday, September 02, 2014 3:12 PM  
**To:** Thornton, Marisa  
**Subject:** FW: great job Reid (existing enforcement issues seem to be the sticky wicket)

---

**From:** Childers, Pat  
**Sent:** Friday, July 11, 2014 8:09 AM  
**To:** Flynn, Mike; Rosnick, Reid  
**Cc:** Edwards, Jonathan; Harrison, Jed  
**Subject:** Re: great job Reid (existing enforcement issues seem to be the sticky wicket)

The desire for more and face to face consultation verse calls isn't unique here but it does seem they do want ongoing feedback/input. it does seem that keeping scott and selene in the loop as we proceed and helping follow up on the enforcement related issues will go a long way.

Great job once again

Pat

---

**From:** Flynn, Mike  
**Sent:** Thursday, July 10, 2014 5:11:43 PM  
**To:** Childers, Pat; Rosnick, Reid  
**Cc:** Edwards, Jonathan; Harrison, Jed  
**Subject:** Re: great job Reid (existing enforcement issues seem to be the sticky wicket)

Agreed, excellent job by Reid! We do plan to have a debrief and, as part of that, discuss next steps on the consultation. It sounds like the Tribe has pretty high expectations for our consultation.

---

**From:** Childers, Pat  
**Sent:** Thursday, July 10, 2014 2:25:52 PM  
**To:** Flynn, Mike; Rosnick, Reid  
**Subject:** great job Reid (existing enforcement issues seem to be the sticky wicket)

Let me know if you are going to have debrief/next steps.

Thanks again

## Thornton, Marisa

---

**From:** Rosnick, Reid  
**Sent:** Tuesday, September 02, 2014 3:11 PM  
**To:** Thornton, Marisa  
**Subject:** FW: Subpart W Website Change

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**From:** Thornton, Marisa  
**Sent:** Friday, July 11, 2014 11:33 AM  
**To:** Rosnick, Reid  
**Subject:** RE: Subpart W Website Change

Aww...thank you...have a great weekend!

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**From:** Rosnick, Reid  
**Sent:** Friday, July 11, 2014 11:32 AM  
**To:** Thornton, Marisa  
**Subject:** RE: Subpart W Website Change

You're the BEST!

---

**From:** Thornton, Marisa  
**Sent:** Friday, July 11, 2014 11:20 AM  
**To:** Rosnick, Reid  
**Subject:** RE: Subpart W Website Change

Done - <http://www.epa.gov/radiation/neshaps/subpartw/rulemaking-activity.html>

---

**From:** Rosnick, Reid  
**Sent:** Friday, July 11, 2014 11:07 AM  
**To:** Thornton, Marisa  
**Subject:** Subpart W Website Change

Hi Marisa,

On the website:

### Conference Call Information

EPA will hold quarterly conference calls with interested stakeholders. The next conference call will occur on **Thursday, July 3, 2014 at 11 AM EDT, 10am CDT, 9am MDT and 8am PDT. The call in number is 1-866-299-3188.** You will be prompted for a conference code, which will be 2023439563

Will you please change the date to October 2, 2014. Thanks

Reid

---

Reid J. Rosnick  
US Environmental Protection Agency  
Radiation Protection Division  
202.343.9563  
[rosnick.reid@epa.gov](mailto:rosnick.reid@epa.gov)

**Thornton, Marisa**

---

**From:** Rosnick, Reid  
**Sent:** Tuesday, September 02, 2014 3:11 PM  
**To:** Thornton, Marisa  
**Subject:** FW: No SAN - Revisions to National Emission Standards for Radon Emissions from Operating Mill Tailings (FR) (AA)(OAR-14-001-1935)

---

**From:** Knapp, Kristien  
**Sent:** Friday, July 11, 2014 4:48 PM  
**To:** Morgan, Ruthw  
**Cc:** Shaw, Betsy; Goffman, Joseph; Powers, Tom; Millett, John; Dennis, Allison; Drinkard, Andrea; Owens, Nicole; Pritchard, Eileen; Adams, Darryl; Muellerleile, Caryn; Brown, Stephanie N.; Jutras, Nathaniel; Free, Laura; Morris, Stephanie; Brooks, Patricia; Lee, Raymond; Rosnick, Reid; Peake, Tom; Perrin, Alan; Mcquilkin, Wendy; Eagles, Tom; Flynn, Mike  
**Subject:** RE: No SAN - Revisions to National Emission Standards for Radon Emissions from Operating Mill Tailings (FR) (AA)(OAR-14-001-1935)

OAR IO concurs.

---

**From:** Morgan, Ruthw  
**Sent:** Wednesday, July 09, 2014 4:29 PM  
**To:** Knapp, Kristien  
**Cc:** Shaw, Betsy; Goffman, Joseph; Powers, Tom; Millett, John; Dennis, Allison; Drinkard, Andrea; Owens, Nicole; Pritchard, Eileen; Adams, Darryl; Muellerleile, Caryn; Brown, Stephanie N.; Jutras, Nathaniel; Free, Laura; Morris, Stephanie; Brooks, Patricia; Lee, Raymond; Rosnick, Reid; Peake, Tom; Perrin, Alan; Mcquilkin, Wendy; Eagles, Tom; Morgan, Ruthw; Flynn, Mike  
**Subject:** No SAN - Revisions to National Emission Standards for Radon Emissions from Operating Mill Tailings (FR) (AA)(OAR-14-001-1935)

To OAR Special Assistant for review and concurrence on FR Notice for AA's signature.

07/09/2014 04:17 PM                      SAN: N/A                      Tier: 3                      CMS Control #: OAR-14-001-1935

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**Revisions to National Emission Standards for Radon Emissions from Operating Mill Tailings**

Reviewers	Sign Off	Concur	Concur w/ Comment	Non- Concur	
Kristien Knapp					
Lori Stewart					
Janet McCabe					

Stage: FR Notice

Deadline:

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[Comment Period Extension](#)

**ORIA** Contact:  
**ORIA** Mgmt. Level  
Reviewer:  
**OPAR** Contact:

Reid Rosnick, 202 343-9563  
Raymond Lee - 202 343-9563

Return to:

Ruth Morgan  
564-1326, 6358 AR North

## Thornton, Marisa

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**From:** Rosnick, Reid  
**Sent:** Tuesday, September 02, 2014 3:13 PM  
**To:** Thornton, Marisa  
**Subject:** FW: Subpart W Conference Call Notes  
**Attachments:** Subpart W Stakeholders Conference Call 7\_3\_14.docx

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**From:** Rosnick, Reid  
**Sent:** Wednesday, July 09, 2014 4:21 PM  
**To:** Thornton, Marisa; Miller, Beth  
**Subject:** Subpart W Conference Call Notes

Marisa/Beth:

Attached is the July 3, 2014 minutes for the Subpart W stakeholders conference call. Will you please post it to the Subpart W website and the docket? Thanks!

Reid

---

Reid J. Rosnick  
US Environmental Protection Agency  
Radiation Protection Division  
202.343.9563  
[rosnick.reid@epa.gov](mailto:rosnick.reid@epa.gov)

## **Subpart W Stakeholders Conference Call July 3, 2014**

### **ATTENDEES**

**EPA:** Reid Rosnick, Tom Peake, Susan Stahle (OGC), Angelique Diaz (Region 8)

**Environmental Groups/Tribes:** Sarah Fields, Uranium Watch; Aaron Mintzes, Earthworks; Jennifer Thurston, INFORM; Susan Gorgon, Multicultural Alliance for a Safe Environment; Kathy Van Dam, Wasatch Coalition; Janet Johnson; Buffalo Bruce, NE

**Uranium Industry/Other:** Jim Cain, John Hamrick, Cotter; Jen Morrison, Energy Fuels; Jay Morris, UT Division of Air Quality

### **UPDATE**

Reid began the call with a welcome and by taking attendance. Reid had a couple of items to share.

Since our last call, the proposed rule was published in the Federal Register, May 2, 2014. The proposal stated that the comment period would be 90 days, and end on July 31, 2014. We received a number of requests from stakeholders to extend the comment period, anywhere from 60-120 days. We will be extending the comment period. Nothing is official yet, but we will announce it on the Subpart W website and it will also be published in the Federal Register. Public hearings have also been requested by stakeholders. We are still in the process of identifying times/dates/venues for hearings. Stakeholders have requested that hearings take place in numerous locations. We are attempting to balance venues with resources available. It's also worth noting that EPA accepts comments in most media, such as letters, emails, etc. No one method for submission of comments is "better" than another. All comments are included in the public docket. We will review and respond to all substantive comments we receive, whether they are vocal, written, or emailed.

Additionally, the Ute Mountain Ute tribe has requested consultation with EPA on the proposed rule, as well as several issues related to the White Mesa mill. Consultation is a formal, government to government process of meaningful communication and coordination between EPA and tribal officials prior to EPA taking actions or implementing decisions that may affect tribes. We take the consultation process with our tribal partners very seriously. Our consultation is scheduled for July 10.

### **DISCUSSION**

Jennifer T. – The NMA presentation discussed opening a new subpart for the regulations at 40 CFR 192. How does this connect with Subpart W? Also, why were the monitoring requirements eliminated? Elimination of this requirement is a great concern, wishes EPA will reconsider.

Reid – The proposed new subpart in 40 CFR 192 will be for ground water issues at ISL facilities and is not really connected to Subpart W, a radon standard for operating facilities. As for

reconsideration of monitoring requirements, make sure you state that in formal comments submitted to the Agency.

Janet J – It is difficult to show proof that a double liner system will work, especially with the record of legacy impoundments.

Sarah F. – Requested additional information and attachments from a 2009 response from Denison Mines section 114 letter. Where is the response from May 2009 regarding the company's evaporation ponds? Where are the Section 114 letters to Sweetwater and Shootaring Canyon? A general comment is that I am disturbed by the quality of the Federal Register notice. EPA is attempting to regulate radon, not eliminate it. There is no mention of section 112(h) of the Clean Air Act Amendments. Why? OGC, can you answer that? You have no authority to replace an emission standard with a work practice standard without the approval of the Administrator.

Kathy Van D – I would like to see the calculations that show work practice standards are as good as an emissions standard. Exactly how much does it cost to run monitoring systems? Reid – That information is in the preamble and the Economic Impact Analysis. Any intention to make the standards applicable to ore piles, crushers, etc? Angelique D. - Not at this time, we regulate byproduct material in the impoundments.

Sarah F. – Disturbed that there are no emission requirements for cell 1 at White Mesa or at other evaporation ponds. Angelique D. – Flux testing is difficult on ponds, but with a liquid cover, radon emissions will be close to zero.

Aaron M. – Thanks for extending the comment period. What can you tell us about the 40 CFR 192 rule? Tom P. – The proposed rule is currently being reviewed by OMB. We expect it to be published in late summer/early fall. Aaron M. – I think the Subpart W comment period should be extended to conform to the comment period for 192. EPA should not have notices of proposed rulemakings that conflict with each other. Each rule could have implications for the regulation of air and water.

Jennifer T. – It is not easy to find information of the 40 CFR 192 proposal. I suggest that you delay the Subpart W rule until the 192 rule is proposed. (Sarah F. agreed). Jennifer also asked how the choice was made to use GACT standards rather than MACT standards. Reid explained that the GACT standard was outlined in the preamble. He also noted that the double liner system used for uranium recovery facilities are the same as those required for hazardous waste land disposal facilities regulated under RCRA.

Janet J. – As a resident of Grand Junction, CO I can tell you that the regulations have to be right the first time. In my area there are billions of dollars of cleanup of legacy sites.

**Next call: Thursday, October 2, 2014 at 11 AM Eastern Time.**

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end

## Thornton, Marisa

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**From:** Rosnick, Reid  
**Sent:** Tuesday, September 02, 2014 3:20 PM  
**To:** Thornton, Marisa  
**Subject:** FW: Ute Mountain Ute Tribe consultation

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**From:** Flynn, Mike  
**Sent:** Wednesday, July 09, 2014 3:00 PM  
**To:** Thomas, Deb  
**Cc:** Daly, Carl; Edwards, Jonathan; Palomares, Art  
**Subject:** Re: Ute Mountain Ute Tribe consultation

Deb,  
Yes, we'll be taking the lead tomorrow on the rulemaking consultation and will be deferring any questions on other White Mesa Mill issues (enforcement, etc) to your meeting/discussions with them later this summer. We totally agree there should be a bright line between the rule issues and other issues.

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**From:** Thomas, Deb  
**Sent:** Wednesday, July 9, 2014 11:19:37 AM  
**To:** Flynn, Mike  
**Cc:** Daly, Carl; Edwards, Jonathan; Palomares, Art  
**Subject:** RE: Ute Mountain Ute Tribe consultation

Mike,  
Thanks for touching base. Yes, I will be traveling to Cortez with Angelique Diaz, R8 Rad expert, and Alfreda Mitre, R8 Tribal Advisor to the RA, for the consultation. It my understanding that HQ will be leading the consultation. I am there to listen and to engage on other issues such as the off-site rule after the Subpart W rulemaking consultation. It is important to have a bright line separating the Subpart W rulemaking consultation from other issues the Tribe may want to discuss regarding the White Mesa Mill. I really appreciate the extensive effort HQ has put into preparing for the consultation and coordinating with R8 staff.

Debra H. Thomas  
EPA Region 8 (8P)  
Acting Assistant Regional Administrator  
Office of Partnerships and Regulatory Assistance  
303-312-6298  
[thomas.debrah@epa.gov](mailto:thomas.debrah@epa.gov)

---

**From:** Flynn, Mike  
**Sent:** Wednesday, July 09, 2014 8:58 AM  
**To:** Thomas, Deb  
**Cc:** Daly, Carl; Edwards, Jonathan  
**Subject:** Ute Mountain Ute Tribe consultation

Deb,

I understand from my folks that you will be participating in the consultation tomorrow with the Ute Mountain Ute Tribe on the Subpart W proposal (Radon Emissions from Operating Mill Tailings). I'm told you will be making the long trip to the reservation – I'll be on the phone with my folks here. I know our staff have been coordinating, but just wanted to touch base with you to see if there's anything you need or want to discuss before the meeting. If so, certainly let me know. Thanks a lot for your help with this.

Mike

Mike Flynn, Director  
Office of Radiation & Indoor Air  
U.S. EPA  
202-343-9356

## Thornton, Marisa

---

**From:** Rosnick, Reid  
**Sent:** Tuesday, September 02, 2014 3:20 PM  
**To:** Thornton, Marisa  
**Subject:** FW: Ute Mountain Ute Tribe consultation

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**From:** Edwards, Jonathan  
**Sent:** Wednesday, July 09, 2014 2:26 PM  
**To:** Perrin, Alan; Peake, Tom; Schultheisz, Daniel; Rosnick, Reid  
**Subject:** FW: Ute Mountain Ute Tribe consultation

FYI

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**From:** Thomas, Deb  
**Sent:** Wednesday, July 09, 2014 11:20 AM  
**To:** Flynn, Mike  
**Cc:** Daly, Carl; Edwards, Jonathan; Palomares, Art  
**Subject:** RE: Ute Mountain Ute Tribe consultation

Mike,

Thanks for touching base. Yes, I will be traveling to Cortez with Angelique Diaz, R8 Rad expert, and Alfreda Mitre, R8 Tribal Advisor to the RA, for the consultation. It my understanding that HQ will be leading the consultation. I am there to listen and to engage on other issues such as the off-site rule after the Subpart W rulemaking consultation. It is important to have a bright line separating the Subpart W rulemaking consultation from other issues the Tribe may want to discuss regarding the White Mesa Mill. I really appreciate the extensive effort HQ has put into preparing for the consultation and coordinating with R8 staff.

Debra H. Thomas  
EPA Region 8 (8P)  
Acting Assistant Regional Administrator  
Office of Partnerships and Regulatory Assistance  
303-312-6298  
[thomas.debrah@epa.gov](mailto:thomas.debrah@epa.gov)

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**From:** Flynn, Mike  
**Sent:** Wednesday, July 09, 2014 8:58 AM  
**To:** Thomas, Deb  
**Cc:** Daly, Carl; Edwards, Jonathan  
**Subject:** Ute Mountain Ute Tribe consultation

Deb,

I understand from my folks that you will be participating in the consultation tomorrow with the Ute Mountain Ute Tribe on the Subpart W proposal (Radon Emissions from Operating Mill Tailings). I'm told you will be making the long trip to the reservation – I'll be on the phone with my folks here. I know our staff have been coordinating, but just wanted to touch base with you to see if there's anything you need or want to discuss before the meeting. If so, certainly let me know. Thanks a lot for your help with this.

Mike

Mike Flynn, Director  
Office of Radiation & Indoor Air  
U.S. EPA  
202-343-9356

## Thornton, Marisa

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**From:** Rosnick, Reid  
**Sent:** Tuesday, September 02, 2014 3:20 PM  
**To:** Thornton, Marisa  
**Subject:** FW: Consultation Conference Number

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**From:** Palomares, Art  
**Sent:** Wednesday, July 09, 2014 3:09 PM  
**To:** Rosnick, Reid  
**Subject:** FW: Consultation Conference Number

Reid,

Would it be possible to get a listing of names of the folks HQ will have on the call tomorrow? Thanks!

Art Palomares, Director  
Water Technical Enforcement Program  
Office of Enforcement, Compliance  
And Environmental Justice

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**From:** Palomares, Art  
**Sent:** Wednesday, July 09, 2014 11:25 AM  
**To:** Logan, Paul  
**Subject:** FW: Consultation Conference Number

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**From:** Rosnick, Reid  
**Sent:** Monday, July 07, 2014 5:39 AM  
**To:** Childers, Pat; Cherepy, Andrea; Harrison, Jed; Gogal, Danny; Baca, Andrew; Diaz, Angelique; Laumann, Sara  
**Cc:** Edwards, Jonathan; Peake, Tom; Perrin, Alan  
**Subject:** Consultation Conference Number

Hello,

I have received the consultation conference call number from the Ute Mountain Ute Tribe.

Dial-in: (866)249-5325  
Code: 370741

Please pass along to anyone interested. Thanks

Reid

---

Reid J. Rosnick  
US Environmental Protection Agency

Radiation Protection Division

202.343.9563

[rosnick.reid@epa.gov](mailto:rosnick.reid@epa.gov)

**Thornton, Marisa**

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**From:** Rosnick, Reid  
**Sent:** Tuesday, September 02, 2014 3:13 PM  
**To:** Thornton, Marisa  
**Subject:** FW: CMS For Concurrence - Ruthw Morgan - OAR-14-001-1935

-----Original Message-----

From: cmsadmin@epa.gov [mailto:cmsadmin@epa.gov]  
Sent: Wednesday, July 09, 2014 3:44 PM  
To: McCabe, Janet  
Subject: CMS For Concurrence - Ruthw Morgan - OAR-14-001-1935

The response for control OAR-14-001-1935 has been sent to you for concurrence on 7/9/14 3:43 PM. Please go to the CMS webpage to view the details of the control.

Summary Information -

Control Number: OAR-14-001-1935

Control Subject: Extension of Comment Period on Notice of Proposed Rulemaking (NPRM) for Revisions to National Emission Standards for Radon Emissions from Operating Mill Tailings --  
ACTION MEMORANDUM

From: Flynn, Mike P.

Note: This Email was automatically generated. Please do not attempt to respond to it. You can access this control at <https://cms.epa.gov/cms>. Questions or comments concerning CMS should be directed to CMS Support at 202-564-4985 or CMS Information@epa.gov.

## Thornton, Marisa

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**From:** Rosnick, Reid  
**Sent:** Tuesday, September 02, 2014 3:20 PM  
**To:** Thornton, Marisa  
**Subject:** FW: References--Last Batch  
**Attachments:** FR34056.pdf; FR36280.pdf; FR43906.pdf

---

**From:** Nesky, Anthony  
**Sent:** Wednesday, July 09, 2014 3:26 PM  
**To:** Thornton, Marisa; Romero, Carmen  
**Subject:** References--Last Batch

- FR (Federal Register) 1984. EPA withdrew the proposed NESHAPs for Elemental Phosphorus Plants, DOE-Facilities, and NRC-Licensed Facilities. Volume 49, p. 43906. October 23, 1984.
  - **FR43906.PDF**
- **Metadata:**
- **Title:** NESHAPS for Elemental Phosphorous Plants withdrawn"
- **Author:** EPA/OAR/Office of Radiation and Indoor Air
- **Subject:** Withdrawal of NESHAPS for Elemental Phosphorous Plants environmental protection standards for nuclear power operations;
- **Keywords:** "FR43906" "EPA" "NESHAPS" "Phosphorous Plants"
  
- FR (Federal Register) 1986. 40 CFR Part 61, National Emission Standards for Hazardous Air Pollutants, Standards for Radon-222 Emissions from Licensed Uranium Mill Tailings; Final Rule, Volume 51, p. 34056, September 24, 1986.
  - **FR34056.PDF**
- **Metadata:**
- **Title:** National Emission Standards for Hazardous Air Pollutants, Standards for Radon-222 Emissions from Licensed Uranium Mill Tailings; Final Rule
- **Author:** EPA/OAR/Office of Radiation and Indoor Air
- **Subject:** NESHAP for Radon-222 Emissions from Licensed Uranium Mill Tailings"
- **Keywords:** "FR34056" "EPA" "NESHAP" "Radon-222" "Uranium" "Tailings"
  
- FR (Federal Register) 1994. National Emission Standards for Hazardous Air Pollutants; Final Rule, Volume 59, p. 36280, July 15, 1994.
  - **FR36280.PDF**
- **Metadata:**
- **Title:** National Emission Standards for Hazardous Air Pollutants; Regulation of Radionuclides
- **Author:** EPA/OAR/Office of Radiation and Indoor Air

- Subject: Final NESHAP for Radionuclides
- Keywords: "FR36280." "EPA" "NESHAP" "radionuclides" "final" "rule"

**ENVIRONMENTAL PROTECTION AGENCY****40 CFR Part 61**

[AD-FRL 2694-2]

**National Emission Standards for Hazardous Air Pollutants; Regulation of Radionuclides****AGENCY:** Environmental Protection Agency (EPA).**ACTION:** Withdrawal of proposed standards.

**SUMMARY:** On April 6, 1983, the Environmental Protection Agency, pursuant to section 112 of the Clean Air Act, proposed standards for sources of emissions of radionuclides in four categories: (1) Elemental phosphorus plants; (2) Department of Energy (DOE) facilities; (3) Nuclear Regulatory Commission (NRC)-licensed facilities and non-DOE Federal facilities; and (4) underground uranium mines. In addition, the Agency decided not to propose standards for the following source categories of radionuclide emissions: (1) Coal-fired boilers; (2) the phosphate industry; (3) other extraction industries; (4) uranium fuel cycle facilities, uranium mill tailings, and management of high-level radioactive waste; and (5) low energy accelerators. The Agency is announcing the withdrawal of its four proposed standards for radionuclide emissions under Section 112 of the Clean Air Act and affirms its original decision not to regulate emissions from the other five source categories considered. The U.S. District Court for the Northern District of California has ordered EPA to take final action on its proposed standards by October 23, 1984.

**DATE:** This withdrawal is effective October 31, 1984.

**ADDRESS:** The rulemaking record is contained in Docket No. A-79-11. This docket is available for public inspection between 8:00 a.m. and 4:00 p.m., Monday through Friday, at EPA's Central Docket Section, West Tower Lobby, Gallery One, Waterside Mall, 401 M Street, SW., Washington, D.C. 20460. A reasonable fee may be charged for copying.

**FOR FURTHER INFORMATION CONTACT:** James M. Hardin, Environmental Standards Branch (ANR-460), Criteria and Standards Division, Office of Radiation Programs, U.S. Environmental Protection Agency, Washington, D.C. 20460, (703) 557-8977

**SUPPLEMENTARY INFORMATION:****I. Supporting Documents**

A final Background Information Document has been prepared and single

copies may be obtained by writing the Program Management Office, Office of Radiation Programs (ANR-458), U.S. Environmental Protection Agency, Washington, D.C. 20460, or by calling (703) 557-9351. Please refer to "NESHAPS-Radionuclides: Background Information Document for Final Rules, Volumes 1 and 2 [EPA 520/1-84-022-1, EPA 520/1-84-022-2], October 1984. These documents comprise the integrated risk assessment performed to provide the scientific basis for this rulemaking. Volume 1 of the Background Information Document contains a complete description of the Agency's methodology used in its risk assessment of the hazards associated with airborne emissions of radionuclides. Volume 2 is devoted to a detailed description of how the Agency applied this methodology to each source category considered in this rulemaking. For each source category, this document describes the radionuclide emissions, estimated doses and risks to nearby individuals and to populations, description of current emission control technology, and descriptions and cost estimates of additional emission control technology.

The Agency's written responses to oral and written comments on the proposed standards have been placed in Docket No. A-79-11. Single copies of the Agency's responses may be obtained by writing the Program Management Office, Office of Radiation Programs (ANR-458), U.S. Environmental Protection Agency, Washington, D.C. 20460, or by calling (703) 557-9351. Please refer to "NESHAPS-Radionuclides: Response to Comments for Final Rules, Volumes 1 and 2" [EPA 520/1-84-023-1, EPA 520/1-84-023-2], October 1984.

**II. History of Standards Development**

In 1977, Congress amended the Clean Air Act (the Act) to address airborne emissions of radioactive materials. Before 1977, these emissions were either unregulated or were regulated under the Atomic Energy Act. Section 122 of the Act required the Administrator of EPA, after providing public notice and opportunity for public hearings (44 FR 21704, April 11, 1979), to determine whether emissions of radioactive pollutants "cause, or contribute to, air pollution which may reasonably be anticipated to endanger public health." On December 27, 1979, EPA published a notice in the Federal Register listing radionuclides as a hazardous air pollutant under section 112 of the Act (44 FR 76738). This action was based on the Agency's finding that studies of the biological effects of ionizing radiation indicated that exposure to radionuclides increases the risk of human cancer and

genetic damage. In addition, the Agency found that emissions data indicated that radionuclides are released into air from many different sources with the result that millions of people are exposed. To support these findings, EPA issued a report entitled "Radiological Impact Caused By Emissions of Radionuclides into Air in the United States, Preliminary Report," [EPA 520/7-79-006], Office of Radiation Programs, U.S. EPA, Washington, D.C., August 1979.

Section 122(c)(2) of the Act directed that, after having listed radionuclides as a hazardous air pollutant, EPA enter into an interagency agreement with the Nuclear Regulatory Commission with respect to those facilities under NRC jurisdiction. Such a memorandum of understanding was effected on October 24, 1980, and was subsequently published in the Federal Register (45 FR 72980, November 3, 1980). When EPA began developing standards for Department of Energy facilities, a similar memorandum of understanding was negotiated with DOE and signed in October 1982. Copies of both these memoranda have been placed in the Docket for public review.

On April 6, 1983, EPA announced its proposed standards for sources of emissions of radionuclides from four categories: (1) Elemental phosphorus plants; (2) DOE facilities; (3) NRC-licensed facilities and non-DOE Federal facilities; and (4) underground uranium mines. Several additional source categories emitting radionuclides were identified in the notice. However, the Agency concluded that good reasons existed to propose not to regulate these categories, which included: (1) Coal-fired boilers; (2) the phosphate industry; (3) other extraction industries; (4) uranium fuel cycle facilities, uranium mill tailings, and management of high-level radioactive waste; and (5) low energy accelerators (48 FR 15076, April 6, 1983). At the time of proposal, it was thought that these nine source categories were all that potentially released radionuclides to air at levels that could warrant regulatory attention. In support of these proposed standards and determinations, EPA published a draft report entitled "Background Information Document, Proposed Standards for Radionuclides," [EPA 520/1-83-001], Office of Radiation Programs, U.S. EPA, Washington, D.C., March 1983.

Following publication of the proposed standards, EPA conducted an informal public hearing in Washington, D.C., on April 28 and 29, 1983. The comment period was held open an additional 30 days to receive written comments. Subsequently, EPA received a number of

requests to extend the time for submission of public comments and to conduct a public hearing outside of Washington, D.C., on the proposed standards to accommodate those were unable to attend the first hearing. In response to these requests, EPA extended the comment period by an additional 45 days and held another informal public hearing in Denver, Colorado, on June 14, 1983 (48 FR 23665, May 26, 1983).

EPA has considered and responded to all written and oral comments; a copy of the Agency's responses is in the Docket. The Background Information Document has been revised and published in final form. In addition, a final economic analysis of the impact of the proposed standards for elemental phosphorus plants has been completed and placed in the Docket (Refer to "Regulatory Impact Analysis of Emission Standards for Elemental Phosphorus Plants," October 1984). The final report on control technology for radionuclide emissions to air at Department of Energy facilities has been published and a copy is available in the Docket. (Refer to "Control Technology for Radioactive Emissions to the Atmosphere at U.S. Department of Energy Facilities," [PNL-4621], October 1984).

In response to requests for wider scientific review of the Agency's risk assessment, the Administrator in December 1983, formed a Subcommittee on Risk Assessment for Radionuclides within the Agency's Science Advisory Board (SAB) to review the scientific basis for the proposed standards. This review is discussed in more detail in Section IV of this notice. On the basis of the Subcommittee's review, the final Background Information Document has been rewritten to incorporate recommendations made by the Subcommittee. The revised Background Information Document presents an integrated risk assessment following the format and methodology suggested by the Subcommittee, to the extent possible.

On February 17, 1984, the Sierra Club filed suit to compel final action in the U.S. District Court for the Northern District of California, pursuant to the citizens' suit provision of the Act (Sierra Club v. Ruckelshaus, No. 84-0656 WHO). In August 1984, the Court granted the Sierra Club's summary judgment motion and ordered EPA to take final action on its proposed standards by October 23, 1984. On September 14, 1984, the Administrator requested that the Court delay its deadline until January 1985 to him enable him to personally evaluate the

merits of the criticisms and suggestions presented by the Subcommittee. This request was denied.

On August 24, 1984, EPA announced in the Federal Register the availability of new technical information (49 FR 33695). The public was encouraged to comment on this new information which included the Final Report of the SAB Subcommittee, transcripts of all public meetings of the Subcommittee, information presented to the Subcommittee, and technical information relevant to elemental phosphorus plants and underground uranium mines. This new information was available in the Docket on September 7, 1984. The Agency's responses to these comments are included in Volume 2 of "NESHAPS-Radionuclides: Response to Comments for Final Rules."

### III. Summary of the Final Actions.

On April 6, 1983, the Agency proposed standards for sources of emissions of radionuclides in four categories: (1) Elemental phosphorus plants; (2) DOE facilities; (3) NRC-licensed facilities and non-DOE Federal facilities; and (4) underground uranium mines. For DOE facilities, the Agency proposed an emission limit not to exceed an amount that causes a dose equivalent rate of 10 mrem/y to the whole body and 30 mrem/y to any organ of any individual living nearby. For NRC-licensees and non-DOE Federal facilities, the Agency proposed an emission limit not to exceed an amount that causes a dose equivalent rate of 10 mrem/y to any organ of any member of the public. The emission limit proposed for elemental phosphorus plants was 1 Ci/y of polonium-210.

For all three of these source categories, the Administrator has determined that current practice provides an ample margin of safety in protecting the public health from the hazards associated with exposure to airborne radionuclides, and has therefore decided to withdraw the proposed standards.

In the case of underground uranium mines, the Agency proposed a standard to limit the annual average radon-222 concentration in air due to emissions from an underground mine to 0.2 pCi/1 above background in any unrestricted area. The Agency is also withdrawing this proposed standard because it has concluded, for the reasons discussed below, that it did not meet the legal requirements of Section 112. The Agency has received additional technical information that suggests the possibility of using bulkheading and other techniques to control radon emissions.

However, pursuing this course of action was not advocated or even suggested in the proposal. Indeed, the information available to EPA at the time of proposal indicated that these techniques were costly and "not very effective" and the Agency dismissed these techniques as the basis for an emission standard (48 FR 15083, col. 3). Since that time, new information suggests that conclusion may be erroneous. Technical information on which the base of final regulation or a proposal is not yet available; further work is needed to demonstrate how to set such a regulation at some future time. Therefore, the Agency is publishing, simultaneously with this notice, an Advance Notice of Proposed Rulemaking for Radon-222 Emissions from Underground Uranium Mines to solicit additional information on control methods, such as bulkheading and other forms of operational controls for radon-222 emissions from these mines. Such an approach could avoid many of the technical and legal difficulties posed by EPA's proposed standards.

In addition to the four source categories for which EPA did propose standards, the Agency has made a final determination not to regulate the following five source categories: (1) Coal-fired boilers; (2) the phosphate industry; (3) other extraction facilities; (4) uranium fuel cycle facilities; uranium mill tailings, and management of high-level radioactive waste; and (5) low energy accelerators. The Agency did not receive any new information during the public comment period that convinced it of a need for regulation of any of these five categories. Therefore, the Administrator affirms the original decision not to regulate these sources, believing that adequate public health protection exists to satisfy the requirements of the Clean Air Act.

When the Agency promulgated its standards for active uranium mill tailings (40 CFR 192, Subparts D and E), it decided that the control of the radon-222 emissions from the active uranium mill tailings piles could more appropriately be considered under the Clean Air Act, rather than the Uranium Mill Tailings Radiation Control Act. The preamble to the final uranium mill tailings standards noted that work practice standards were probably the most practical way to control radon emissions at active uranium mills. Consequently, EPA is issuing, simultaneously with this notice, an Advance Notice of Proposed Rulemaking for Radon-222 Emissions from Licensed Uranium Mills.

The withdrawal of the proposed standards for elemental phosphorus plants, Department of Energy facilities, Nuclear Regulatory Commission-licensed facilities and non-DOE Federal facilities, and underground uranium mines are final actions. Also, the decision not to establish radionuclide emission standards for coal-fired boilers; the phosphate industry, other extraction industries; uranium fuel cycle facilities, uranium mill tailings, and management of high-level radioactive waste; and low energy accelerators are final actions. Judicial review is available only by filing a petition for review in the United States Court of Appeals for the District of Columbia Circuit within 60 days of today's publication date.

### III. Major Issues Raised in Public Comments

Many commenters expressed considerable dissatisfaction with the proposed standards. Operators of facilities for which standards were proposed objected vigorously to the stringency of the proposed standards; other groups objected on the grounds that the proposed actions were not sufficiently protective of public health. Both groups criticized the proposed standards for not meeting the intent of the Clean Air Act.

A number of comments were made which apply to all of the source categories considered and which address the bases of the standards-setting process. The following is a summary of the most significant comments and the Agency's responses:

**Comment:** Radionuclides should not be considered a hazardous air pollutant under section 112 of the Clean Air Act because ambient levels do not pose a significant risk to human health. One commenter petitioned for reconsideration of EPA's listing of radionuclides as a section 112 pollutant, on the basis that the Agency had not justified its conclusion that radionuclides are hazardous air pollutants within the meaning of section 112.

**Response:** EPA has concluded that existing radionuclide emissions from some stationary sources can represent a significant risk of fatal and nonfatal cancers to exposed populations. There is no scientific doubt that radionuclides are carcinogens. This conclusion is based on extensive scientific evidence derived from studies of populations of humans and animals exposed to radiation at various levels ranging from very high doses to doses only slightly greater than environmental levels.

Both this conclusion and EPA's specific risk estimates are based on the

widely used assumption that there is no threshold below which exposure to radiation does not pose some risk to human health. Based on this premise, EPA concludes that exposure to radionuclides at low levels in the ambient air presents a risk of fatal and nonfatal cancers, as well as genetic damage.

In addition, section 112 requires not only a finding that the pollutant at issue is hazardous in the abstract, but also that it poses a public health risk in its form as an air pollutant. EPA has evaluated the air pollution risk of radionuclide emissions based on the magnitude of such emissions from stationary sources to the ambient air, on observed and estimated ambient concentrations of radionuclides, on the proximity of large populations to emitting sources, on estimates of health risks to exposed populations, and on considerations of uncertainties associated with risk estimates.

Based on this analysis, EPA has concluded that the present record does not support regulation of any of the source categories for which regulation was proposed. This conclusion, however, does not support delisting of radionuclides, because, in the case of uranium mines, the risks appear sufficient to warrant future regulatory action under section 112. It is only because regulation of the appropriate type is impossible at this time, due to the need for further work on the technical issues and the need to provide an opportunity for notice and comment on any proposed action, that no rules for uranium mines are being included in this decision.<sup>1</sup>

Therefore, with respect to the petition for reconsideration of the listing of radionuclides as a hazardous air pollutant, EPA has considered this option and has rejected it, believing that the original decision to list under section 112 is still appropriate.

**Comment:** The EPA standards are unnecessary because current administrative or regulatory standards of 500 mrem/y to the whole body and 1500 mrem/y to any organ (Federal Radiation Council guidance and NRC regulatory values), coupled with directives to keep emissions as low as

<sup>1</sup>The Administrator believes, based on an analysis by EPA's Office of General Counsel, that today's actions are consistent with the statute and the court order governing today's decision. EPA acknowledges, however, that an argument exists that the only proper way to procedurally express the substantive conclusions set forth in today's rulemaking is by delisting the particular pollutant involved. Though EPA does not presently accept that position, it stands ready to amend this package promptly along these lines if the Court should so direct.

practicable, are adequately protective of the public health. Other commenters felt that the proposed standards were too lax and that the Agency should set an emission limit of zero, with exceptions allowed only after a case-by-case examination.

**Response:** EPA does not believe that current Federal Radiation Council guidance and NRC policy of limiting exposure to individuals to 500 mrem/y to the whole body and 1500 mrem/y to any organ protects public health with an ample margin of safety, as required by the Clean Air Act. EPA estimates that a person receiving 500 mrem/y to the whole body over a lifetime would have an added potential risk of developing a fatal cancer of about one in one hundred due to the radiation exposure. In addition, that same person would face an approximately equal level of risk of nonfatal cancer and of passing on nonfatal genetic effects to succeeding generations.

However, EPA recognizes that the "as low as reasonably achievable" (ALARA) emissions policy had led to generally low emissions of radionuclides from most facilities. The Agency expects that this current policy will continue in the future and does not anticipate an increase in the emission level or the associated risks. Therefore, the Agency believes that in cases in which a vigorous and well-implemented ALARA program has achieved low emissions, such practice can provide an ample margin of safety for public health protection.

The Agency does not agree with the approach of establishing an emission limit of zero. The implementation of such a standard for the source categories considered would be extremely burdensome, and would result in little improvement in public health. More important, however, is the Administrator's determination that public health is currently protected to a degree which satisfies the requirement of Section 112 of the Act.

**Comment:** EPA is required to promulgate standards under all of its applicable authorities in order to fulfill the intent of its Congressional mandates. For example, the Agency must regulate air emissions from uranium fuel cycle facilities under the Clean Air Act, as well as under the Atomic Energy Act.

**Response:** The Agency believes that its primary objective is to provide reasonable public health protection, but that it was not the intent of Congress that the Agency issue duplicative regulations to achieve this goal. In light of the limited resources in both the

public and private sector, it would be inefficient and unnecessarily complicated to require sources to comply with a standard they already meet, or alternatively, to meet several comparable standards set by one Agency under different statutory authorities.

*Comment:* Some commenters stated that the standards should be based on cost analyses, and if not cost-effective, they should not be promulgated. Others felt that costs should not be considered at all.

*Response:* The Agency believes that giving equal weight to costs and benefits is inappropriate in developing standards under Section 112 of the Clean Air Act. Congress clearly intended that public health protection considerations be primary and that cost be secondary.

The Agency did consider, in developing these rules, the availability and practicality of control equipment. While this was not a primary consideration, knowledge of the availability of control technology is necessary when making judgments on the need for and level of emission standards. EPA believes these considerations are within the Administrator's discretion in determining what level of protection is adequate. The Agency considered costs to a limited degree consistent with this overall perspective in reaching its decisions on coal-fired boilers and elemental phosphorus plants, but otherwise today's action does not rest on cost considerations.

*Comment:* Some commenters stated that the Clean Air Act requires standards for all source categories releasing significant amounts of radionuclides into the air. Determinations that standards are not needed are not allowed for any reason. Others supported EPA's determinations that standards for some categories are unnecessary.

*Response:* The comment that every stack emitting radionuclides to air must be subject to an emission limit established under the Clean Air Act must be considered in light of the fact that every stack in the United States discharges at least minute quantities of radionuclides. These radionuclides include certain kinds of carbon and potassium atoms and other naturally-occurring radionuclides. Because these emissions are so small, the risk to nearby individuals and the total population group is minimal. To regulate these sources would not significantly improve the public health.

Section 112 of the Act requires the Administrator to assure public health protection with an ample margin of

safety. A negative determination of the need for standards is permissible within the context of the Act, so long as this criterion is met. With respect to eight of the source categories considered in this rulemaking, the Agency has concluded that the public health is adequately protected under current practice, and therefore has met the requirements of the Act. For the uranium mines category, the Agency concludes that risks are significant; however, there is presently no feasible way to establish an emission standard. The Agency will consider such a standard, together with alternative design, equipment, work practice and operational standards, for future proposal.

*Comment:* There has not been sufficient review outside the Agency of EPA's methods and procedures for risk assessment. Specifically, EPA's Science Advisory Board should review the scientific basis of the proposed standards for radionuclides.

*Response:* The Agency agrees with this comment (see section V below).

*Comment:* The proposed standards should not be promulgated because they cannot be implemented with reasonable procedures. Compliance with indirect emission standards (dose or concentration limits at site boundary) must be determined by environmental measurements at the site boundary. Because the proposed standards are so restrictive, this is either very expensive or altogether impractical.

*Response:* Questions concerning the implementations of standards for airborne radionuclide emissions are moot in light of the Administrator's decision to withdraw the proposed rules.

*Comment:* Standards should be consistent with established international and national policies and regulations governing radiation protection, as well as among each source category.

*Response:* The Agency agrees with this comment and has based its decision to withdraw the proposed standards, in part, on the fact that current practices in radiation protection do provide adequate public health protection.

*Comment:* Standards should allow for greater operational flexibility in selecting control technology.

*Response:* Questions concerning the amount of operational flexibility necessary to comply with standards for airborne radionuclide emissions are moot in light of the Administrator's decision to withdraw the proposed rules.

#### V Technical Review by the Science Advisory Board

In response to criticism that the Agency did not have sufficient outside

review of its methods used to assess risk due to radionuclides, the Administrator formed a subcommittee of the Agency's Science Advisory Board to review the scientific basis of the proposed standards for radionuclides. The Subcommittee held three public meetings: the first on January 16, 1984, the second on February 21-22, 1984, and the third on March 22, 1984. At these meetings, the Subcommittee was briefed by Agency staff on the methods used in estimating risks caused by airborne radionuclides. The panel heard from members of the public on the Agency's risk assessments, as well. The Subcommittee also held executive sessions to consider the information presented by the Agency and the public.

Transcripts of the public meetings are available in the Docket. The Subcommittee's final report, entitled "Report on the Scientific Basis of EPA's Proposed National Emission Standards for Hazardous Air Pollutants for Radionuclides," was transmitted to the Administrator on August 17, 1984. A copy of this report and the Agency's response are available in the Docket.

In the Executive Summary of its report, the Subcommittee noted that its activities could be viewed as addressing two interrelated questions. First, did the Agency's staff collect the scientifically relevant data and use scientifically defensible approaches in modeling the transport of radionuclides through the environment from airborne releases, in calculating the doses received by persons inhaling or ingesting this radioactivity and in estimating the potential cancer and genetic risks of the calculated doses? Second, are the individual facts, calculational operations, scientific judgments, and estimates of uncertainty documented and integrated in a clear and logical manner to provide a risk assessment that can be used as a scientific basis for risk management purposes, i.e., standard-setting? With regard to the first question, the Subcommittee concluded that EPA had gathered the appropriate scientific information needed for a risk assessment in a technically proficient manner.

The Subcommittee made several technical suggestions on how EPA could improve its assumptions, models, and methods for estimating risks. Most of these technical suggestions have been incorporated into EPA's risk assessment procedures. The risk assessment for the final rule reflects these modifications. Some of these technical suggestions involve additional research to improve future risk assessment methods. Those

suggestions will be used as EPA conducts new studies.

The Subcommittee's greatest criticism in its report was related to the second question. They concluded that EPA had not assembled and integrated the available scientific data in the format of a risk assessment that provides an adequate basis for regulatory decisions. The panel suggested the need for an intermediate step between the collection of the relevant technical information and the selection of regulatory options. Specifically, they encouraged the Agency to assemble an integrated risk assessment document that would lead a decisionmaker step-by-step from the identification of emission sources, through the calculation of radiation doses and the associated degree of uncertainty, to a variety of regulatory options from which to choose. Only in this way did the Subcommittee feel that a policymaker could be presented with all the facts necessary to make a responsible regulatory decision. Further, this analysis would enable the scientific community and the public to understand the rationale and basis for the Agency's actions.

The Agency recognizes and is concerned about the adverse criticism of its processes by its own Science Advisory Board. EPA does believe that, on balance, its risk estimates for specific sources of radionuclide emissions are accurate within the limitations inherent in making such estimates. It acknowledges, however, that the criticism of the Board does cloud the rulemaking record, and that the Subcommittee's concerns, by their very nature, cannot be fully addressed within the time available for this decision. Nevertheless, the final Background Information Document has been greatly modified to encompass the format and suggestions of the Subcommittee to the extent possible. However, the Subcommittee has not reviewed this revised document.

The Science Advisory Board also made several procedural suggestions for improving the Agency's risk assessment methods. These recommendations will be incorporated into the Agency's procedures and processes. Detailed responses to the Science Advisory Board's recommendations can be found in Volume 2 of "NESHAPS-Radionuclides: Response to Comments for Fiscal Rule."

#### VI. Perspectives on Risk Assessment

Today's decision is based on a developing body of science and policy concerning the treatment of one particular class of hazardous substances, namely materials that

cause, or are thought to cause, cancer. In some cases, scientific evidence indicates that a given substance is hazardous at high levels or exposure, but has no effect below a certain level. For most carcinogenic substances, however, scientists are unable to identify such a threshold below which no effects occur; moreover, to the extent scientists understand the process of carcinogenesis, there is some reason to believe such thresholds may not exist. For these kinds of substances, EPA and other Federal agencies have taken the position that any level of exposure may pose some risks of adverse effects, with the risks increasing as the exposure increases.

EPA's approach to risk assessment for suspected carcinogens may be divided into several steps. The first is qualitative evaluation of the evidence to determine whether a substance should be considered a human carcinogen for regulatory purposes. This was done for radionuclides before they were listed as a hazardous air pollutant in 1979. The second step is quantitative: how large is the risk of cancer at various levels of exposure? The result of this examination is a dose-response function which gives the lifetime risk per unit of exposure (or "potency"). The third step is to estimate how many people are exposed to the sources of radiation, and at what levels. These exposure estimates then are combined with the dose-response function to obtain estimates of the risk caused by emissions of the pollutant, in this case radionuclides, into the environment.

Exposure levels for each specific source category are derived using emissions estimates, dispersion modeling, and population data. For any given level of emissions, dispersion models predict concentrations at different distances from the emission source. By combining those estimated concentrations with census data on population densities, the number of people exposed at different levels can be estimated. Several factors suggest that actual exposure levels will be lower than those estimated. In estimating exposure, the most exposed individuals are hypothetically subjected to the maximum annual average concentration of the emissions for 24 hours every day for 70 years (roughly a lifetime). This does not take into account indoor vs. outdoor air, for instance, or the fact that most people in their daily routines move in and out of the specific areas where the emission concentration are the highest.

The final risk estimates are the product of the exposure levels and the estimated unit-risk factor. Two summary

measures are of particular interest: "nearby individual risk" and "total population impact." The former refers to the estimated increased lifetime risk from a source that is faced by individuals who spent their entire life at the point where predicted concentrations of the pollutant are highest. Nearby individual risk is expressed as a probability; a risk of one in one thousand, for example, means that a person spending a lifetime at the point of maximum exposure faces an estimated increased risk of cancer of one in one thousand. (For comparison, the average lifetime risk of dying of cancer in the United States is about 185 in 1,000, so eliminating a risk of one in one thousand reduces the overall lifetime risk of contracting cancer by less than 0.6 percent.) Estimates of nearby individual risk must be interpreted cautiously, however, since generally few people reside at the points of maximum concentrations and spend their whole lives at such locations.

The second measure, "total population impact," considers people exposed at all concentrations, low as well as high. It is expressed in terms of annual number of cancer cases, and provides a measure of the overall impact on public health. A total population impact of 0.05 fatal cancer per year, for example, means that emissions of the specific pollutant from the source category are expected to cause one case of cancer every 20 years. Such figures should not be viewed as precise estimates of the likely effects. Together with the estimates of maximum individual risk, they are intended to give an indication of a reasonable upper-limit situation.

The two estimates together provide a better description of the magnitude and distribution of risk in a community than either number alone. "Nearby individual risk" tells us the highest risk, but not how many people bear that risk. "Total population impact" describes the overall health impact on the entire exposed population, but not how much risk the most exposed persons bear. Two sources of radionuclide or chemical emissions could have similar population impacts, but very different maximum individual risks, or vice versa. Any sensible "risk management" system cannot rely on either measure alone; both are important.

Much more is known about the risks from exposure to radiation than exposure to most chemicals. While there is uncertainty in risk estimates from assessments of chemical emissions and radionuclide emissions, there is likely to be much less uncertainty in estimates of

risk from radionuclide emissions because of the extensive data base on human exposure to radiation. Therefore, a risk estimate of one in one thousand resulting from radionuclide emissions is likely to be more accurate than the same estimate for chemical releases. The situation for estimating risk from radionuclides is much less likely to reflect hypothetical maximum potential estimates than are estimates made for chemical emissions.

To provide general perspective regarding radiation exposure, everyone is exposed to background radiation due to cosmic radiation, and radioactivity in minerals, soils, and even our own bodies. Background radiation levels vary across the U.S., but average about 100 mrem/y for each person. There is very little that people can do to control exposure to background radiation. Over a lifetime this exposure is estimated to contribute to a fatal cancer risk of about one or two cases for every one thousand people.

## VII. Withdrawal of Proposed Standards

### A. Alternatives

In determining the appropriate course of action for the proposed standards, EPA considered the following alternatives.

#### 1. Withdraw the Proposed Standards

This alternative is based on the finding that current and future emissions at the facilities under consideration are anticipated to be at levels that would protect the public with an ample margin of safety, as required by section 112 of the Act. This alternative is also appropriate if implementation of the proposed standards is infeasible.

#### 2. Promulgate the Proposed Standards

This alternative is based on the conclusion that the findings made in the proposed rule were correct and that the proposed standards are necessary to adequately protect the public health.

#### 3. Promulgate a Standard for Each Category at a Level That Would Limit Dose to 25 mrem/y to the Whole Body and 75 mrem/y to Any Organ

This alternative is based on the conclusion that the need for standards for each category for which the Agency proposed rules was correct, but that EPA could establish the standards at these recommended levels and still provide an ample margin of safety. Establishing the standards at these levels would also respond to several comments regarding consistency among the categories and with the recommendations of recognized national

and international radiation protection groups, and regarding the need for greater operator flexibility in selecting control technology and methods of demonstrating compliance.

### B. Elemental Phosphorus Plants

One of the decisions presented by this rulemaking concerns emission for elemental phosphorus plants. Risks from these plants are higher than for any other source category in this rulemaking except uranium mines. Moreover, technology to reduce these risks is available. Nevertheless, after consideration of the proposed rule, the public comments, the Science Advisory Board report, the risk assessment, and other pertinent information, it is the Administrator's judgment that the present record does not support a conclusion that regulation of elemental phosphorus plants is necessary to protect the public health, within the meaning of the Clean Air Act. Therefore, the proposed rule is withdrawn. This decision presents difficult questions and the Agency is undertaking a number of nonregulatory actions, explained below, that may lead to reexamination of this decision at some future date.

EPA estimates the total risk to human populations posed by radionuclide emissions from elemental phosphorus plants to be 0.08 fatal cancer per year, or approximately one case every seventeen years. This risk is similar to other risks that EPA has considered insufficient to warrant Federal regulation in comparable Section 112 proceedings. About 80% of the total risk presented by the industry is accounted for by two plants, the FMC plant in Pocatello, Idaho, and the Monsanto plant in Soda Springs, Idaho.

In the case of one of the plants, EPA estimates the dose rate to individuals at the location of highest air concentrations to be about 600 mrem/y to the lung. The chance of getting cancer from a lifetime of exposure at this location is calculated to be about one in one thousand. If risk to the "most exposed individuals" were the only criterion for judgment, this relatively high risk might well have led to a decision to regulate.

However, this risk must be weighed against both the low aggregate risk described earlier and against other factors. Our studies indicate that present emission controls on these plants are not efficient in removing radionuclides and could be improved. However, adding such additional controls will be expensive measured against the limited public health benefits provided.

Finally, the SAB Subcommittee's report harshly criticized EPA's analysis in support of its proposed standards. That alone would not justify a decision not to regulate, but in the context of the limited aggregate risk and other factors described earlier it contributes to such a decision, particularly given the Science Advisory Board's statutory role as the Agency's science advisor.

Over the next several years, EPA will work with the Science Advisory Board to satisfy its concerns regarding the scientific basis of regulations such as this. Undertaking this effort will also allow the development of answers to the following two questions that may have a bearing on any future EPA action.

1. EPA is currently reconsidering its ambient air quality standard for particulates, and may shift its emphasis toward regulating the smaller-sized particles. Since the two elemental phosphorus plants being considered here emit large amounts of these smaller particles, they may require additional controls based on these new standards. Limiting emissions of these smaller particulates would also control some of the radionuclide emissions from the plants.

2. The area surrounding these two plants is characterized by high total levels of radiation from a variety of sources. The storage and widespread use of slag and possibly other waste products from these plants have significantly increased the natural background radiation levels in parts of the communities. In particular, phosphate slag from these plants has been widely used as aggregate in road and house construction in these areas. EPA and the State of Idaho intend to perform a total assessment of the various sources and will investigate ways to reduce or prevent risks from growing. This assessment may find more effective ways to control the overall risks than by controlling the emissions at issue here.

### C. Department of Energy (DOE) Facilities

It is also the Administrator's judgment that the present record does not support a conclusion that regulation of DOE facilities for radio-nuclide emissions to air is necessary to protect the public health with an ample margin of safety, within the meaning of the Clean Air Act. Therefore, the proposed rule is withdrawn and the rulemaking is terminated.

EPA estimates the total risk to exposed human populations by all DOE facilities for which regulation was proposed as 0.08 potential fatal cancer

per year, or one case every 13 years. This risk is comparable to risks that EPA has considered insufficient to warrant regulation in similar Section 112 proceedings.

Dose rates from the four DOE facilities with the greatest radionuclide emissions range from 50 mrem/y to 88 mrem/y to the lung; one of these facilities delivers a dose rate of 34 mrem/y to the whole body. EPA estimates the chances of fatal cancer from a lifetime of exposure to these plants' most concentrated emissions are about one to eight in ten thousand, somewhat lower than the maximum risks elemental phosphorus plants. Once again, this risk to nearby individuals must be weighed both against the low aggregate risks and the Science Advisory Board report described earlier.

The DOE currently has a program to keep exposure to the public to levels that are as low as reasonably achievable. This program is operated by the Department in keeping with the longstanding recommendations of the National Council on Radiation Protection and Measurements, the International Commission on Radiological Protection, and the Federal Radiation Council to avoid radiation exposure where practical. While the Agency recognizes that DOE facilities maintain very large quantities of radionuclides in their inventories at many of their facilities, there has been a general trend at most facilities for radionuclide emissions to be reduced over the years. Emissions should not significantly increase in the future. EPA intends to continue its oversight of emissions from DOE facilities and should this change, the Agency will reexamine its decision not to regulate.

As previously noted, EPA currently has a Memorandum of Understanding (MOU) with DOE regarding the development and implementation of standards under section 112. EPA intends to coordinate with DOE to seek to modify the Memorandum of Understanding as appropriate.

#### *D. Nuclear Regulatory Commission (NRC)-Licensed Facilities and Non-DOE Federal Facilities*

It is also the Administrator's judgment that the present record does not support a conclusion that regulation of NRC-licensed facilities and Federal facilities other than DOE facilities is necessary to protect the public health with an ample margin of safety, within the meaning of section 112. Therefore, the proposed rule is withdrawn and the rulemaking is terminated.

EPA estimates the total risk to human populations posed by NRC-licensed

facilities and non-DOE Federal facilities for which regulations were proposed to be no more than 0.02 fatal cancer per year, or less than one case every fifty years. This risk is comparable to other risks that EPA has considered insufficient to warrant regulation in similar Section 112 proceedings.

EPA calculates the changes of developing fatal cancer from a lifetime of exposure to the most concentrated emissions from the NCR facility with the greatest dose rate at no more than two in ten thousands. EPA believes that the Nuclear Regulatory Commission and other Federal facilities will continue to implement programs to keep exposure of the public to levels that are as low as reasonably achievable, and adequate to protect the public against significant adverse effects from radiation. Emissions should not significantly increase in the future. EPA will continue its oversight of emissions from these facilities, and should this change, the Agency will reexamine its decision not to regulate.

As previously noted EPA currently has a Memorandum of Understanding (MOU) with NRC regarding the development and implementation of standards under section 112. EPA intends to coordinate with NRC to seek to modify the Memorandum of Understanding as appropriate.

#### *E. Underground Uranium Mines*

The Agency proposed a standard for underground uranium mines that would limit the annual average radon-222 concentration in air due to emissions from an underground mine to 0.2 pCi/l above background in any unrestricted area. The standard was expected to be met by one of the following procedures: (1) Reducing the percentage of time the mine operates, (2) increasing the effective height of the release, and (3) controlling additional land. EPA expected that mine operators would most likely try to control land within about 2 kilometers of the mine vents in order to comply with the standard. EPA did not issue a direct emission standard for radon from underground uranium mines because, as the proposal explained, available information suggested that radon could not be collected by available pollution control equipment before being released from the vents, reductions afforded by better bulkheading or sealants were highly uncertain, and reducing the volume of air flow was not feasible due to the effect on occupational exposure. Comments on the proposed rule indicated that controlling a sufficient amount of land might not be feasible because private owners of land

surrounding the mine might be unwilling to make their land available to the mine owners.

Several comments were received starting that EPA had overestimated the risks from radon-222 emissions from underground uranium mines. It was suggested that the Agency had used overly conservative assumptions in the dispersion and risk calculations and that it used greater risk coefficients than recommended by other recognized radiation experts. EPA has considered these comments in establishing its parameters for emission rates, plume rise, and equilibrium ratios in the revised risk assessment. The most recent estimates of the lifetime risks to individuals living near these mine range from one in one thousand to one in one hundred. The potential exists for even higher risks in some situations, e.g., a person living very close to several horizontal mines vents or in areas influenced by multiple mine emissions. Lifetime risks in these situations could be as high as one in ten. EPA estimates the fatal cancer risk to the total population to be about five fatal cancers per year. The Agency considers these risks to be significant and believes action is needed to protect populations and individuals living near underground uranium mines.

Analysis of the likely reduction in health risks afforded by the proposed standards showed that while risks to nearby individuals were reduced by a factor of about ten, the risks to the total population were only negligibly reduced. The lack of population risk reduction is due to the fact that radon releases would not be reduced by the proposed rule, they would only be more widely dispersed.

EPA has concluded that its proposed standard was legally flawed in two ways. First, because it would not have limited radionuclide emissions on a continuous basis, but was primarily based on the use of dispersion technology to reduce risks to nearby people, it did not qualify an "emission standard" within the meaning of section 112 (See Clean Air Act, section 302(k)). EPA also believes such dispersion techniques cannot qualify in this context as a "design, equipment, work practice or operational standard" within the meaning of section 112(e). EPA believes that for such standards to be valid, they must also have an emission limiting effect. (See Clean Air Act, sections 112(e)(3) and (e)(4).) Second, because this standard would not reduce the aggregate population risk appreciably, when such risk was high, if failed to

meet the public health protection purposes of the Act.

Because radon-222 is a noble gas and the volume of air discharged through mine vents is very large, there is no practical method to remove radon-222 from the mine exhaust air. Adsorption onto activated charcoal is the most widely used method for removing noble gases from a low volume air stream. However, application of this method to the removal of radon-222 from mine ventilation air at the volumes of air which must be treated would require large, complex, unproven systems which would be extremely costly (i.e., at least \$18-44/lb of  $U_3O_8$  produced).

Since proposal, EPA has received additional technical information in a report prepared for the U.S. Bureau of Mines, indicating that work practices, such as bulkheading abandoned sections of mines to trap the radon before it is vented, may be more feasible and cost-effective than previously thought. This information, which is of a preliminary nature, suggests that bulkheading, even without the use of charcoal filters, could reduce emissions of radon-222 by 10-60% from typical mines at a cost ranging from \$4-\$60 per curie reduced or about \$0.01-0.05/lb of  $U_3O_8$  produced.

Uranium mines are widely diverse in their characteristics. They differ in configuration; for example, some mines have very few side tunnels and cross cuts whereas others may have many side areas. Consequently, they have a wide variety of surface areas where radon can be generated. In addition, mines differ in the geologic strata, mining techniques, and uranium and radium concentrations. All of these factors tend to decrease the number of common characteristics among mines that can be used to make general predictions of the effectiveness of specific control measures. Therefore, considerable additional work is needed to establish whether these results can be realized consistently for an appreciable segment of the industry, and to determine methods of bulkheading that might potentially produce any such consistently acceptable results. Only after these facts have been established would EPA be able to propose a standard based on these techniques. In any event, no such rule can be promulgated on the present record because the original proposal considered the use of this form of control and explicitly dismissed it as a basis for the standard.

Because the Agency is convinced that the health risks posed by underground uranium mines are significant, EPA has decided to begin developing an

emission, design, equipment, work practice, or operational standard to control radon releases from underground uranium mines. An Advance Notice of Proposed Rulemaking announcing this decision is being published simultaneously with this notice.

#### VIII. Final Determination for Sources EPA Proposed Not To Regulate

EPA previously identified several source categories that emit radionuclides to air but proposed not to regulate them. Final decisions on the need for emission standards for these categories, and the reasons for these decisions, are discussed in the following paragraphs.

##### A. Coal-Fired Boilers

Large coal-fired boilers are used by utilities and industry to generate electricity and to make process steam and hot water for space heaters and industrial processes. When operating, these boilers emit trace amounts of uranium, radium, thorium, and their decay products found in the feed coal. These radionuclides become incorporated into fly ash and are carried into the air along with the particulate matter these boilers emit. Technology that removes particulates will also limit radionuclide emissions.

Particulate emissions from new utility and new large industrial boilers are controlled by new source performance standards issued under Section 111 of the Clean Air Act reflecting best demonstrated technology. EPA has also proposed new source performance standards for smaller industrial boilers. Existing utility and industrial boilers are regulated for particulate emissions by State implementation plans as required by the Clean Air Act.

EPA proposed not to regulate coal-fired boilers because these existing particulate emission standards also limit radionuclide releases, and result in relatively insignificant risks to nearby individuals and to populations due to radionuclides. The highest dose resulting from this source category is 1 mrem/y to the lung. This is equivalent to an individual lifetime risk of fatal cancer of one in one million. Population risk is estimated to be about two fatal cancers per year, spread over the entire U.S. population. The cost to further reduce radionuclide emissions is greater in comparison to the additional public health protection achieved. In addition, radionuclide emissions will decrease as old plants are replaced with new ones having improved particulate emission controls as required by the Clean Air Act.

Many commenters, mostly industrial groups, strongly supported the determination not to propose regulations for this source category. Several commenters stated that the risks from coal-fired boilers were so low that this fact alone indicated that standards are not needed. The Agency's decision not to regulate is based on both a consideration of the level of risk and on a consideration of total cost and practicality of additional control equipment. Some commenters stated costs should not be considered under section 112 of the Clean Air Act. EPA believes it is not reasonable to avoid considering cost and practicality of control technology; however, the protection of public health was the primary consideration in reaching this decision.

Some commenters raised the question of whether there are some boilers that might burn coal with high uranium content, leading to emission levels far greater than those considered in making this determination. EPA asked for comment on this point and contracted with Los Alamos National Laboratory to investigate the existence of such boilers. The Agency was unable to find boilers with radionuclide emission rates significantly greater than the model facility we studied in detail. In fact, the majority of boilers can be demonstrated to have emissions much lower.

Some commenters stated that the requirements of the Clean Air Act dictate that EPA must propose an emission standard specifically for radionuclides, regardless of other Clean Air Act regulations limiting particulate emissions. EPA believes that to issue a standard that duplicates current regulations is unreasonable. As a practical matter, Clean Air Act regulations limiting particulate emissions from these boilers also limit radionuclide emissions. Hence, these existing regulations protect the public health with an ample margin of safety as far as radionuclide emissions are concerned.

After carefully considering all comments, EPA has decided not to regulate radionuclide emissions from coal-fired boilers at this time. This decision will be periodically reviewed as additional information on the total impact of all hazardous air pollutants from coal-fired boilers becomes available.

##### B. Phosphate Industry

The phosphate industry processes phosphate rock to produce fertilizers, detergents, animal feeds, and other products. The production of fertilizer

uses approximately 80 percent of the phosphate rock mined in the United States. Phosphate deposits contain elevated quantities of natural radioactivity, principally uranium-238 and members of its decay series. Uranium concentrations in phosphate deposits range from ten to one hundred times the concentration of uranium in other natural rocks and soils.

#### Phosphate Rock Processing Plants

The processing of phosphate rock in dryers, grinders, and fertilizer plants results in the release of radionuclides into the air in the form of dust particles. Control techniques that remove particulates will also control radionuclide emissions.

Particulate emissions from new or modified phosphate rock drying, grinding, and fertilizer plants are controlled by new source performance standards issued under Section 111 of the Clean Air Act. In the case of fertilizer plants, the new source performance standard for fluoride also provides for effective control of particulates. Existing drying, grinding, and fertilizer plants are regulated for particulate emissions by State implementation plans as required by the Clean Air Act. EPA proposed not to regulate phosphate rock processing facilities because the existing particulate and fluoride emission standards also limit radionuclide releases. The risks to nearby individuals and the total population risks due to radionuclide emissions from these three types of facilities are insignificant. The highest doses resulting from emissions from these facilities are 15 mrem/y to the bone and 7 mrem/y to the lung. This is equivalent to a lifetime individual risk of fatal cancer of one in one hundred thousand. Population risk is from all of these facilities about to 0.02 fatal cancer per year. In addition, there is no potential for emissions to increase; rather, they should decrease as older plants are replaced with new ones subject to new source performance standards.

Comments from the phosphate industry strongly supported EPA's proposal not to regulate phosphate rock processing facilities and further stated that EPA had overestimated the radionuclide emissions from these facilities. EPA agrees that its estimates of radionuclide emissions from these facilities were based on some conservative assumptions and has concluded that this serves to reinforce its decision not to regulate these facilities.

Several commenters stated that standards were needed for phosphate

rock processing facilities and that cost should not be considered in reaching a decision on the need for these standards. Even without considering costs, EPA does not agree that standards are needed for these facilities for the reasons just stated.

EPA did not previously make any determination regarding radionuclide standards for phosphate rock calciners at wet process fertilizer plants because information on emissions from these facilities was not available. EPA requested comments on these emissions and asked whether standards were needed. In addition, the Agency conducted emission tests at two of these facilities. EPA has not yet completed its analysis of these emission tests or carried out a risk assessment for these calciners. Therefore, no determination of the need for standards for phosphate rock calciners at wet process fertilizer plants is made at this time.

After considering all comments, EPA has decided to affirm and make final its decision not to regulate radionuclide emissions from phosphate rock processing plants, other than phosphate rock calciners at wet process fertilizer plants. A decision regarding the need for standards for this latter source will be made after completion of the Agency's analyses of emissions and risks from these facilities.

#### Phosphogypsum Piles

Several comments were received requesting EPA to issue standards under the Clean Air Act for radionuclide emissions from phosphogypsum piles (fertilizer plant waste material). EPA did not propose radionuclide standards for this source because it believed that such wastes would be more appropriately regulated under the Resource Conservation and Recovery Act (Pub. L. 94-580).

After considering all comments, EPA is reevaluating the need for radionuclide standards for this source. Preliminary risk estimates indicate that individual lifetime risks from exposure to air emissions from these piles may be as high as eight in ten thousand. Population risks may be on the order of one fatal cancer per year. The Agency will continue its examination of the need for a standard for this source category.

#### C. Other Extraction Industries

Almost all industrial operations involving removal and processing of soils and rocks to recover mineral resources release some radionuclides into the air. EPA has conducted studies of airborne radioactive emissions from the mining, milling, and smelting of iron, copper, zinc, clay, limestone, fluorspar,

and bauxite. These are relatively large industries and are considered to have the greatest potential for air emissions of radionuclides.

EPA proposed not to regulate these extraction industries because the available data showed that the risks to individuals and populations from radionuclide emissions from these facilities are insignificant. Individual lifetime risks range from one in one hundred million to one in ten thousand. Population risks range from 0.000001 to 0.01 fatal cancer per year.

Most of the comments received were from industry representatives who concurred with EPA's proposal not to regulate these facilities. In their opinion, emissions, doses, and risks were so small that a regulation was unnecessary. No new information was provided to the Agency during the public comment period which indicated a need for standards. Additional Agency studies have confirmed that radionuclide emissions from these sources are low.

After considering all comments, EPA has decided to affirm and make final its decision not to regulate radionuclide emissions from extraction industry facilities.

#### D. Uranium Fuel Cycle Facilities, Uranium Mill Tailings, and Management of High-Level Radioactive Waste

The uranium fuel cycle consists of operations associated with production of commercial electric power by light water reactors using uranium fuel. It includes nuclear power plants and facilities that mill uranium ore, process uranium, and fabricate and reprocess uranium fuel. EPA has promulgated emission standards for normal operations of the uranium fuel cycle under the Atomic Energy Act (40 CFR Part 190). These standards limit the annual dose equivalent from radionuclide emissions to 25 mrem/y to the whole body and to any organ, with the exception of the thyroid, which may receive 75 mrem/y. EPA standards and their implementation by the NRC require the use of available technology which results in low doses to individuals and populations.

Many commenters, both government and industry, supported EPA's decision not to issue emission standards for this source category. Other commenters felt that the Clean Air Act requires EPA to set emission standards for uranium fuel cycle facilities, regardless of any other standards in force.

The Agency believes that current EPA standards for the uranium fuel cycle provide a level of protection which

satisfies the requirements of the Clean Air Act. An emission standard promulgated under the Clean Air Act would be duplicative with the uranium fuel cycle standard and would not offer any additional public health protection. During the Agency's upcoming review of 40 CFR Part 190, this issue will be reexamined.

Uranium mill tailings remain after uranium is removed from the ore. Many thousands of acres of these tailings exist at both inactive and active uranium mill sites, located mostly in the West. The high concentration of radium-226 in the tailings can result in significant emission of radon-222, a radioactive gas. Under current EPA disposal standards which require long term stabilization of the tailings piles, 95% or more of the radon emissions will be controlled. These standards, issued under the authority of the Uranium Mill Tailings Radiation Control Act of 1978 (Pub. L. 95-604), provide a level of public health protection comparable to an air emission standard.

However, commenters noted that radon emissions from the tailings piles at licensed uranium mills are exempted from the requirements of 40 CFR Part 190. They are controlled, instead, by NRC regulations which allow a concentration of 3pCi/1 of radon-222 in unrestricted areas. This value represents a level of risk that may be significant. EPA is publishing, simultaneously with this notice, and Advance Notice of Proposed Rulemaking to consider the need for an emission standard for radon emission from licensed uranium mills.

Highly radioactive liquid or solid wastes from reprocessing spent nuclear fuel, or the spent fuel elements themselves if they are disposed of without reprocessing, are considered high-level radioactive waste. EPA has proposed standards under the Atomic Energy Act to limit public exposure to the radionuclides in this waste prior to disposal and has proposed that operations be conducted to reduce exposures below the standard to the extent reasonably achievable. The Agency expects its standards for the management of high-level radioactive waste to be promulgated in the near future. These standards will control emissions during the operational phase of the disposal site to a level which results in a dose equivalent no greater than 25 mrem/y to the whole body or to any organ, except the thyroid, which may receive a dose as high as 75 mrem/y. These standards will provide a level of public health protection comparable to an emission standard issued under the Clean Air Act.

After consideration of all comments, EPA affirms and makes final its decision not to issue separate standards under the Clean Air Act for radionuclide emissions from the uranium fuel cycle, uranium mill tailings, and management of high-level radioactive waste.

#### *E. Low Energy Accelerators*

Accelerators impart energy to charged particles, such as electrons, alpha particles, protons, and neutrons. They are used for a wide variety of applications, including radiography, activation analysis, food sterilization and preservation, and radiation therapy and research. Accelerators, other than those owned by the DOE, operate at comparatively low energy levels and therefore emit very small quantities of radionuclides. The doses and health risks associated with these emissions are extremely low. Lifetime individual risks range from one in ten trillion to one in one billion. Further, there is no potential for the emissions from these facilities to increase significantly.

The Agency proposed not to regulate this category. No comments were received on this proposal, and the Agency is not aware of any new information indicating a need for a standard. Therefore, the Agency affirms and makes final its decision not to regulate radionuclide emissions from low energy accelerators.

#### *IX. Miscellaneous*

##### *Docket*

The docket is an organized and complete file of all information considered by EPA in this rulemaking. It is a dynamic file, since material is added throughout the rulemaking process. The docket allows interested persons to identify and locate documents so they can effectively participate in the rulemaking process, and it also serves as the record for judicial review.

Transcripts of the hearings, all written statements, the Agency's responses to comments, and other relevant documents have been placed in the docket and are available for inspection and copying during normal working hours.

Dated: October 23, 1984.

William D. Ruckelshaus,  
*Administrator.*

[FR Doc. 84-28453 Filed 10-30-84; 2:12 P.M.]  
BILLING CODE 6560-50-M

#### 40 CFR Part 61

[AD-FRL 2694-2a]

#### National Emission Standards for Hazardous Air Pollutants; Standards for Radon-222 Emissions From Underground Uranium Mines

AGENCY: Environmental Protection Agency (EPA).

ACTION: Advance notice of proposed rulemaking.

**SUMMARY:** This notice announces the Agency's intent, under Section 112 of the Clean Air Act, as amended, to start a program to consider a standard based on bulkheading or related techniques to control radon emissions from underground uranium mines. This standard could be an emission standard, or a design, equipment, work practice, or operational standard, or a combination thereof. The Agency requests interested parties to submit information and comments relative to controlling these emissions.

**DATES:** Information received by April 30, 1985 will be of maximum value.

**ADDRESS:** Comments must be submitted (in duplicate, if possible) to: Central Docket Section (LE-130) Attention: Docket No. A-79-11, Environmental Protection Agency, 401 M Street, SW., Washington, D.C. 20460.

**FOR FURTHER INFORMATION CONTACT:** James M. Hardin, (703) 557-8977, Environmental Standards Branch, Criteria and Standards Division (ANR-460), Office of Radiation Programs, Environmental Protection Agency, Washington, D.C. 20460.

**SUPPLEMENTARY INFORMATION:** This Advance Notice of Proposed Rulemaking (ANPR) serves to inform interested parties that the Agency is considering a rulemaking related to the design and type of equipment, work practices, operational procedures, or to emission standards based on these techniques, to control the radon-222 emissions from underground uranium mines. As of January 1933, there were 139 of these mines located in Arizona, Colorado, New Mexico, Utah, and Wyoming. These mines have a production rate of 6,200 tons of U<sub>3</sub>O<sub>8</sub> and account for about 46% of the total production of U<sub>3</sub>O<sub>8</sub> in the United States.

The Agency proposed a standard under section 112 of the Clean Air Act in April of 1933 for underground uranium mines that would limit the annual radon-222 concentration in air due to emissions from an underground mine to 0.2 pCi/1 above background in any unrestricted area. The principal method

to meet this standard was considered to be control of land around the mine, since at the time, the Agency believed that no emission reduction measures were practical.

In EPA's most recent evaluation of the risks due to radon-222 emissions from underground uranium mines, the estimated lifetime risk of fatal cancer to nearby individuals ranges from one in one thousand to one in one hundred. The potential exists for an even higher risk in some situations (up to one in ten) for individuals living very close to several horizontal vents or in areas influenced by multiple mine emissions. The fatal cancer risk to the total population from radon-222 emissions from all underground uranium mines is five fatal cancers per year. The Agency considers these risks to be significant and believes action is needed to protect individuals living near underground mines and other populations.

However, analysis of the likely reduction in health risks afforded by the proposed standard showed that, while risks to nearby individuals were reduced by a factor of about ten, the risks to the total population were only negligibly reduced. The lack of population risk reduction was due to the fact that radon releases would not be reduced, they would only be more widely dispersed.

The Agency decided to withdraw its proposed standard for underground uranium mines based on its conclusion that the proposed standard was not authorized by the Clean Air Act and that the limited reduction in population risk would not meet the full intent of section 112 to provide adequate public health protection.

Because radon-222 is a noble gas and the volume of air discharged through mine vents is very large, there is no practical method to remove radon-222 from the mine exhaust air. Adsorption onto activated charcoal is the most widely used method for removing noble gases from a low volume air stream. However, application of this method to the removal of radon-222 from mine ventilation air at the volumes of air that must be treated would require large, complex, unproven systems which would be extremely costly.

Since proposal, EPA has received additional information indicating that work practices, such as bulkheading, are more feasible and cost-effective than originally thought. The Agency has decided to begin development of standards based on bulkheading or similar techniques to control radon releases from underground uranium mines. Interested parties are requested

to submit information and comments on the following issues:

- (1) Measured or estimated radon-222 releases from underground mines;
- (2) Applicable standards for reducing radon emissions, including such practices as bulkheading, sealants, mine pressurization, and backfilling;
- (3) Methods of procedures to predict releases of radon-222 without controls and with controls, such as bulkheading, sealants, mine pressurization, and backfilling;
- (4) Effectiveness, feasibility and costs of controls;
- (5) Methods of determining compliance with design, equipment, work practice, or operational type standards;
- (6) Estimates of impacts on nearby individuals and populations due to radon-222 emissions before and after control;
- (7) Extent of radon-222 controls now practiced by the industry, including such methods as bulkheading, sealants, mine pressurization, and backfilling; and
- (8) Effect on the industry if controls are required.

Dated: October 23, 1984.

William D. Ruckelshaus,  
Administrator.

[FR Doc. 84-28439 Filed 10-28-84; 2:13 pm]  
BILLING CODE 6560-50-M

#### 40 CFR Part 61

[AD FRL 2694-2b]

#### National Emission Standards for Hazardous Air Pollutants; Standards for Radon-222 Emissions from Licensed Uranium Mills

AGENCY: Environmental Protection Agency (EPA).

**ACTION:** Advance notice of proposed rule making.

**SUMMARY:** This notice announces the Agency's intent, under section 112 of the Clean Air Act, as amended, to consider development of standards to control radon-222 emissions from licensed uranium mills. The Agency requests interested parties to submit information and comments relative to controlling these emissions.

**DATES:** Information received by April 30, 1985 will be of maximum value.

**ADDRESS:** Comments must be submitted (in duplicate, if possible) to: Central Docket Section (LE-130) Attention: Docket No. A-79-11, Environmental Protection Agency, 401 M Street, SW., Washington, D.C. 20460.

**FOR FURTHER INFORMATION CONTACT:** James M. Hardin, (703) 557-8977,

Environmental Standards Branch, Criteria and Standards Division (ANR-460), Office of Radiation Programs, Environmental Protection Agency, Washington, D.C. 20460.

**SUPPLEMENTARY INFORMATION:** This Advance Notice of Proposed Rulemaking (ANPR) serves to inform interested parties that the Agency is considering emission standards under the Clean Air Act for licensed uranium ore processing facilities. As of January 1983, there were 27 licensed uranium mills located in Colorado, New Mexico, South Dakota, Texas, Utah, Washington, and Wyoming. These mills have produced a total of over 150 million metric tons of tailings which contain radioactive elements from the uranium decay chain, including radium-226 which decays to radon-222. The latter is a radioactive gas which is emitted from the piles to the ambient air.

EPA issued standards under the Uranium Mill Tailings Radiation Control Act (UMTRCA) (40 CFR Part 192 Subparts D and E) for the management of tailings at locations that are licensed by the Nuclear Regulatory Commission (NRC) or the States under Title II of the UMTRCA. These standards do not specifically limit radon-222 emissions until after closure of the facility. When the UMTRCA standards were promulgated, the Agency stated that it would issue an ANPR for consideration of control of radon emissions from uranium tailings piles during the operational period of a uranium mill. This notice fulfills that commitment.

The Agency issued Environmental Radiation Protection Standards for Nuclear Power Operations (42 FR 2858, January 13, 1977). These standards (40 CFR Part 190) limit the total individual radiation dose caused by emissions from facilities that comprise the uranium fuel cycle, including licensed uranium mills. At the time 40 CFR Part 190 was promulgated, there existed considerable uncertainty about the public health impact of existing levels of radon-222 in the atmosphere, as well as uncertainty about the best method for management of new man-made sources of the gas. The Agency exempted radon-222 from control under 40 CFR Part 190 since at that time the problems associated with radon emissions were considered sufficiently different from those of other radioactive materials associated with the fuel cycle to warrant separate consideration.

Subsequently, standards were proposed under the Clean Air Act (48 FR 15076, April 6, 1983) for NRC licensees, but uranium fuel cycle facilities, which included operating uranium mills, were

- excluded because these sources are subject to EPA's 40 CFR Part 190 standard that provided protection equivalent to that of the Clean Air Act. It was noted during the comment period for the Clean Air Act standards that radon-222 emitted from operating uranium mills and their actively used tailings piles are not subject to any current or proposed EPA standards, and that there may be significant risks associated with resulting radon-222 emission.

The Agency is particularly interested in receiving information on the following issues:

- (1) Radon-222 emissions from these facilities;
- (2) Applicable control options and strategies, including work practices;
- (3) Feasibility and cost of control options and strategies;
- (4) Local and regional impacts due to emissions of radon-222 from active uranium mills;

(5) Methods of determining compliance with a work practice type of standard; and

(6) Effect on the industry if controls are required.

Dated: October 23, 1984.

William D. Ruckelshaus,

*Administrator.*

[FR Doc. 84-22419 Filed 10-30-84; 2:14 am]

BILLING CODE 6550-50-M

**ENVIRONMENTAL PROTECTION AGENCY****40 CFR Part 61**

[FRL-5011-1]

RIN 2060-AE23

**National Emissions Standards for Hazardous Air Pollutants**

AGENCY: Environmental Protection Agency (EPA).

ACTION: Final rule.

**SUMMARY:** EPA is rescinding 40 CFR part 61, subpart T (subpart T) as it applies to owners and operators of uranium mill tailings disposal sites licensed by the Nuclear Regulatory Commission (NRC) or an affected Agreement State (Agreement States). As required by section 112(d)(9) of the Clean Air Act as amended, EPA has determined that the NRC regulatory program protects public health with an ample margin of safety to the same level as would implementation of subpart T. Subpart T is a National Emission Standard for Hazardous Air Pollutants (NESHAPs) which was published on December 15, 1989 and which regulates emissions of radon-222 into the ambient air from uranium mill tailings disposal sites. Subpart T continues to apply to unlicensed uranium mill tailings disposal sites currently regulated under subpart T that are under the control of the Department of Energy (DOE).

**DATES:** This rule is effective June 29, 1994. The provisions in this rule will be applied immediately to all affected facilities including existing sources. Under section 307(b)(1) of the Clean Air Act, judicial review of this final action is available only by filing a petition for review in the United States Court of Appeals for the District of Columbia Circuit within 60 days of publication of this rule. Under section 307(b)(2) of the Act, the provisions which are the subject of today's rule will not be subject to judicial review in any civil or criminal proceedings brought by EPA to enforce these requirements.

**FOR FURTHER INFORMATION CONTACT:** Gale C. Bonanno, Risk Assessment and Air Standards Branch, Criteria and Standards Division, 6602J, Office of Radiation and Indoor Air, Environmental Protection Agency, Washington, D.C. 20460 (202) 233-9219.

**SUPPLEMENTARY INFORMATION:****Docket**

Docket A-91-67 contains the rulemaking record. The docket is available for public inspection between

the hours of 8 a.m. and 4 p.m., Monday through Friday, in room M1500 of Waterside Mall, 401 M Street, SW Washington, DC 20460. A reasonable fee may be charged for copying.

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**1. Background****A. Description of Uranium Mill Tailings**

Uranium mill tailings are sand-like wastes that result from the processing of uranium ore. Tailings are stored in large surface impoundments, called piles, in amounts from less than one million tons to over thirty million tons, over areas that may cover hundreds of acres. Most piles are located in the Western United States, and all piles emit radon gas, a decay product of radium in the waste material resulting from the processing of ore to recover uranium at the uranium mills.

**B. Regulatory History**

To deal specifically with the risks associated with these tailings, Congress passed the Uranium Mill Tailings Radiation Control Act (UMTRCA) in 1978 (42 U.S.C. 2022, 7901-7942). In enacting UMTRCA, Congress found that uranium mill tailings may pose a potential and significant radiation health hazard to the public, and that every reasonable effort should be made to provide for the stabilization, disposal, and control in a safe and environmentally sound manner of such tailings in order to prevent or minimize radon diffusion into the environment and to prevent or minimize other environmental hazards from such tailings. See 42 U.S.C. 7901(a). Under UMTRCA, two programs were established to protect public health and the environment from the hazards associated with uranium mill tailings. One program (Title I) required the Department of Energy (DOE) to conduct the necessary remedial actions at designated inactive uranium mill tailing sites to achieve compliance with the general environmental standards to be promulgated by EPA. These sites were generally abandoned uranium processing sites for which a license issued by the NRC or its predecessor, the Atomic Energy Commission (AEC), was not in effect on January 1, 1978. The other program (Title II) pertained to active sites, which are those that are licensed by the NRC or an affected Agreement State. Requirements for licensed sites include the final disposal of tailings, including the control of radon after milling operations cease. UMTRCA also required that EPA promulgate standards for these licensed sites, including standards that protect human health and the environment in a manner consistent with standards established under Subtitle C of the Solid Waste Disposal Act, as amended. The NRC, or an Agreement State, is responsible for implementing the EPA standards at licensed uranium milling sites.

As part of NRC's 1982 authorization and appropriations, Congress amended UMTRCA on January 4, 1983. Public Law 97-415, sections 18(a) and 22(b), reprinted in 2 1982 U.S. Code Cong. & Admin. News (96 Stat.) 2077 and 2080. As partially amended thereby EPA was required to promulgate standards of general applicability for the protection of the public health, safety and the environment from radiological and nonradiological hazards associated with the processing and with the possession, transfer, and disposal of byproduct material as defined under section 11e(2)

of the AEA, e.g., uranium mill tailings. Requirements established by the NRC with respect to byproduct material must conform to the EPA standards. Any requirements of such standards adopted by the NRC shall be amended as the NRC deems necessary to conform to EPA's standards. In establishing such standards, the Administrator was to consider the risk to the public health, safety and the environment, the environmental and economic costs of applying such standards, and such other factors as the Administrator determines to be appropriate. See 42 U.S.C. 2022(b)(1).

As promulgated by EPA under subpart D of 40 CFR part 192 in 1983 and implemented by NRC pursuant to its regulations at 10 CFR part 40, appendix A, a Title II site licensed by NRC or an Agreement State, could indefinitely continue to emit radon at levels that could result in risks higher than allowed under the CAA. It was this possibility which compelled EPA to promulgate subpart T of 40 CFR part 61 under CAA section 112. In addition, the UMTRCA regulations called for an impoundment design that would achieve compliance with the 20 pCi/m<sup>2</sup>-s flux standard for 1,000 years, or at least 200 years, but prior to the recent EPA amendments did not include any requirement that monitoring occur to verify the efficacy of the design.

On October 16, 1985, NRC promulgated rules at 10 CFR part 40, appendix A to conform NRC's regulations issued five years earlier to the provisions of EPA's general UMTRCA standards other than those affecting groundwater protection at 40 CFR part 192 (50 FR 41852). NRC completed conforming amendments for groundwater protection in appendix A of 10 CFR part 40 in 1987.

Neither the UMTRCA standards promulgated by EPA in 1983 nor the NRC standards promulgated in 1980 and amended in 1985, established compliance schedules to ensure that non-operational tailings piles would be closed, and that the 20 pCi/m<sup>2</sup>-s standard would be met, within a reasonable period of time. Moreover, the EPA standards and NRC criteria also did not require monitoring to ensure compliance with the flux standard. 50 FR 41852 (October 16, 1985). To rectify these shortcomings of the then current EPA and NRC programs regulating uranium mill tailings, EPA promulgated standards under Section 112 of the CAA on October 31, 1989, to ensure that the piles would be closed in a timely manner with monitoring.

On December 15, 1989, EPA published national standards regulating

radionuclide emissions to the ambient air from several source categories, including non-operational sites used for the disposal of uranium mill tailings. (54 FR 51654). These sites are either under the control of the DOE pursuant to Title I of the Uranium Mill Tailings Radiation Control Act (UMTRCA) of 1978, 42 USC 7901 *et. seq.*, or are under the control of NRC or Agreement State-licenses pursuant to Title II of UMTRCA. These standards—subpart T of 40 CFR part 61 (subpart T)—were promulgated pursuant to the authority of Clean Air Act (CAA or Act) section 112 as it existed in 1989.

Prior to today's action, subpart T of 40 CFR part 61, limited radon-222 emissions to the ambient air from non-operational uranium mill tailings disposal sites licensed by the NRC or an affected Agreement State. Subpart T required that these sites, which consist of large (i.e., numerous acre) impoundments or piles, comply with a radon flux standard of 20 pCi/m<sup>2</sup>-s. 40 CFR 61.222(a). Moreover, compliance must be achieved within two years of when the site becomes non-operational, 40 CFR 61.222(b), which for piles which had ceased operation prior to the time of promulgation was no later than December 15, 1991. While at the time of promulgation EPA recognized that many sources might not be able to achieve this date, EPA was constrained by then existing CAA section 112(c)(1)(B)(ii) which allows a maximum of two years for facilities to come into compliance. EPA stated that for those sites which could not meet the two-year date, the Agency would negotiate expeditious compliance schedules pursuant to its enforcement authority under CAA section 113. See 54 FR 51683. Subpart T also called for monitoring and recordkeeping to establish and demonstrate compliance. See 40 CFR 61.223 and 61.224.

Subpart T was part of a larger promulgation of radionuclide NESHAPs that represent the Agency's application of the policy for regulating pollutants under then existing CAA section 112, which was first announced in the benzene NESHAPs. 54 FR 38044 (September 14, 1989). The NESHAPs policy utilized a two-step approach. In the first step, EPA considered the lifetime risk to the maximally exposed individual, and found that it is presumptively acceptable if it is no higher than approximately one in ten thousand. This presumptive level provides a benchmark for judging the acceptability of a category of emissions. This first step also considers other health and risk factors such as projected incidence of cancer, the estimated

number of persons exposed within each individual lifetime risk range, the weight of evidence presented in the risk assessment, and the estimated incidence of non-fatal cancer and other health effects. After considering all of this information, a final decision on a safe level of acceptable risk is made. This becomes the starting point for the second step, determining the ample margin of safety.

In the second step, EPA strives to provide protection for the greatest number of persons possible to an individual lifetime risk level no higher than approximately one in one million. In this step, the Agency sets a standard which provides an ample margin of safety again considering all of the health risk and other health information considered in the first step, as well as additional factors such as costs and economic impacts of controls, technological feasibility uncertainties, and any other relevant factors.

EPA noted that standards it had already promulgated pursuant to UMTRCA (42 U.S.C. 2022, 7901-7942) would eventually limit radon emissions from those sites to a flux of 20 pCi/m<sup>2</sup>-s (see 40 CFR part 192, subpart D), and thus EPA referred to that level as "baseline." EPA's risk assessment revealed that compliance with the 20 pCi/m<sup>2</sup>-s baseline would result in an estimated lifetime risk to the maximally exposed individual of approximately 1×10<sup>-4</sup> a level EPA determined to be safe under the first step of the analysis. EPA further concluded in the second step, which considers additional factors such as cost and technological feasibility that the baseline level also provided an ample margin of safety.

Even though EPA determined that the baseline was protective of public health with an ample margin of safety, EPA still found it was necessary to promulgate subpart T. This was because the baseline assumed compliance with the UMTRCA regulations even though those regulations did not require that compliance occur in the foreseeable future and, in fact, many sites were not proceeding towards the baseline level at the time subpart T was promulgated. In other words, EPA promulgated subpart T to address the timing issue, which was not addressed in the UMTRCA regulations.

The primary subpart T standard is the requirement that radon-222 emissions not exceed a flux of 20 pCi/m<sup>2</sup>-s. 40 CFR 61.222(a). Additionally it requires that, once a uranium mill tailings pile or impoundment ceases to be operational, it must be disposed of and brought into compliance with the emission limit within two years of the effective date of

the standard (by December 15, 1991) or within two years of the day it ceases to be operational, whichever is later. Lastly, it requires monitoring of the disposed pile to demonstrate compliance with the radon emission limit. See 40 CFR 61.223 and 61.224. In its 1989 action, EPA recognized that even though NRC implements general EPA standards (promulgated under UMTRCA) which also regulate these sites and call for compliance with a 20 pCi/m<sup>2</sup>-s flux standard (see 40 CFR part 192, subpart D), the UMTRCA regulatory program did not answer the critical timing concern addressed by subpart T.

The existing UMTRCA regulations set no time limits for disposal of the piles. Some piles have remained uncovered for decades emitting radon. Although recent action has been taken to move toward disposal of these piles, some of them may still remain uncovered for years.

54 FR at 51683. However, due to then-existing CAA section 112(c)(1)(B)(ii), EPA was constrained to requiring compliance with the 20 pCi/m<sup>2</sup>-s baseline within two years, a date the Agency recognized many sites might find impossible to meet. EPA announced that those situations could be dealt with through site-specific enforcement agreements under CAA section 113. Because EPA felt constrained by the CAA as it existed at that time, EPA stated that for those sites the Agency would negotiate expeditious compliance schedules pursuant to its enforcement authority under CAA section 113. See 54 FR 51683. By so doing, subpart T in effect mandated that the cover to meet that emissions level be installed as expeditiously as practicable considering technological feasibility.

The numerical radon emission limit of subpart T is the same as the UMTRCA standard at 40 CFR part 192, subpart D (subpart D) (although under UMTRCA, the limit is to be met through proper design of the disposal impoundment, and is to be implemented by DOE and NRC for the individual sites, while under the CAA, the standard is an emissions limit with compliance established by EPA through monitoring). However, the two year disposal requirement and the radon monitoring requirement were not separately required by the then existing UMTRCA regulations.

EPA amended 40 CFR part 192, subpart D on November 15, 1993, (58 FR 60340) to fill a specific regulatory gap with respect to timing and monitoring. Under subpart D, sites are now required to construct a permanent radon barrier pursuant to a design to achieve compliance with the 20 pCi/m<sup>2</sup>-s flux

standard as expeditiously as practicable considering technological feasibility (including factors beyond the control of the licensee). EPA announced its goal that this occur by December 31, 1997 for those non-operational uranium mill tailings piles listed in the MOU between EPA, NRC and the affected Agreement States (at 56 FR 67568), or seven years after the date on which the impoundments cease operation for all other piles. The new requirement for verifying the flux with monitoring is meant to assure the efficacy of the design of the permanent radon barrier following construction.

Section 84a(2) of the Atomic Energy Act requires NRC to conform its regulations to EPA's regulations promulgated under UMTRCA. As noted above, the then existing NRC criteria while providing a comprehensive response to EPA's general UMTRCA standards did not compel sites to proceed to final closure by a certain date nor did they require monitoring to confirm the efficacy of the design of the cover. NRC proposed uranium mill tailings regulations to conform the NRC requirements to EPA's proposed amended standards at 40 CFR part 192 subpart D. 58 FR 58657 (November 3, 1993). The final NRC regulations amend Criterion 6 and add a new Criterion 6A together with new definitions in the Introduction to appendix A to part 40 of title 10 of the CFR. (59 FR 28220, June 1, 1994).

These CAA and UMTRCA programs duplicate each other by creating dual regulatory oversight, including independent procedural requirements, while seeking to ensure compliance with the same numerical 20 pCi/m<sup>2</sup>-s flux standard. Concern over this duplication inspired several petitions for reconsideration, most notably from NRC, the American Mining Congress (AMC) and Homestake Mining Co. It was also alleged that subpart T was unlawful because it was physically impossible for some sites to come into compliance with subpart T in the time required. While those petitions remained pending before EPA (at least in part), EPA has taken several actions to address the issues they raised, including publishing the proposal to rescind subpart T, as well as the Final Rule to amend 40 CFR part 192, subpart D (UMTRCA regulations) and a Final Rule staying subpart T pending the conclusion of this rulemaking.

#### C. Clean Air Act Amendments of 1990

After promulgation of subpart T (and receipt of reconsideration petitions), the Clean Air Act was substantially amended in November 1990. Included

in the amended Act was an amendment that speaks directly to the duplication issue. Newly enacted section 112(d)(9) provides that no standard for radionuclide emissions from any category or subcategory of facilities licensed by the Nuclear Regulatory Commission (or an Agreement State) is required to be promulgated under section 112 if the Administrator determines, by rule, and after consultation with the Nuclear Regulatory Commission, that the regulatory program established by the Nuclear Regulatory Commission pursuant to the Atomic Energy Act for such category or subcategory provides an ample margin of safety to protect the public health. This provision strives to eliminate duplication of effort between EPA and NRC, so long as public health is protected with an ample margin of safety.

Moreover, Congress expressed sensitivity to the special compliance problems of uranium mill tailings sites through new section 112(i)(3). This provision provides an additional 3-year extension to mining waste operations (e.g., uranium mill tailings) if the 4 years allowed (including a one year extension) for compliance with standards promulgated under the amended section 112 is insufficient to dry and cover the mining waste (thereby controlling emissions).

#### D. Memorandum of Understanding (MOU) Between EPA, NRC and Affected Agreement States

In July of 1991, EPA, NRC and the affected Agreement States entered into discussions over the dual regulatory programs established under UMTRCA and the CAA. In October 1991, those discussions resulted in a Memorandum of Understanding (MOU) between EPA, NRC and the Agreement States which outlines the steps each party will take to both eliminate regulatory redundancy and to ensure uranium mill tailings piles are closed as expeditiously as practicable. See 56 FR 55434 (MOU reproduced as part of proposal to stay subpart T); see also 56 FR 67537 (final rule to stay subpart T). The primary purpose of the MOU is to ensure that owners of uranium mill tailings disposal sites that have ceased operation, and owners of sites that will cease operation in the future, bring those piles into compliance with the 20 pCi/m<sup>2</sup>-s flux standard as expeditiously as practicable considering technological feasibility (including factors beyond the control of the licensee) with the goal that all current disposal sites be closed and in compliance with the radon emission standard by the end of 1997 or within

seven years of the date on which existing operations and standby sites enter disposal status. This goal comports with Congress's concern over timing as reflected in CAA section 112(i)(3), as amended.

#### E. The Settlement Agreement

As contemplated by the MOU, on December 31, 1991, EPA took final action to stay and proposed rescission of subpart T under section 112(d)(9), and issued an advance notice of proposed rulemaking under UMTRCA. See 55 FR 67537, 67561 and 67569. In order to preserve its rights, EDF filed a lawsuit challenging the legality of the stay. *EDF v. Reilly*, No. 92-1082 (D.C. Cir.). Litigation had previously been filed by EDF, NRDC, AMC, Homestake and others, challenging subpart T. *AMC, et al. v. EPA*, Nos. 90-1058, 90-1063, 90-1068, and 90-1074 (D.C. Cir.). NRC, AMC and Homestake had also filed an administrative petition for reconsideration of subpart T.

Discussions continued with the litigants and NRC, and in February 1993, an agreement was reached to settle the pending litigation and the administrative proceeding, avoid potential future litigation, and otherwise agree to a potential approach to regulation of NRC-licensed non-operational uranium mill tailings disposal sites. See 58 FR 17230 (April 1, 1993) (notice announcing settlement agreement under CAA section 113(g)). NRC agreed in principle with the agreement by letter.

The settlement agreement adds comprehensive detail to, and thereby continues, the approach set forth in the MOU. Actions implemented under the settlement agreement should result in the expeditious control of radon-222 emissions at non-operational uranium mill tailings disposal sites without the delays and resource expenditures engendered by litigation and contentious administrative process. This enables EPA to satisfy the criteria of section 112(d)(9) that EPA find, by rule, that the NRC regulatory program protects public health with an ample margin of safety. It does this, in part, by providing for changing EPA's UMTRCA regulations such that public health would be as well protected under UMTRCA as would implementation of subpart T under the CAA.

#### II. Rationale for Final Rule To Rescind 40 CFR Part 61 Subpart T for NRC and Agreement State Licensees

In light of the new statutory authority provided EPA by section 112(d)(9) of the Clean Air Act as amended, EPA met with NRC and the affected Agreement

States to determine whether, with certain modifications to its regulatory program under UMTRCA, the NRC regulatory program might provide an ample margin of safety. If so, subpart T would be rendered superfluous and, therefore, needlessly duplicative and burdensome such that rescission pursuant to CAA section 112(d)(9) would be appropriate.

In applying the risk methodology for CAA section 112 to the risk assessment for subpart T, EPA has already determined that the baseline that would result once the 20 pCi/m<sup>2</sup>-s UMTRCA standard is met protects public health with an ample margin of safety. Thus, since the regulatory program implemented by NRC assures that sites will achieve the baseline (20 pCi/m<sup>2</sup>-s) as soon as practicable considering technological feasibility and factors beyond the control of the licensee, the NRC program protects the public to the same extent as subpart T and subpart T is not necessary for these facilities. More specifically appropriate modifications to the UMTRCA regulatory scheme as implemented by NRC and the affected Agreement States to ensure specific, enforceable closure deadlines and monitoring requirements such that compliance with the baseline occurs as expeditiously as practicable considering technological feasibility and factors beyond the control of the licensee, protect public health with an ample margin of safety. In so concluding, EPA relies wholly upon the risk analysis it conducted in promulgating subpart T. EPA is not revisiting that analysis here.

#### A. The Regulatory Scheme Under UMTRCA

As a supplement to the Atomic Energy Act of 1954, as amended, UMTRCA (42 U.S.C. 2022, 7901-7942) was enacted to comprehensively address the dangers presented by uranium mill tailings, including their disposal:

Uranium mill tailings located at active and inactive mill operations may pose a potential and significant radiation health hazard to the public, and the protection of the public health, safety, and welfare requires that every reasonable effort be made to provide for the stabilization, disposal, and control in a safe and environmentally sound manner of such tailings in order to prevent or minimize radon diffusion into the environment

42 U.S.C. 7901(a); see *American Mining Congress v. Thomas*, 772 F.2d 617 (10th Cir. 1985), cert. denied, 426 U.S. 1158 (1986). As to uranium mill tailings disposal sites in particular, UMTRCA gives the Department of Energy (DOE) the responsibility to clean up and

dispose of certain sites (i.e., Title I), and gives NRC the responsibility for regulating those sites that are owned and operated by its licensees (i.e., Title II). EPA is responsible for promulgating the generally applicable environmental standards to be implemented by both NRC and DOE. 42 U.S.C. 2022(a), 7911-7924; AMC, 724 F.2d at 621. EPA published its final UMTRCA regulations on December 15, 1982 for Title I sites and on September 30, 1983 for Title II sites. 48 FR 590 and 48 FR 45926 (codified at 40 CFR part 192).

Parts of EPA's final UMTRCA regulations are directed to the permanent disposal of uranium mill tailings. See 40 CFR part 192, subpart D. Among the requirements of subpart D is the mandate that radon releases from the disposal sites not exceed a flux of 20 pCi/m<sup>2</sup>-s. 40 CFR 192.32 (a) and (b). Other aspects of subpart D pertain to groundwater, monitoring, design, and duration of closure. See 40 CFR 192.32 and 192.33. With the exception of the groundwater provisions at 40 CFR 192.20(a)(2)-(3), applicable to Title I sites, all aspects of EPA's regulations were upheld by the Tenth Circuit in *AMC v. Thomas*, 772 F.2d at 640. EPA is currently engaged in rulemaking to address the court's remand of the Title I groundwater provisions.

Because NRC implements EPA's general UMTRCA standards for its licensees (as do its Agreement States), it has promulgated its own implementing regulations in the form of "criteria." See generally 10 CFR part 40, appendix A. While these criteria set forth a variety of specific requirements—financial, technical, and administrative—to govern the final reclamation (i.e., closure) design for each disposal site, they also provide for "site-specific" flexibility by authorizing alternatives that are at least as stringent as EPA's general standards and NRC's criteria, "to the extent practicable" as provided in section 84c of the Atomic Energy Act of 1954, as amended. 10 CFR part 40, appendix A, Introduction.

Overall, NRC's implementation criteria set forth a rigorous program governing the reclamation of the disposal sites so that closure will (1) last for 1,000 years to the extent reasonable, but in any event at least 200 years, and (2) limit radon release to 20 pCi/m<sup>2</sup>-s throughout that period. The design must be able to withstand extreme weather and other natural forces. Upon review, EPA believed the NRC criteria comprise a comprehensive response to EPA's general standards at 40 CFR part 192, subpart D. However, as noted above, nothing in either EPA's 1983 general standards or NRC's 1985 amended

implementing criteria compelled sites to proceed towards final closure by a certain date. This was the reason for EPA's decision in 1989 to promulgate the subpart T NESHAPs under the CAA. Moreover, neither EPA's general UMTRCA regulations, nor NRC's implementing criteria previously required appropriate monitoring to ensure compliance with the 20 pCi/m<sup>2</sup>-s standard.

*B. Clean Air Act Amendments of 1990: Section 112(d)(9) ("Simpson Amendment")*

The purpose of this provision is to preserve governmental resources and avoid needless, burdensome, and potentially contradictory CAA regulations. Specifically, section 112(d)(9) makes explicit that EPA need not regulate radionuclides under section 112 of the CAA for those radionuclide sources that are sufficiently regulated by NRC or its Agreement States (under the Atomic Energy Act or its component Acts, such as UMTRCA). More particularly, section 112(d)(9) allows EPA to decline to regulate under section 112 if the Administrator determines "by rule, and after consultation with the [NRC]," that NRC's regulatory program for a particular source "category or subcategory provides an ample margin of safety to protect the public health."

As EPA interprets section 112(d)(9), the Agency may rescind the subpart T NESHAP as it applies to non-operational uranium mill tailings disposal facilities licensed by NRC or an affected Agreement State if the Agency (1) consults with NRC, (2) engages in public notice and comment rulemaking, and (3) finds that the separate NRC regulatory program provides an equivalent level of public health protection (i.e., an ample margin of safety) as would implementation of subpart T. While this rulemaking may commence prior to final development of NRC's regulatory program, that program must fully satisfy the statute at the time EPA takes final action. In so doing, EPA must find that the NRC regulatory program satisfies the CAA standard, not that full and final implementation of that program has already successfully occurred.

*C. Memorandum of Understanding (MOU)*

EPA, NRC and the affected Agreement States entered intensive discussions resulting in the execution of a Memorandum of Understanding (MOU), a copy of which was printed at the end of the proposed rule to rescind subpart T published December 31, 1991 (56 FR 67568). The primary purpose of the

MOU is to ensure that non-operational uranium mill tailings piles and impoundments licensed by NRC or an affected Agreement State achieve compliance through emplacement of a permanent radon barrier with the 20 pCi/m<sup>2</sup>-s flux standard specified in EPA's UMTRCA standards (40 CFR 192.32(b)(1)) as expeditiously as practicable considering technological feasibility (including factors beyond the control of the licensee). The goal is that this occur at all current disposal sites by the end of 1997 or within seven years of when the existing operating and standby sites enter disposal status. The MOU called for EPA to modify its UMTRCA regulations (at 40 CFR part 192, subpart D) to address the timing concern that resulted in EPA's 1989 decision to promulgate subpart T. In addition, the MOU called for NRC to modify its implementing regulations at 10 CFR part 40, appendix A, as appropriate, and to immediately commence efforts to amend the licenses of the non-operational mill tailings disposal site owners and operators to include reclamation plans that require compliance with the 20 pCi/m<sup>2</sup>-s standard as expeditiously as practicable considering technological feasibility (including factors beyond the control of the licensee). This was to be accomplished either through voluntary cooperation with the licensees, or through administratively enforceable orders. In accordance with the MOU, the NRC and affected Agreement States agreed to amend the licenses of all sites whose milling operations have ceased and whose tailings piles remain partially or totally uncovered. The amended licenses would require each mill operator to establish a detailed tailings closure plan for radon to include key closure milestones and a schedule for timely emplacement of a permanent radon barrier on all non-operational tailings impoundments to ensure that radon emissions do not exceed a flux of 20 pCi/m<sup>2</sup>-s. These actions, coupled with NRC's commitment to enforce the amended licenses, are intended to provide the basis for EPA to make the requisite findings under CAA section 112(d)(9) for rescission of subpart T.

*D. Settlement Agreement*

In light of CAA section 112(d)(9), and in order to foster a consensus approach to regulation in this area, EPA then commenced discussions with NRC, the American Mining Congress (AMC), and the Environmental Defense Fund (EDF). As a result of discussions after execution of the MOU, a final settlement agreement was executed between EPA,

AMC, EDF, NRDC and individual site owners, to which NRC agreed in principle by letter. The settlement agreement continues the regulatory approach set forth in the MOU adding extensive detail to that agreement.

Under the agreement between EDF, AMC, individual sites and EPA, the pending litigation would not be dismissed until after certain terms in the agreement were fulfilled. The parties agreed that upon rescission of subpart T they would jointly move the court to dismiss the challenges pertaining solely to subpart T. (Paragraph III.1.) By the terms of the agreement (paragraph III.15.), AMC's pending administrative petition for reconsideration of subpart T becomes moot with the final rescission of subpart T. Moreover, the agreement does not legally bind or otherwise restrict EPA's rights or obligations under law rather, by its terms (paragraph III.12.), there is no recourse for a court order to implement the agreement. Indeed, the only remedy for failure to meet the terms of the final agreement is activation by the litigants of the underlying litigation.

*E. Actions by NRC and EPA Pursuant to the MOU and Settlement Agreement*

*1. EPA Regulatory Actions*

On December 31, 1991, EPA took several steps towards fulfilling its responsibilities under the MOU and in implementing CAA section 112(d)(9) by publishing three Federal Register (FR) notices. In the first notice (56 FR 67537), EPA published a Final Rule to stay the effectiveness of 40 CFR part 61, subpart T as it applies to owners and operators of non-operational uranium mill tailings disposal sites licensed by the NRC or an Agreement State. The stay will remain in effect until the Agency rescinds the uranium mill tailings NESHAPs at 40 CFR part 61, subpart T. However, if EPA fails to complete that rulemaking by June 30, 1994, the stay will expire and the requirements of subpart T will become effective.

In a second notice published on December 31, 1991, the Agency proposed to rescind the NESHAPs for radionuclides that appears at 40 CFR part 61, subpart T, as it applies to non-operational uranium mill tailings disposal sites licensed by the NRC or an Agreement State (56 FR 67561).

In the third notice, EPA published an advanced notice of proposed rulemaking to amend 40 CFR part 192, subpart D (56 FR 67569) to provide for site closure to occur as expeditiously as practicable considering technological feasibility (including factors beyond the control of the licensee), and appropriate

monitoring requirements for non-operational uranium mill tailings piles. These amendments would ensure timely compliance and add monitoring requirements currently lacking in the UMTRCA regulations.

EPA published a notice on June 8, 1993, proposing to amend 40 CFR part 192, subpart D. (58 FR 32174). On November 15, 1993, EPA published the Final Rule amending 40 CFR part 192, subpart D. (58 FR 60340). This Final Rule requires: (1) Emplacement of a permanent radon barrier constructed to achieve compliance with, including attainment of, the 20 pCi/m<sup>2</sup>-s flux standard by all NRC or Agreement State licensed sites that, absent rescission, would be subject to subpart T (2) interim milestones to assure appropriate progress in emplacing the permanent radon barrier; and (3) closure of the site closure as expeditiously as practicable considering technological feasibility (including factors beyond the control of the licensee) after the impoundments cease operation. EPA announced a goal that this occur by December 31, 1997 for those non-operational uranium mill tailings piles listed in the MOU between EPA, NRC and affected Agreement States (at 56 FR 67568), or seven years after the date on which the impoundments cease operation for all other piles.

As intended by EPA, the phrase "as expeditiously as practicable considering technological feasibility" means as quickly as possible considering: (1) The physical characteristics of the tailings and sites; (2) the limits of available technology; (3) the need for consistency with mandatory requirements of other regulatory programs; and (4) factors beyond the control of the licensee. While this phrase does not preclude economic considerations to the extent provided by the phrase "available technology," it also does not contemplate utilization of a cost-benefit analysis in setting compliance schedules. The radon control compliance schedules are to be developed consistent with the targets set forth in the MOU as reasonably applied to the specific circumstances of each site.

EPA recognized that the UMTRCA regulatory scheme encompasses a design standard. EPA made minor amendments to this scheme to better facilitate implementation of the regulation without fundamentally altering the current method of compliance. Subpart D, as amended, requires site control be carried out in accordance with a written tailings closure plan (radon), and in a manner which ensures that closure activities are

initiated as expeditiously as practicable considering technological feasibility (including factors beyond the control of licensees). The tailings closure plan (radon), either as originally written or subsequently amended, will be incorporated into the individual site licenses, including provisions for and amendments to the milestones for control, after NRC or an affected Agreement State finds that the schedule reflects compliance as expeditiously as practicable considering technological feasibility (including factors beyond the control of the licensee). The compliance schedules are to be developed consistent with the targets set forth in the MOU as reasonably applied to the specific circumstances of each site with a goal that final closure occur by December 31, 1997 for those non-operational uranium mill tailings piles listed in the MOU between EPA, NRC and affected Agreement States (at 56 FR 67568), or seven years after the date on which the impoundments cease operation for all other piles. These schedules must include key closure milestones and other milestones which are reasonably determined to promote timely compliance with the 20 pCi/m<sup>2</sup>-s flux standard. Milestones which are not reasonably determined to advance timely compliance with the radon air emissions standard, e.g. installation of erosion protection and groundwater corrective actions, are not relevant to the tailings closure plans (radon). In addition, subpart D requires that licensees ensure that radon closure milestone activities, such as wind blown tailings retrieval and placement on the pile, interim stabilization (including dewatering and the removal of freestanding liquids and recontouring), and radon barrier construction, are undertaken to achieve compliance with, including attainment of, the 20 pCi/m<sup>2</sup>-s flux standard as expeditiously as practicable considering technological feasibility.

The goal of the amendments to subpart D is for existing sites, or those that become non-operational in the future, to achieve compliance as expeditiously as practicable considering technological feasibility (including factors beyond the control of licensees) within the time periods set forth in the MOU, including Attachment A thereto, and for new sites to achieve compliance no later than seven years after becoming non-operational.

However, if the NRC or an Agreement State makes a finding that compliance with the 20 pCi/m<sup>2</sup>-s flux standard has been demonstrated through appropriate monitoring, after providing an opportunity for public participation,

then the performance of the milestone(s) may be extended. If an extension is granted, then during the period of the extension, compliance with the 20 pCi/m<sup>2</sup>-s flux standard must be demonstrated each year. Additionally, licensees may request, based upon cost, that the final compliance date for emplacement of the permanent radon barrier, or relevant milestone set forth in the applicable license or incorporated in the tailings closure plan (radon), be extended. The NRC or an affected Agreement State may approve such a request if it finds, after providing the opportunity for public participation, that: (1) The licensee is making good faith efforts to emplace a permanent radon barrier constructed to achieve the 20 pCi/m<sup>2</sup>-s flux standard; (2) such delay is consistent with the definition of "available technology" and (3) such delay will not result in radon emissions that are determined to result in significant incremental risk to the public health. Such a finding should be accompanied by new deadlines which reasonably correspond to the target dates identified in Attachment A of the MOU. (56 FR 67569).

EPA expects the NRC and Agreement States to act consistently with their commitment in the MOU and provide for public notice and comment on proposals or requests to (1) incorporate radon tailings closure plans or other schedules for effecting emplacement of a permanent radon barrier into licenses and (2) amend the radon tailings closure schedules as necessary or appropriate for reasons of technological feasibility (including factors beyond the control of the licensees). Under the terms of the MOU, NRC should do so with notice timely published in the *Federal Register*. In addition, consistent with the MOU, members of the public may request NRC action on these matters pursuant to 10 CFR 2.206. EPA also expects the Agreement States to provide comparable opportunities for public participation pursuant to their existing authorities and procedures.

The UMTRCA regulations, as promulgated by EPA and implemented by NRC prior to the 1993 amendments, while ultimately limiting emissions to the same numerical level as subpart T, were supported by a variety of design-based substantive and procedural requirements that speak to UMTRCA's unique concern that final site closure occur in a manner that will last 1,000 years or at least 200 years, but did not require monitoring of emissions to confirm the performance of the earthen cover. See generally 10 CFR part 40, appendix A and 40 CFR part 192. Subpart D, as amended, requires all

appropriate monitoring be conducted pursuant to the procedures described in 40 CFR part 61, appendix B, Method 115, or any other measurement method proposed by a licensee and approved by NRC or the affected Agreement State as being at least as effective as EPA Method 115 in demonstrating the effectiveness of the permanent radon barrier in achieving compliance with the 20 pCi/m<sup>2</sup>-s flux standard. After emplacement of a permanent radon barrier designed and constructed to achieve compliance with, including attainment of, the 20 pCi/m<sup>2</sup>-s flux standard, the licensee shall conduct appropriate monitoring and analysis of the radon flux through the barrier. This monitoring will verify that the design of the permanent radon barrier is effective in ensuring that emissions of radon-222 will not exceed compliance with the 20 pCi/m<sup>2</sup>-s flux standard, as contemplated by 40 CFR 192.32(b)(1)(ii). EPA intends that the permanent radon barrier be designed to ensure sustained compliance with the 20 pCi/m<sup>2</sup>-s flux standard by all sites, but does not require continuous emissions monitoring. Rather, a single monitoring event may suffice to verify the design of the permanent radon barrier to ensure continued compliance. Note, however that if the NRC or an Agreement State extends the time for performance of milestones based on a finding that compliance with the 20 pCi/m<sup>2</sup>-s flux standard has been demonstrated by appropriate monitoring, compliance with the 20 pCi/m<sup>2</sup>-s flux standard must be demonstrated each year during the period of the extension.

## 2. NRC Regulatory Action

On May 20, 1994, the Commissioners approved final amendments conforming 10 CFR part 40, appendix A to 40 CFR part 192, subpart D. The final regulations adopted by NRC amend Criterion 6, add a new Criterion 6A and new definitions contained in the Introduction to appendix A. Criterion 6 was revised to provide for appropriate verification that the "final" (or "permanent" as defined by EPA) radon barrier, as designed and constructed, is effective in controlling releases of radon-222 to a level no greater than 20 pCi/m<sup>2</sup>-s when averaged over the entire pile or impoundment. Criterion 6(2) (59 FR 28220, June 1, 1994). The licensee must use EPA Method 115, or another method approved by the NRC as being at least as effective in demonstrating the effectiveness of the "final" radon barrier. *Id.* If the reclamation plan specifies phased emplacement of the "final" radon barrier, the verification must be performed on the portion of the

pile or impoundment as the "final" radon barrier for that portion is emplaced. Additionally, certain reporting and recordkeeping is required in connection with the verification of the effectiveness of the "final" radon barrier. Criterion 6(4) (59 FR 28220, June 1, 1994).

The Introduction section of appendix A to part 40 was amended by adding the following definitions: as expeditiously as practicable considering technological feasibility available technology factors beyond the control of the licensee, final radon barrier, milestone, operation and reclamation plan. While subpart D requires emplacement of the "permanent" radon barrier NRC requires emplacement of the "final" radon barrier. According to NRC, the definition of final radon barrier, is intended to "facilitate the drafting of clear regulatory text and to eliminate any ambiguity with respect to compliance with the 20 pCi/m<sup>2</sup>-s 'flux standard' after completion of the final earthen barrier and not as a result of any temporary conditions or interim measures. (59 FR 28222; June 1, 1994). The final definitions of factors beyond the control of the licensee and available technology have been revised to include a list of possible factors and examples of grossly excessive costs respectively, consistent with subpart D:

Criterion 6A paragraph 1 requires completion of the "final" radon barrier as expeditiously as practicable considering technological feasibility after a pile or impoundment containing uranium byproduct materials ceases operation, and requires it to be done in accordance with a written Commission-approved reclamation plan. In addition, this paragraph requires inclusion of specified interim milestones as a condition of the individual site license. Criterion 6A also specifies the conditions for Commission approval of extensions for performance of milestones and continued acceptance of uranium byproduct and other materials in the pile or impoundment. 10 CFR part 40, appendix A Criterion 6A (2) and (3) (59 FR 28220, June 1, 1994). These provisions vary somewhat from NRC's proposal, to reflect changes made in EPA's final amendments to subpart D at §§ 192.32(a)(3) (iv) and (v). The changes are "(1) that only byproduct material, not 'similar' material, will be approved for continued disposal after the final radon barrier is essentially complete and the verification of radon flux levels has been made, and (2) that public participation is specifically to be provided for only in the case of continued disposal after radon flux verification, in addition to general

clarification of the paragraph." (59 FR 28224, June 1, 1994).

Additionally NRC's final regulations in Criterion 6A provide for public participation consistent with the MOU and the settlement agreement. Such public participation will be provided through a notice published in the *Federal Register* including the opportunity for public comment on the proposed license amendment and the opportunity to request an informal hearing in accordance with the Commission's regulations at 10 CFR part 2, subpart L. The final regulations contain various revisions to NRC's proposal, both substantive and editorial in nature, primarily for consistency with EPA's final amendments to subpart D.

EPA believes the final revisions clarify NRC's proposal. EPA further believes that although NRC's conforming regulations are not identical to subpart D, the differences are minor in nature, and properly reflect application of the subpart D requirements to NRC's separate regulatory program. NRC's final rule appropriately conforms its regulations to 40 CFR part 192 subpart D. EPA notes that NRC's conforming amendments are an important consideration in EPA's determination that the NRC regulatory program protects the public health with an ample margin of safety.

## 3. Amendment of NRC and Agreement State Licenses

Consistent with their commitments under the MOU, as well as EPA's previous proposal to rescind subpart T (56 FR 67561 December 31, 1991), NRC and the affected Agreement States agreed to amend the licenses of all non-operational uranium mill tailings sites to ensure inclusion of schedules for emplacing a permanent radon barrier on the tailings impoundments, as well as interim milestones (e.g., wind blown tailings retrieval and placement on the pile, and interim stabilization). To this end, NRC and the Agreement States requested the licensees to voluntarily seek amended licenses and have completed processing those requests. NRC has continued the spirit of cooperation between EPA and NRC by keeping the Agency apprised of the status of the approval of reclamation plans and amendment of licenses.

As of September 30, 1993, NRC and the Agreement States had completed all license amendments for closure of licensed non-operational impoundments, with the exception of the license amendment incorporating the reclamation plan for the Atlas site located in Moab, Utah.

NRC informed EPA by letter that the Commission received extensive comments on NRC's July 20, 1993 proposal to approve the Atlas reclamation plan, including the closure schedule and interim milestones required by the MOU, and the Environmental Assessment and the Finding of No Significant Impact for the Atlas mill. NRC rescinded its Finding of No Significant Impact for the Atlas mill in October 1993. (58 FR 52516, October 8, 1993). One issue appears to be the potential for flooding of the Atlas impoundment if it is reclaimed on-site, due to the proximity of the site to the Colorado River. This concern and others appear to have caused delays in the license amendment for this site. NRC is actively pursuing a timely final decision on the acceptability of the existing Atlas site and its reclamation plan. To this end, NRC informed EPA by letter dated December 28, 1993, that NRC has conducted several meetings with the various representatives enumerated above and has requested additional technical information from the licensee. On March 30, 1994, NRC published a Notice of Intent to Prepare an Environmental Impact Statement and to Conduct a Scoping Process. (59 FR 14912). In that notice, NRC states its determination "that approval of the revised reclamation plan constitutes a major Federal action and that based on the level of controversy related to the proposed action [on-site reclamation] and uncertainties associated with the unique features of the Moab site, preparation of an EIS in accordance with the National Environmental Policy Act (NEPA) and the NRC's implementing requirements in 10 CFR part 51 is warranted. (59 FR 14913, March 30, 1994). The notice describes the proposed action, possible alternative approaches and the scoping process. The alternative approaches include moving the pile to one of two alternative sites. *Id.*

The near edge of the town of Moab is located about 2 km to the east of the Atlas tailings impoundment. However, it appears the area within a 1.5 km radius of the Atlas mill tailings impoundment site is sparsely populated. An interim cover is being placed over the impoundment for radon emission control as the Atlas tailings impoundment dries sufficiently to allow access of the necessary equipment. As discussed in the Background Information Document (BID) for the amendments to 40 CFR part 192 subpart D, interim covers significantly reduce radon emissions. Technical Support for Amending Standards for Management of

Uranium Byproduct Materials: 40 CFR Part 192 Background Information Document, EPA 402-R-93-085, October 1993.

NRC announced on May 11, 1994 (59 FR 24490) that Atlas Corporation applied to amend condition 55 of its source material license. Atlas proposed to amend the milestone dates by extending the dates for windblown tailings retrieval and placement on the pile, placement of the interim cover and placement of the final radon barrier by one year. NRC has informed EPA that the Commission approved the extension of the date for placement of the interim cover to February 15, 1995 and that the milestone for emplacement of the "final" radon barrier was not extended. See Docket Entry A91-67 IV-D-50 (Letter from NRC to Atlas).

Since NRC will notice any proposed change in the milestone date for emplacement of the permanent radon barrier, EPA and others will have the opportunity to monitor such an extension at that time. Under the present circumstances, it appears an extension of the MOU target date of 1996 would be consistent with the factors to be considered under the "as expeditiously as practicable" standard at 40 CFR 192.32(a)(3)(i), since NRC has determined there is a need for consistency with mandatory requirements of the National Environmental Policy Act (NEPA) and there may be factors beyond the control of the licensee. 40 CFR 192.31(k). Based on representations from NRC, EPA believes that the extra time NRC is taking to further review the proposed Atlas mill site reclamation plan is necessary to address the large amount of public comments received and that it will result in a final solution that is more responsive to public comment.

NRC and the affected Agreement States have also agreed to enforce the provisions of the amended licenses to ensure compliance with the new schedules for emplacing the permanent radon barriers, including interim milestones, and to ensure (and verify) the efficacy of the design and construction of the barrier to achieve compliance with the 20 pCi/m<sup>2</sup>-s flux standard contained in the amendments to subpart D. (56 FR 67568, December 31, 1991) (MOU, a copy of which was printed at the end of the proposed rule to rescind subpart T).

### III. Final Rule to Rescind 40 CFR Part 61, Subpart T for NRC and Agreement State Licensees

EPA is rescinding subpart T as it applies to non-operational uranium mill tailings disposal sites licensed by NRC

or an affected Agreement State. The Agency sets forth this Final Rule pursuant to its authority under section 112(d)(9) of the CAA, as amended in 1990. The support for this action includes (1) the MOU, which reflects consultation with NRC and the affected Agreement States and sets forth a course of conduct to bolster NRC's regulatory program under UMTRCA so that it is protective of public health with an ample margin of safety (2) the settlement agreement which adds comprehensive detail to the MOU, (3) EPA's amendments to 40 CFR part 192, subpart D, (4) the relevant NRC and Agreement State actions concerning license amendments, to date, and (5) NRC's amendments to its implementation regulations at appendix A, 10 CFR part 40.

#### A. EPA Determination Under CAA Section 112(d)(9)

##### 1. Background

Section 112(d)(9) authorizes EPA to decline to regulate radionuclide emissions from NRC-licensees under the CAA provided that EPA determines, by rule, and after consultation with NRC, that the regulatory scheme established by NRC protects the public health with an ample margin of safety. The legislative history of section 112(d)(9) provides additional guidance as to what is meant by "an ample margin of safety to protect the public health" and what process the Administrator should follow in making that determination in a rulemaking proceeding under section 112(d)(9). The Conference Report accompanying S. 1630 points out that the "ample margin of safety" finding under section 112(d)(9) is the same "ample margin of safety" requirement that was contained in section 112 of the CAA prior to its amendment in 1990. The conferees also made clear that the process the Administrator was expected to follow in making any such determination under section 112(d)(9) was that "required under the decision of the U.S. Court of Appeals in *NRDC v EPA*, 824 F.2d 1146 (D.C. Cir 1987) (*Vinyl Chloride*). H. Rep. No. 101-952, 101st Cong., 2d Sess: 339 (1990), reprinted in 1 A Legislative History of the Clean Air Act Amendments of 1990, at 1789 (1993) (hereinafter "Legislative History CAAA90").

EPA has already made a determination in promulgating subpart T that compliance with the 20 pCi/m<sup>2</sup>-s flux standard protects public health with an ample margin of safety. EPA conducted a risk analysis in promulgating subpart T in 1989. At that time, EPA determined that the 20 pCi/

m<sup>2</sup>-s flux standard was a "baseline" that was provided by EPA's general UMTRCA standards at 40 CFR part 192, subpart D. EPA further determined that compliance with that baseline would be protective of public health with an ample margin of safety. EPA promulgated subpart T to ensure achievement of the flux standard at non-operational sites in a timely manner. In conducting this rescission rulemaking, EPA is *not* revisiting either the risk analysis or decision methodology that supported the promulgation of subpart T; rather, EPA is only visiting whether NRC's regulatory program under UMTRCA will result in meeting the 20 pCi/m<sup>2</sup>-s flux standard established in subpart T as being the level that provides an ample margin of safety with compliance achieved in a timely manner thereby rendering subpart T unnecessarily duplicative.

EPA's determination that the NRC regulatory program protects public health with an ample margin of safety includes a finding that NRC and the affected Agreement States are implementing and enforcing, in significant part on a programmatic and site-specific basis: (1) The regulations governing the disposal of uranium mill tailings promulgated by EPA and NRC consistent with the settlement agreement described above and (2) the license (i.e., tailings closure plan) requirements that establish milestones for the purpose of emplacing a permanent radon barrier that will achieve compliance with the 20 pCi/m<sup>2</sup>-s flux standard.

## 2. EPA's UMTRCA Standards

As discussed above, EPA has modified its UMTRCA regulations (40 CFR part 192 subpart D) to require compliance with the 20 pCi/m<sup>2</sup>-s flux standard as expeditiously as practicable considering technological feasibility (and factors beyond the control of the licensee), and to require appropriate monitoring to verify the efficacy of the design of the permanent radon barrier. By definition, no more rapid compliance can occur, as a practical matter, because this schedule represents the earliest that the sites could be closed when all factors are considered. EPA expects that these compliance schedules were developed and will be modified consistent with the targets set forth in the MOU as reasonably applied to the specific circumstances of each site. When EPA promulgated subpart T it recognized that many sources might not be able to comply with the two year compliance date then required pursuant to section 112. Based on this, subpart T includes a provision that in such a case

EPA would "establish a compliance agreement which will assure that disposal will be completed as quickly as possible." 40 CFR 61.222(b). The time period required for closure under subpart D embodies the same approach. In practice, therefore, both subpart T and subpart D establish the same basic timeframes for achievement of the flux standard. Assuming NRC and the Agreement States faithfully implement subpart D and the license amendments required under subpart D, EPA would not expect there to be any significant difference between these two programs in the amount of time required for sites to comply with the flux standard.

As discussed above, subpart D as amended, provides that NRC may grant an extension of time to comply with either of the following deadlines: (1) Performance of milestones based upon a finding that compliance with the 20 pCi/m<sup>2</sup>-s flux standard has been met or (2) final compliance beyond the date or relevant milestone based upon cost. EPA considers these two bases upon which NRC may grant an extension to be mutually exclusive, i.e., a request for a specific extension may be based on one or the other but not both grounds. If a milestone is being extended for a basis other than cost, such an extension may be granted if NRC finds that compliance with the 20 pCi/m<sup>2</sup>-s flux standard has been demonstrated using EPA Method 115 or an NRC approved alternative. In addition the site must continue to demonstrate compliance with this flux standard on an annual basis. However, if a licensee requests extension of the final compliance date (or relevant milestone) based upon cost, such an extension may only be granted if NRC finds that the three criteria specified in 40 CFR section 192.32(a)(3)(iii) are met. Any extensions of the final compliance date based upon cost will be of the nature of the criteria be granted on a site-specific basis.

If a licensee requests an extension of the final compliance date based upon cost, technology may not be used as a basis for granting the extension unless the costs are grossly excessive, as measured by normal practice within the industry. EPA recognizes that the emissions from the pile may exceed the 20 pCi/m<sup>2</sup>-s flux standard pending final compliance, but believes these increases will be minimal and of limited duration. EPA does not anticipate the short extensions in the time to complete the radon barrier contemplated in subpart D and the NRC conforming amendments to increase the maximum lifetime individual risk beyond 1 in 10,000, the level which EPA found presumptively safe under the benzene policy and for

this category protective of the public health with an ample margin of safety in promulgating subpart T 54 FR 51656 (December 15, 1989). EPA believes that during the short extensions, this is consistent with the reality of short-term risks from radon emissions during the period of delay and consistent with the risks associated with negotiated compliance agreements when non-operational sites fail to close within the two-year period required by subpart T. EPA believes these emissions should not exceed those emissions which could occur under subpart T if compliance agreements had been negotiated. Extensions based upon cost will only be granted if NRC or an Agreement State finds, after providing an opportunity for public participation, that the emissions caused by the delay will not cause significant incremental risk to the public health. Additionally, a site requesting an extension based upon cost must demonstrate that it is making a good faith effort to emplace the permanent radon barrier. In many situations, where an interim cover is in place, radon emissions are significantly reduced and tailings which are wet or ponded emit no significant levels of radon. If NRC or an Agreement State uses this flexibility, public notice is required, and as appropriate, EPA would be aware of its use and could also monitor extensions under the provisions of § 61.226(c) to determine whether the Agency should reconsider the rescission and seek reinstatement of subpart T on either a programmatic or site-specific basis. Thus, under the circumstances, EPA believes affording authority for extensions of the final compliance date based upon cost is not inconsistent with protecting the public health.

Additionally NRC or an Agreement State may extend the date for emplacement of the radon barrier based on "factors beyond the control of the licensee," as that term is implicit in the definition of "as expeditiously as practicable." EPA understands that under subpart D's provisions there is no bar to NRC or an Agreement State reconsidering a prior decision establishing a date for emplacement of the radon barrier that meets the standard of "as expeditiously as practicable considering technological feasibility." Such reconsideration could, for example, be based on the existence of factors beyond the control of the licensee, or on a change in any of the various factors that must be considered in establishing a date that meets the "as expeditiously as practicable" standard of § 192.32(a)(3)(i). However, EPA stresses that such a change in

circumstances would not automatically lead to an extension. It would be incumbent on NRC or an Agreement State to evaluate all the factors relevant under § 192.32(a)(3)(i) before it changed a previously established milestone or date for emplacement of the final barrier, and any new date would have to meet the standard set out in § 192.32(a)(3)(i). Finally, NRC's and Agreement States' authority to reconsider previously established milestones or dates would include authority to shorten or speed up such dates, as well as extend them. EPA also expects that public participation consistent with that level of participation provided in the MOU and the settlement agreement will be afforded the public by NRC or an Agreement State in amending a license due to "factors beyond the control of the licensee," or for any other basis.

3. NRC's Conforming Regulations

As discussed previously, the Commission has approved final regulations to conform appendix A of 10 CFR part 40 to EPA's general standards promulgated under UMTRCA. (59 FR 28220, June 1, 1994.) EPA is today making a determination that NRC's final regulations support rescission. EPA believes NRC's final regulations adequately and appropriately implement EPA's amendments to 40 CFR part 192, subpart D. This determination is supported by the comments received in response to EPA's supplemental proposal to rescind subpart T. (59 FR 5674, February 7, 1994.) All commenters agreed that

NRC's proposed conforming regulations support EPA's proposal to rescind subpart T by either adequately and appropriately implementing subpart D, or may reasonably be expected to do so when finalized.

4. License Amendments

Table 1 illustrates that all NRC and affected Agreement State licenses, except one, have been modified pursuant to the MOU. Attachment A to the MOU, developed in conjunction with each site and considering the particular circumstances of that site, lists target dates for emplacement of the permanent radon barrier with "a guiding objective that this occur to all current disposal sites by the end of 1997, and within seven years of when the existing operating and standby sites cease operation." 56 FR 67568 (December 31, 1991). The MOU requires NRC and the Agreement States to "ensure \* \* \* that cover emplacement on the tailings impoundments occurs as expeditiously as practicable considering both short-term reductions in radon releases and long-term stability of the uranium mill tailings." *Id.* Under the MOU, the compliance schedules (i.e., tailings closure plans (radon) under subpart D, as amended) were to be developed consistent with the MOU targets as reasonably applied to the specific circumstances of each site, with a goal that final closure occur by December 31, 1997, for those non-operational uranium mill tailings piles listed in the MOU. EPA believes the NRC and the Agreement States have acted in good faith to implement their

commitments under the MOU by amending the site licenses. EPA also believes that uranium mill tailings disposal site owners and operators have acted in good faith by voluntarily requesting the license amendments. The license amendments by NRC and the affected Agreement States appear to reflect closure as expeditiously as practicable under the terms of the MOU and the requirements of subpart D as amended, thus supporting rescission of subpart T and a determination that the NRC program protects public health with an ample margin of safety. See Docket Entry A91-67 IV-D-46 (NRC Comments in Response to EPA's February 7, 1994 Proposal); Docket Entry A91-67 II-D-23 (February 7, 1994, Note to Docket from Gale Bonanno, Office of Radiation and Indoor Air, Criteria and Standards Division detailing approval of NRC licenses and milestone schedules); Docket Entry A91-67 II-D-45 (June 1, 1994, Note to Docket from Gale Bonanno, Office of Radiation and Indoor Air, Criteria and Standards Division detailing approval of Agreement State licenses and milestone schedules); Docket Entry A91-67 IV-D-52 (June 13, 1994, Letter to Gail Bonanno from State of Washington); Docket Entry A91-67 IV-D-49 (Letter to Gail Bonanno [sic] providing information for Washington State licensees, Dawn Mining Company and Western Nuclear, Inc.). In addition, consistent with their commitments under the MOU, NRC and the affected Agreement States are providing opportunities for public participation in the license amendment process.

TABLE 1.—STATUS OF RECLAMATION PLAN FOR NON-OPERATIONAL URANIUM MILL TAILINGS IMPOUNDMENTS<sup>1</sup>

Facility	Approval date for reclamation plan	Approval date for reclamation milestones	MOU date for final radon cover	License date for final radon cover
ANC, Gas Hills, WY .....	4/10/83	11/5/92	1995	12/31/94 <sup>2</sup> 6/30/96
ARCO Coal, Bluewater, New Mexico .....	1/30/92	11/9/92	1995	12/28/94
Atlas, Moab, Utah .....	<sup>3</sup>	11/4/92	1996	12/31/96
Conoco, Conquista, Texas .....	9/8/93	9/8/93	1996	12/31/93
Ford-Dawn Mining, Ford, WA .....	9/30/93	9/30/93	2010	<sup>4</sup> 12/31/18
Hecla Mining, Duria, CO .....	9/30/93	9/30/93	1997	12/31/95
Homestake, Milan, NM .....	7/23/93	11/9/92	<sup>5</sup> 1996/2001	<sup>6</sup> 12/31/01
Pathfinder-Lucky Mc, Gas Hills, Wyoming .....	9/17/93	12/29/92	1998	9/30/98
Petrotomics, Shirley Basin, WY .....	10/23/89	1/21/93	1995	12/31/95
Quivira, Ambrosia Lake, NM .....	10/5/90	1/22/93	1997	<sup>7</sup> 12/31/97
Rio Algom, Lisbon, UT .....	9/29/93	12/31/96	1996	12/31/96
Sohio L-Bar, Cebolleta, New Mexico .....	5/1/89	11/4/92	1992	12/31/92
UMETCO, Gas Hills, Wyoming .....	<sup>8</sup>	12/2/92	1995	12/31/95
UMETCO, Maybell, CO .....	7/30/93	7/30/93	1997	12/31/97
UMETCO, Uravan, CO .....	12/31/87	12/31/87	<sup>9</sup> 2002	12/31/96
UNC, Church Rock, NM .....	3/11/92	10/29/92	1997	12/31/97
Union Pacific, Bear Creek, Wyoming .....	4/3/92	11/5/92	1996	12/31/96
WNI, Sherwood, WA .....	9/30/93	9/30/93	1996	<sup>4</sup> 1/31/98

TABLE 1—STATUS OF RECLAMATION PLANS FOR NON-OPERATIONAL URANIUM MILL TAILINGS IMPOUNDMENTS<sup>1</sup>—  
Continued

Facility	Approval date for reclamation plan	Approval date for reclamation milestones	MOU date for final radon cover	License date for final radon cover
WNI, Split Rock, WY .....	6/17/93	11/5/92	1995	12/31/94

NRC and the affected Agreement States committed to complete review and approval of reclamation plants, including schedules for emplacement of earthen covers on non-operational tailings impoundments by September 30, 1993.

<sup>2</sup> Two impoundments: 1996 date is for impoundment which was accepting waste from off-site for disposal. Licensee has requested an amendment for a one year extension of dates for placement of radon barrier on the two piles.

<sup>3</sup> Delayed pending resolution of issues raised in response to *Federal Register* notice dated July 20, 1993.

<sup>4</sup> Closure date change is because of groundwater remediation schedule.

<sup>5</sup> Two impoundments: large impoundment to be completed by 1996, small impoundment by 2001 except for areas covered by evaporation ponds. Final radon barrier placement over the remainder of the small impoundment shall be completed within two years of completion of groundwater corrective actions.

<sup>6</sup> Date in the MOU is for final reclamation.

<sup>7</sup> Two impoundments: final radon barrier placement on both by December 31, 1997. One active cell.

<sup>8</sup> Various early 1980s.

The license amendments noted in Table 1 reflect consistent application of the dates contained in the MOU. Three exceptions are worth noting. First, although the license amendment to incorporate the reclamation plan for the Atlas site is not complete, EPA is confident that NRC is actively pursuing final resolution of the pending reclamation plan. In the notice announcing its intent to prepare an environmental impact statement, NRC published a tentative schedule to: prepare a draft EIS and issue for public comment in October 1994; provide a 45 day comment period; and publish the final EIS in April 1995. (59 FR 14914, March 30, 1994). Pending final approval of a reclamation plan, the Atlas site is continuing to emplace an interim cover on the pile to control radon emissions, and recently received approval to extend the date for placement of the interim cover to February 15, 1995. The date for placement of the "final" radon barrier was not extended by NRC and remains December 31, 1996. See Docket Entry A91-67 IV-E-5 (Note to Docket from Gale Bonanno, Office of Radiation and Indoor Air, Criteria and Standards Division, summary of telephone conversation with legal counsel to AMC); Docket Entry A91-67 IV-D-50 (Letter from NRC to Atlas).

Second, the license amendments for the ANC Gas Hills site address two separate impoundments. Consistent with the MOU, the license amendment for the non-operational impoundment contains a December 31, 1994, date for emplacement of the permanent radon barrier. On February 11, 1994, NRC published a notice of receipt of a request to amend the reclamation schedule at the ANC Gas Hills site. (59 FR 6658). ANC has requested a one-year extension of the current date for emplacement of the permanent radon barrier. ANC

"believes [it] cannot begin authorized restoration activities in the time necessary to meet current reclamation milestone dates," due to an NRC communication "that a previous amendment request for a reclamation redesign proposal dated April 16, 1992, would not be reviewed by late 1992 or early 1993." *Id.* NRC notes that ANC is continuing to monitor and maintain the interim cover. Further, NRC states—

Approval of the request will be based on determination there be no harm to human health or the environment, that reclamation will be completed as expeditiously as practical[sic], verification that rescheduling reclamation will not impact the final closure date for the entire facility.

Additionally an impoundment previously designated as operational for in-situ waste disposal is now non-operational. Emplacement of the permanent radon barrier on this second impoundment is scheduled to be completed by June 30, 1996, well within the seven year goal of the MOU for impoundments which cease operations after December 31, 1991.

On May 9, 1994, ANC informed NRC by letter that it would be ceasing operations and going out of business by the end of May 1994. On May 13, 1994, NRC issued an Order and Demand for Information to ANC. See Docket Entry A91-67 IV-D-47. This Order requires ANC to continue complying with all applicable license conditions, including monitoring and reclamation activities. The Order further states "[D]iscontinuance of those programs and functions in the manner described by the Licensee in its letter of May 9, 1994, would constitute a willful violation of ANC's license." According to the Order, abandonment would constitute a "deliberate violation" of section 184 of the AEA of 1954, as amended, 10 CFR 40.41.(b), and 10 CFR

40.42. The Order further states that "such a deliberate act of abandonment would be a serious violation of the AEA NRC regulations, and ANC's license," and could subject ANC and the individuals causing the violations to further enforcement actions and potential criminal sanctions. NRC also ordered that ANC submit additional information in order for NRC to determine "whether enforcement action should be taken to ensure compliance with NRC statutory and regulatory requirements."

EPA notes that the actions taken to date by NRC regarding this site indicate a good faith intention to implement the MOU and the requirements of subpart D and to respond quickly as the situation at the ANC Gas Hills site develops. EPA fully expects that NRC will take actions consistent with the Commission's enforcement policy and authority. See 10 CFR part 2, subpart B and appendix C. While difficult enforcement questions are raised about this site, EPA notes that the same questions would be raised if subpart T were not rescinded. Under the provisions of the rule adopted today, if future developments meet the criteria and conditions for reconsideration of rescission, the Agency expects it would receive a petition pursuant to § 61.226(b). EPA would then take action consistent with those provisions at that time. In any case, EPA reserves the right to initiate reconsideration if appropriate.

Lastly, the license amendment dates for two additional sites, the Ford-Dawn Mining site and the Western Nuclear, Inc. (WNI) site both located in the Agreement State of Washington, are also beyond the dates contained in the MOU. However, Washington State notes that for these sites the closure date was changed because of the groundwater remediation schedule, and the difficulty

experienced in drying the piles due to the evaporation and precipitation rates. In sum, EPA believes that the license amendments adopted by the State of Washington for these two sites reflect a good faith attempt to implement the MOU and reflect closure of the sites as expeditiously as practical considering technological feasibility under subpart D.

While NRC and the Agreement States have obtained license amendments for all but one of the relevant sites, they have not as yet established a record for enforcement of the milestones, including action on requests for extensions. To date, only one extension for placement of the interim cover at the Atlas site has been approved by NRC. Based on NRC representations, no milestones occurring after the date of the MOU, October 1991, have been missed and, as noted in footnote 2 of Table 1, an application for another extension is pending but no action has been taken. However, given their response to the requirements of the MOU, and the rulemaking conducted by NRC to implement the requirements of subpart D, EPA expects that the milestones established in the licenses for emplacement of the permanent radon barrier (i.e., the tailings closure plan (radon)) will be implemented and enforced in significant part on a programmatic and site-specific basis. The relevant portions of the amended licenses have been placed in the docket for this action, as well as letters from NRC to EPA apprising the Agency of the status of the license amendments.

EPA and NRC have completed almost all of the actions required by the MOU, including: revising the NRC and affected Agreement State licenses to reflect the MOU and regulatory requirements, promulgating amendments to EPA's UMTRCA regulations at 40 CFR part 192, subpart D, and revising the NRC regulations at 10 CFR part 40 to conform to EPA's revised UMTRCA regulations. Based on EPA's review, to date, of the regulatory program established by NRC under UMTRCA (including amended 10 CFR part 40, appendix A), EPA has determined that the timing and monitoring concerns are fully addressed consistent with EPA's UMTRCA standards, and the NRC criteria result in reclamation designs and schedules fully adequate to ensure compliance with the 20 pCi/m<sup>2</sup>-s flux standard as expeditiously as practicable considering technological feasibility (including factors beyond the control of the licensee). EPA today finds that NRC and the affected Agreement States are or will be implementing and enforcing, in significant part, the regulations

governing disposal of tailings and the license requirements (tailings closure plan (radon)) that establish milestones for emplacement of a permanent radon barrier that will achieve compliance with the 20 pCi/m<sup>2</sup>-s flux standard on a programmatic and a site-specific basis. The Agency intends "in significant part" to mean that NRC or an affected Agreement State is implementing and enforcing the regulatory and license requirements in a manner that EPA reasonably expected to not materially (i.e., more than de minimis) interfere with compliance with the 20 pCi/m<sup>2</sup>-s standard as expeditiously as practicable considering technological feasibility (including factors beyond the control of the licensee).

As announced in the February 7 1994, proposal, EPA is taking today's action since NRC's regulations at 10 CFR part 40, appendix A, were effectively revised, as necessary and appropriate to implement the revisions to EPA's regulations at 40 CFR part 192, subpart D. As stated in the February 1994 proposal, EPA intended to take final action on the proposed rescission prior to the time compliance with the 20 pCi/m<sup>2</sup>-s flux standard is achieved at all sites.

#### 5. Judicial or Administrative Challenges

Neither EPA nor any commenter is aware of any judicial or administrative challenge to these regulations that is pending. Thus, EPA is aware of no challenge which would present a significant risk of interference with the purposes and objectives of the MOU, as reflected in the regulatory changes.

#### B. Reconsideration Provisions

Under the Atomic Energy Act, NRC has the authority to waive, for reasons of practicability, the dual requirement of the MOU that compliance with the 20 pCi/m<sup>2</sup>-s flux standard occur as expeditiously as practicable considering technological feasibility. 42 U.S.C. 2114(c). NRC considers the term "practicability" to include certain economic considerations not contemplated by the requirement of the MOU that compliance occur as expeditiously as practicable considering technological feasibility. In promulgating subpart T, the CAA did not permit, and EPA did not consider, site-specific waivers from ultimate compliance with that standard. Thus, as a theoretical matter, EPA recognized in its December 1991 proposal that this waiver authority might be exercised in

The phrase "de minimis" as used in this notice is not intended to be restricted to the meaning of section 112(g)(1)(A) of the Clean Air Act, as amended.

a manner not addressed in the MOU even after the UMTRCA regulations have been promulgated and each license amended, although EPA has no reason to believe such relaxation of restriction will actually occur. Nevertheless, EPA recognized that this authority would not exist under the CAA and subpart T and, thus, there was some concern over the potential for deviation from the agreements contained in the MOU.

#### 1. December 31, 1991 Proposed Rule to Rescind subpart T

In response to the concern over the waiver authority in the Atomic Energy Act, and in order to ensure its exercise does not alter EPA's finding that the NRC regulatory program protects public health with an ample margin of safety EPA announced in its December 31, 1991, proposal that certain conditions and grounds for reconsideration would be included in any final decision to rescind subpart T. In this way, EPA might base its rescission finding upon its view of the NRC regulatory program contemplated by the MOU at the time of taking final action, while also providing some assurance that EPA would revisit that finding should NRC or the affected Agreement States substantially deviate from that program. Thus, in December 1991, EPA proposed certain conditions and grounds for reconsideration, to provide assurance that any finding by the Agency that the NRC program is sufficient to justify rescission of subpart T under CAA section 112(d)(9) would be revisited if the NRC program is actually implemented in a manner inconsistent with that finding. The specific reconsideration options proposed by EPA were published at 56 FR 67565 (December 31, 1991).

#### 2. Reconsideration Options

EPA has reviewed the various options for reconsideration proposed in December 1991 in light of the comprehensive details added to the terms of the MOU by the settlement agreement finalized in April 1993. On February 7 1994, EPA proposed an additional reconsideration option that is a combination of the options proposed in December 1991. It is in effect a hybrid of that December 1991 proposal. While EPA did not withdraw its prior reconsideration proposal and the reconsideration options contained therein, the additional reconsideration option proposed in February 1994 was preferred by EPA.

#### 3. Reconsideration Provisions Adopted Today

EPA believes the following reconsideration provisions adopted

today, which include both programmatic and site-specific bases for reinstatement, represent a comprehensive approach under both the MOU and settlement agreement. The Agency notes that the 20 pCi/m<sup>2</sup>-s flux standard must be met by all sites as provided by 40 CFR part 192, subpart D. EPA does not intend to reconsider the decision to rescind subpart T for any site that is in fact meeting the 20 pCi/m<sup>2</sup>-s flux standard, absent other factors that would indicate the need for reinstatement. For example, EPA may initiate reconsideration under § 61.226 even if a site is meeting the 20 pCi/m<sup>2</sup>-s flux standard if there are factors which show that NRC or an Agreement State failed to implement and enforce in significant part, the applicable regulations, e.g., failure of that site to replace a permanent radon barrier designed to meet the requirements of subpart D.

This action amends subpart T and establishes an obligation for the Administrator to reinstate subpart T as applied to owners and operators of non-operational uranium mill tailings disposal sites licensed by NRC or an affected Agreement State provided certain conditions are met. Additionally, this action sets forth the procedures for EPA to act on a petition to reconsider rescission of subpart T which seeks such reinstatement. However, these provisions are not intended to be exclusive. EPA reserves the right to initiate reinstatement of subpart T if appropriate. Pursuant to section 553(e) of the Administrative Procedure Act (5 U.S.C. 553(e)) interested persons may petition the EPA to initiate reinstatement of subpart T, in addition to petitions for reinstatement under today's procedures.

The reconsideration provisions set forth in § 61.226 establish procedures for persons to petition EPA for reconsideration of the rescission and seek reinstatement of subpart T and EPA's response to such petitions. Provisions for the substantive conditions for reconsideration of the rescission of this subpart and subsequent reinstatement for NRC licensees are also included. Under these provisions, a person may petition the Administrator for reconsideration of the rescission and seek reinstatement of subpart T under § 61.226(a) which provides for programmatic and site-specific reinstatement. If reconsideration is initiated it must be conducted pursuant to notice and comment procedures. It is important that any alleged failures by NRC or an affected Agreement State to implement and enforce the regulations governing

uranium mill tailings or the applicable license requirements be addressed in a timely manner. These provisions are intended to ensure that persons may seek recourse from the Administrator if they are adversely affected by the failure of NRC or an affected Agreement State to implement and enforce, in significant part, on a programmatic and a site-specific basis the regulations governing the disposal of uranium mill tailings promulgated by EPA and NRC, requirements of the tailings closure plan, or license requirements establishing milestones for the purpose of emplacing a permanent radon barrier that will achieve compliance with the 20 pCi/m<sup>2</sup>-s flux standard. Thus, EPA is establishing a non-discretionary duty to take final action granting or denying an authorized petition for reconsideration of the rescission of subpart T within 300 days of receipt of the petition. If EPA grants such petition it would then proceed to initiate rulemaking to reinstate subpart T. The rulemaking to reinstate subpart T, however, is not subject to the 300-day time period. This schedule is intended to provide EPA and NRC adequate time to resolve any potential problems identified by a petition. Failure to meet this 300-day deadline for a decision on whether to initiate rulemaking or not could lead to a citizen suit action in a federal District Court under CAA section 304 for an order that EPA take final action on the petition. Review of that final response would be in a federal Circuit Court of Appeals under CAA section 307(b). If EPA grants such a petition and initiates rulemaking to reinstate subpart T then final agency action would not occur until EPA had concluded such rulemaking. Consistent with the settlement agreement, EPA may propose to grant or deny the petition within 120 days of receipt, allow a comment period of at least 60 days, and take final action granting or denying the petition within 120 days of the close of the comment period.

Under today's procedures, EPA shall summarily dismiss without prejudice a § 61.226(b) petition to reconsider the rescission and seek reinstatement of subpart T on a programmatic basis, unless the petitioner demonstrates that it provided written notice of the alleged failure to NRC or an affected Agreement State at least 60 days before filing its petition with EPA. This notice to NRC must include a statement of the grounds for such a petition. This notice requirement may be satisfied, among other ways, by submissions or pleadings submitted to NRC during a proceeding conducted by NRC. The purpose of this

advance notice requirement is to provide NRC or an affected Agreement State with an opportunity to address the concerns raised by the potential petitioner. Additionally, EPA shall summarily dismiss without prejudice a § 61.226(b) petition to reconsider the rescission and seek reinstatement of subpart T on a site-specific basis, unless the petitioner demonstrates that it provided, at least 60 days before filing its petition with EPA, a written request to NRC or an affected Agreement State for enforcement or other relief, and unless the petitioner alleges that NRC or the affected Agreement State failed to respond to such request by taking action, as necessary, to assure timely implementation and enforcement of the 20 pCi/m<sup>2</sup>-s flux standard. This provision is intended to provide NRC or an Agreement State with an opportunity to address the concerns raised by the potential petitioner through its standard enforcement mechanisms.

The Administrator may also initiate reconsideration of the rescission and reinstatement of subpart T as applied to owners and operators of non-operational uranium mill tailings disposal sites if EPA believes it is appropriate to do so. For example, EPA may initiate such reconsideration if it has reason to believe that NRC or an affected Agreement State has failed to implement and enforce, in significant part, the regulations governing the disposal of uranium mill tailings promulgated by EPA and NRC or the tailings closure plan (radon) requirements establishing milestones for the purpose of emplacing a permanent radon barrier that will achieve compliance with the 20 pCi/m<sup>2</sup>-s flux standard. Before the Administrator initiates reconsideration of the rescission and reinstatement of subpart T, EPA shall consult with NRC to address EPA's concerns. If the consultation does not resolve the concerns, EPA shall provide NRC with 60 days notice of the Agency's intent to initiate rulemaking to reinstate this subpart.

Upon completion of a reconsideration rulemaking, EPA may: (1) Reinstate subpart T on a programmatic basis if EPA determines, based on the record, that NRC has significantly failed to implement and enforce, in significant part, on a programmatic basis, (a) the regulations governing the disposal of uranium mill tailings promulgated by EPA and NRC or (b) the license requirements establishing milestones for the purpose of emplacing a permanent radon barrier that will achieve compliance with the 20 pCi/m<sup>2</sup>-s flux standard; (2) reinstate subpart T on a

site-specific basis if EPA determines, based on the record, that NRC or an affected Agreement State has significantly failed to implement and enforce, in significant part, on a site-specific basis, (a) the regulations governing the disposal of uranium mill tailings promulgated by EPA and NRC or (b) the license requirements establishing milestones for the purpose of emplacing a permanent radon barrier that will achieve compliance with the 20 pCi/m<sup>2</sup>-s flux standard; or (3) issue a finding that NRC is implementing and enforcing on either a site-specific or programmatic basis the regulations and license requirements described above and that reinstatement of subpart T is not appropriate.

The regulations establish an obligation for the Administrator to reinstate subpart T as applied to owners and operators of non-operational uranium mill tailings disposal sites if the Administrator determines by rulemaking, based on the record, that NRC or an affected Agreement State has failed on a programmatic basis to implement and enforce, in significant part, the regulations governing the disposal of uranium mill tailings promulgated by EPA and NRC or the tailings closure plan (radon) requirements establishing milestones for the purpose of emplacing a permanent radon barrier that will achieve compliance with the 20 pCi/m<sup>2</sup>-s flux standard. The Administrator also shall reinstate subpart T on a site-specific basis as applied to owners and operators of non-operational uranium mill tailings disposal sites if the Administrator determines by rulemaking, based on the record, that NRC or an affected Agreement State has failed on a site-specific basis to achieve compliance by the operator of the site or sites with applicable license requirements, regulations, or standards implemented by NRC and the affected Agreement States. Under today's action, EPA shall be required to reinstate subpart T only for the failures enumerated in the preceding sentence that may reasonably be anticipated to significantly interfere (i.e., more than de minimis) with the timely emplacement of a permanent radon barrier constructed to achieve compliance with the 20 pCi/m<sup>2</sup>-s flux standard at uranium mill tailings disposal sites. In rescinding subpart T EPA intends "in significant part" to mean that EPA must find that NRC or an affected Agreement State is implementing and enforcing, on a programmatic and a site-specific basis: (1) The regulations governing the disposal of uranium mill tailings

promulgated by EPA and NRC consistent with the MOU and settlement agreement and (2) the tailings closure plan (radon) requirements establishing milestones for the purpose of emplacing a permanent radon barrier that will achieve compliance with the 20 pCi/m<sup>2</sup>-s flux standard in a manner that is not reasonably expected to materially (i.e., more than de minimis) interfere with compliance with the 20 pCi/m<sup>2</sup>-s flux standard as expeditiously as practicable considering technological feasibility (including factors beyond the control of the licensee). Reinstatement would require an EPA finding that NRC or an affected Agreement State has failed to implement and enforce in this manner.

#### IV Discussion of Comments and Response to Comments From NPR

Public hearings on EPA's December 31, 1991, proposal to rescind subpart T (56 FR 67561) were held on January 15, 1992 in Washington, D.C. and on January 21-22, 1992 in Santa Fe, New Mexico. Representatives of the Nuclear Regulatory Commission (NRC), the American Mining Congress (AMC), the owners and operators of individual sites and the Southwest Research and Information Center (SWRIC) testified at these hearings. Written comments were also received from the Environmental Defense Fund (EDF), NRC, AMC, owners and operators of individual sites, the Department of Energy and the SWRIC.

In February 1993, an agreement was reached between EPA, EDF, NRDC, AMC, and individual uranium mill tailings disposal sites to settle pending litigation and administrative proceedings, avoid potential future litigation, and otherwise agree to a potential approach to regulation of NRC and Agreement State licensed non-operational uranium mill tailings disposal sites. See 58 FR 17230 (April 1, 1993) (notice announcing settlement agreement under CAA section 113(g)). NRC agreed in principle with the settlement agreement. The settlement agreement added comprehensive detail to, and thereby continued, the approach set forth in the MOU published with the 1991 proposal. (56 FR 67568, December 31, 1991).

Written comments in response to EPA's February 7, 1994 supplemental proposal were received from NRC, EDF, AMC, Homestake Mining Company, Rio Algom Mining Corp., ARCO and Envirocare of Utah, Inc.

Many of the parties who commented on the December 1991 proposal also signed the settlement agreement and commented on the February 1994 proposal. In certain cases, a party's

comments to the December 1991 proposal are inconsistent with and conflict with comments later submitted in response to the 1994 proposal. Given the intervening settlement agreement and the revisions to EPA's and NRC's UMTRCA regulations, EPA believes that the more recent comments submitted by a party in response to the 1994 proposal, should be accorded more weight than comments previously submitted by that same party in 1991, where there is inconsistency between the comments.

In addition, EPA's review of the comments has been limited to the question of whether EPA should rescind subpart T. This rulemaking was not intended to reconsider and did not address whether EPA should have promulgated subpart T in 1989. EPA therefore rejected as irrelevant to this rulemaking, comments addressed to the validity or appropriateness of the promulgation of subpart T.

#### 1. General

In response to the 1991 and 1994 Notices of Proposed Rulemaking (NPR), NRC, environmental and industry groups generally support EPA's proposal to rescind 40 CFR part 61; subpart T as applied to owners and operators of NRC and Agreement State licensed non-operational uranium mill tailings disposal sites. Various commenters to the 1994 proposal suggested specific revisions to the proposed regulatory text and preamble. The Agency has reviewed all comments and suggested revisions carefully. Revisions to the regulatory text and preamble have been made where deemed appropriate.

#### 2. Request for Comments Contained in the 1994 NPR

In the February 1994 proposal, EPA requested comments on its proposed determination that the NRC regulatory program protects public health with an ample margin of safety, including comments on whether: (1) EPA has effectively promulgated appropriate revisions to 40 CFR part 192, subpart D; (2) NRC's regulations at 10 CFR part 40, appendix A either already adequately and appropriately implement the revisions to EPA's regulations, or may reasonably be expected to do so prior to rescission of subpart T; (3) the revision of NRC and affected Agreement State licenses reflect the new requirements of subpart D; and (4) any judicial or administrative challenge to EPA or NRC regulations is expected to present a significant risk of interference with full compliance with the MOU and the settlement agreement.

Several commenters responded to the Agency's request for comments. Commenters believed EPA's amendments to 40 CFR part 192, subpart D fulfill the intent of the settlement agreement with respect to actions required by EPA. However, certain commenters noted that the settlement agreement called for action by both EPA and NRC. The commenters universally agreed that based upon NRC's November 3, 1993 proposal, NRC may reasonably be expected to adequately and appropriately implement the Agency's amendments to 40 CFR part 192, subpart D. These commenters believe that when finalized, NRC's regulations at 10 CFR part 40, appendix A should adequately comply with the settlement agreement and conform to EPA's subpart D UMTRCA regulations.

Many commenters noted that NRC and the Agreement States have faithfully implemented their MOU commitment to complete review and approval by no later than September 1993 of detailed reclamation plans including schedules for emplacing an earthen cover on non-operational tailings impoundments to control emissions of radon-222 to 20 pCi/m<sup>3</sup>-s. See 56 FR 67568, December 31, 1991. Several commenters noted that although the license amendment for the Atlas site in Moab, Utah is not yet complete, that site represents a unique situation and should not affect EPA's decision to rescind subpart T.

No commenter was aware of any pending judicial or administrative challenge that would present a significant risk of interference with the MOU and the settlement agreement.

Additionally, EPA requested comments on the proposed reconsideration provisions included in a new § 61.226 added to subpart T. In particular EPA requested comments as to whether these provisions effectively implement the regulatory approach of the settlement agreement, especially the terms providing specific time periods for a reconsideration rulemaking. One commenter believed the criteria and procedures for reconsidering the decision to rescind subpart T were consistent with the terms of the settlement agreement. Several other commenters commented as to specific aspects of these provisions and suggested revisions to the regulatory language for consistency with the settlement agreement. Specific comments pertaining to the proposed provisions for reconsideration of the rescission and reinstatement of subpart T are addressed in Section 4 below.

There was widespread agreement among the commenters that the EPA and NRC regulatory and licensing framework that either has been, or is in the process of being, implemented will ensure that non-operational uranium mill tailings disposal sites will achieve the 20 pCi/m<sup>3</sup>-s flux standard as expeditiously as practicable considering technological feasibility.

### 3. Rescission of Subpart T

#### 3.1 Timing of Rescission

*Comment:* In response to the 1991 proposal, one commenter noted EPA should not rescind subpart T until the Agency is assured that the MOU between EPA, NRC and the affected Agreement States is implemented and EPA's amendments to its UMTRCA regulations at 40 CFR part 192, subpart D are complete.

*Response:* As stated in the preamble to the 1994 proposal and the final rule amending 40 CFR part 192, subpart D, EPA is now rescinding subpart T for NRC-licensed uranium mill tailings disposal sites due to the completion of the Agency's amendments to subpart D, completion of NRC conforming regulations, and completion by NRC and affected Agreement States of various license amendments containing schedules for emplacement of the permanent radon barrier. EPA believes it is appropriate to rescind subpart T pursuant to the authority of section 112(d)(9) of the CAA, as amended, since NRC has established a regulatory program to ensure that non-operational uranium mill tailings piles will be closed as expeditiously as practicable considering technological feasibility.

#### 3.2 Section 112(d)(9) of the Clean Air Act, As Amended ("Simpson Amendment")

*Comment:* In response to the 1991 proposal, one commenter argued section 112(d)(9) of the CAA, as amended, applies prospectively and does not authorize EPA to rescind a previously promulgated standard.

*Response:* The Agency disagrees and believes that section 112(d)(9) of the CAA authorizes EPA to rescind previously promulgated regulations if certain determinations are made by EPA. Congress clearly intended to give the Agency the discretion to rescind certain previously promulgated regulations and thereby relieve affected facilities from the burdens associated with parallel regulation when the NRC regulatory program would protect public health with an ample margin of safety. See, e.g., 136 Cong. Rec. S 3797-99 (daily ed. April 3, 1990), reprinted in

4 A Legislative History of the Clean Air Act Amendments of 1990, at 7156-7162 (1993). ("Legislative History, CAAA 1990"). This Senate floor debate on Amendment No. 1457 to S. 1630 evidences a clear intention that section 112(d)(9) authorizes rescission of previously promulgated radionuclide NESHAPs. Senator Simpson, the sponsor of the amendment, stated that "[p]assage of this amendment will allow EPA to replace the emission standards issued by EPA in November 1989, for NRC-licensed facilities, including power plants, uranium fuel cycle facilities, and by-product facilities, if that agency concludes that the existing NRC regulatory program adequately protects public health." 4 Legislative History, CAAA 1990 at 7158. Also see 1 Legislative History, CAAA 1990 at 778 (1993) (statement by Senator Burdick during debate on the Conference Committee Report) ("It is clear that the existing regulatory program under the Atomic Energy Act protects the public health with an ample margin of safety. Under these circumstances, additional or dual regulation under the Clean Air Act does not make any sense.")

Additionally in commenting on the 1994 proposal, this commenter expressed the belief that the 1994 proposal is consistent with the terms of the settlement agreement between EPA, EDF NRDC, AMC and individual site owners and operators. The settlement agreement, as described in detail above, promotes the objectives of section 112(d)(9) of the CAA by establishing an agreed upon framework for reconsideration of rescinding subpart T and making minor modifications to the AEA regulatory program for closure of the uranium mill tailings disposal sites. Clearly rescission of the previously promulgated subpart T was contemplated by the parties to the settlement agreement. This particular commenter and EPA were parties to that agreement. EPA continues to implement the terms of the settlement agreement, including today's action rescinding subpart T. Thus, EPA is rejecting the prior comment to the 1991 proposal.

*Comment:* In response to the 1991 proposal, a commenter suggested EPA publish its finding that the NRC regulatory program protects the public health with an ample margin of safety.

*Response:* Pursuant to the settlement agreement, EPA published and invited comment on its proposed determination that the NRC regulatory program protects public health with an ample margin of safety on February 7, 1994 (59 FR 5674). That determination is also contained in this action, which will be published in the Federal Register.

*Comment:* Commenters suggested in response to the 1991 proposal that EPA could not determine that the NRC regulatory program protects public health with an ample margin of safety so long as NRC retains the authority to waive standards and time schedules for compliance, and there are no provisions under the AEA for citizens' suits.

*Response:* The commenters suggest that the NRC regulatory program does not ensure that EPA's revised UMRCA regulations (40 CFR part 192, subpart D) would apply, since NRC has the authority to grant waivers under the AEA due to cost or technological feasibility. EPA recognizes that the NRC has authority under the AEA to waive for economic reasons strict compliance with the requirement that sites meet the 20 pCi/m<sup>2</sup>-s standard as expeditiously as practicable considering technological feasibility (including factors beyond the control of the licensee). AEA section 84c., 42 USC 2114c. However, the full exercise of this authority is not contemplated by either the MOU or the settlement agreement, described above. If this waiver authority is used in a manner inconsistent with the purposes and objectives of the MOU and settlement agreement, today's action includes procedural and substantive provisions designed to facilitate reconsideration of the rescission and possible reinstatement of subpart T.

The amendments to subpart T provide clear authority and procedures for EPA to revisit today's finding should NRC or the affected Agreement States deviate from the regulatory program in place in a manner which materially (i.e., more than de minimis) interferes with compliance with the 20 pCi/m<sup>2</sup>-s flux standard as expeditiously as practicable considering technological feasibility (including factors beyond the control of the licensee). Additionally, EPA believes the actions taken to date by NRC, including the license amendments and the final amendments to the NRC conforming regulations, as described above, reflect the good faith effort on the part of NRC to implement the MOU. Thus, EPA believes under these circumstances NRC's authority to waive strict compliance with the flux standard and the time for compliance does not preclude EPA from finding NRC's regulatory program protects the public health with an ample margin of safety.

Further, the Agency believes that Congress was aware that the legislative authority under the CAA provided for citizen suits while the AEA did not contain such provisions. Congress clearly envisioned that circumstances might be such that EPA would make the finding required by the Simpson

Amendment. In making today's ample margin of safety determination, EPA considered whether NRC is implementing and enforcing, in significant part, the regulations governing disposal of tailings and the license requirements which establish milestones for emplacement of a permanent radon barrier that will achieve compliance with the 20 pCi/m<sup>2</sup>-s flux standard on a programmatic and site-specific basis. UMRCA gives NRC and the Agreement States the responsibility to implement and enforce regulations promulgated under UMRCA. If, in the future, NRC or the Agreement States do not implement and enforce, in significant part, the regulations governing disposal of tailings and the license requirements which establish milestones for emplacement of a permanent radon barrier that will achieve compliance with the 20 pCi/m<sup>2</sup>-s flux standard on a programmatic or site-specific basis, reconsideration and reinstatement provisions adopted today allow EPA to reconsider its rescission of subpart T and thus, possibly reinstate the CAA standards. The settlement agreement executed between EPA, EDF, NRDC and AMC which provided the regulatory approach for today's action had as an objective the rescission of subpart T. Moreover, NRC's final amendments to the conforming regulations also provide enhanced opportunities for public participation under certain circumstances.

### 3.3 Section 112(q)(3) of the Clean Air Act, As Amended

*Comment:* The comments to the 1991 proposal included a comment that the "Savings Provision" (section 112(q)(3)) of the CAA requires that subpart T remain in effect.

*Response:* Section 112(q)(3) provides this section, as in effect prior to the date of enactment of the Clean Air Act Amendments of 1990, shall remain in effect for radionuclide emissions from disposal of uranium mill tailings piles, unless the Administrator, in the Administrator's discretion, applies the requirements of this section as modified by the Clean Air Act Amendments of 1990 to such sources of radionuclides.

EPA believes the plain language of section 112(q)(3) gives the Administrator the discretion to rescind subpart T pursuant to section 112(d)(9) or allow subpart T to remain in effect pursuant to section 112 as in effect prior to the CAAA of 1990. In this rulemaking, EPA acted to apply section 112 as modified by the 1990 amendments, and pursuant to section

112(d)(9) to decline to regulate "radionuclide emissions from any category or subcategory of facilities licensed by the Nuclear Regulatory Commission (or an Agreement State)" if the Administrator determines, by rule, and after consultation with the Nuclear Regulatory Commission, "that the regulatory program established by the Nuclear Regulatory Commission pursuant to the Atomic Energy Act for such category or subcategory provides an ample margin of safety to protect the public health." This provision strives to eliminate duplication of effort between EPA and NRC, so long as public health is protected with an ample margin of safety. Although the commenter suggests that section 112(q)(3) should cause the Administrator to not rescind subpart T such an interpretation is not harmonious and is inconsistent with the intent of Congress in enacting the CAAA of 1990.

Additionally EPA received comments from this commenter supporting the 1994 proposal, expressing the belief that the 1994 proposal is consistent with the terms of the settlement agreement. The settlement agreement promotes the objectives of section 112(d)(9) of the CAA as amended by establishing an agreed upon framework for consideration of the rescission of subpart T and minor modifications to the AEA regulatory program for closure of uranium mill tailings disposal sites. This commenter, together with EPA and others, was a party to that agreement, which clearly envisions rescission of subpart T.

Thus, EPA is rejecting this comment, since a plain reading of section 112(q)(3) authorizes EPA to exercise its discretion under section 112(d)(9) and as a party to the settlement agreement the commenter clearly supports the goal of the agreement that subpart T be rescinded.

### 3.3 Section 122(a) of the Clean Air Act, as Amended in 1977

*Comment:* The commenter asserts in response to the 1991 proposal that EPA should not rescind subpart T because such rescission is inconsistent with section 122(a) of the CAA of 1977. The commenter contends section 122(a) was not repealed by the 1990 amendments to the CAA and that it required the Agency to list radionuclides as a hazardous air pollutant if the Administrator found that public health was threatened due to air emissions of radionuclides.

*Response:* EPA disagrees with the commenter's interpretation that rescission of subpart T pursuant to section 112(d)(9) of the CAA is inconsistent with section 122(a) of the

CAA. On December 27, 1979, EPA listed radionuclides, including those defined by the AEA as byproduct material, as a Hazardous Air Pollutant pursuant to section 112(b)(1)(A) of the CAA as amended in 1977 (44 FR 76738). In that notice EPA stated that

[I]n accordance with the requirements of sections 122 and 112, the Agency finds that studies of the biological effects of ionizing radiation indicate that exposure to radionuclides increases the risk of human cancer and genetic damage. Based on this information, the Administrator has concluded that emission of radionuclides may reasonably be anticipated to endanger public health, and that radionuclides constitute hazardous air pollutants within the meaning of the Clean Air Act.

*Id.* On April 6, 1983 (48 FR 15076) EPA announced proposed standards for four sources of emissions of radionuclides, and its decision to not regulate uranium mill tailings together with other sources. Under court order, EPA finalized the regulations proposed in 1983 on February 6, 1985. 50 FR 5190. See also *Sierra Club v. Ruckelshaus*, No. 84-0656 (U.S. District Court for the Northern District of California). On September 24, 1986, EPA promulgated a final rule regulating radon-222 emissions from licensed uranium mill processing sites by establishing work practices for new tailings. (51 FR 34056). On April 1, 1988, EPA requested a remand for this standard. On EPA's motion, the Court placed the uranium mill tailings NESHAPs on the same schedule as the other radionuclide NESHAPs to reconsider the standards in light of *Natural Resources Defense Council v. EPA*, 824 F.2d 1146 (D.C. Cir. 1987) (*Vinyl Chloride*). EPA subsequently promulgated 40 CFR part 61, subpart T the subject of today's action.

EPA believes section 122 of the CAA must be read consistent with and in harmony with the 1990 amendments to the CAA. EPA took action under section 122 when it listed radionuclides. EPA subsequently regulated radionuclides emissions under section 112. Section 112(d)(9) of the CAA authorizes EPA to now decline to regulate radionuclide emissions from any category or subcategory of facilities licensed by the NRC (or an Agreement State) if the Administrator determines, by rule, and after consultation with the NRC, that the regulatory program established by the NRC pursuant to the AEA for such category or subcategory provides an ample margin of safety to protect the public health. This provision strives to eliminate duplication of effort between EPA and NRC, so long as public health is protected with an ample margin of

safety. While section 122 addresses whether radionuclides should be listed, section 112(d)(9) addresses a separate issue—whether EPA should continue to regulate or initiate regulation of radionuclide air emissions under section 112 based on the NRC regulatory program.

Although the commenter suggests EPA should not rescind subpart T based on section 122(a), EPA believes such a reading of sections 112(d)(9) and 122(a) is not harmonious and is inconsistent with the intent of Congress in enacting section 112(d)(9).

Additionally EPA received comments from this particular commenter in response to the 1994 proposal expressing the belief that the 1994 proposal to rescind subpart T is consistent with the terms of the settlement agreement. The settlement agreement promotes the objectives of section 112(d)(9) of the CAA as amended through the rescission of subpart T and minor modifications to the AEA regulatory program for closure of the uranium mill tailings disposal sites. This commenter, together with EPA and others, was a party to that agreement. Through today's action rescinding subpart T EPA is furthering the goal of the settlement agreement.

Thus, EPA is rejecting this comment, since a reading of section 122(a) apparently preventing such rescission is inconsistent with the intent of Congress in enacting section 112(d)(9), and as a party to the settlement agreement the commenter was aware of and supported the goal of the agreement that subpart T be rescinded.

#### 4. Proposed Amendments to 40 CFR Part 61, Subpart T

##### 4.1 General

*Comment:* The rationale for adding the definitions *residual radioactive material* and *tailings*, while deleting the definition of *uranium byproduct material* or *tailings* is not clear. The proposed definitions appear to apply to Title I sites, and significant problems might arise if these definitions were to be applied to Title II sites in the event of reinstatement of subpart T.

*Response:* § 61.220(a) as adopted today states that subpart T applies only to Title I sites except for the reconsideration and reinstatement procedures in § 61.226. The phrase "or uranium byproduct materials" was deleted to further clarify that subpart T applies to Title I sites. The phrases "residual radioactive materials" and "tailings" currently appear in § 61.220(a). EPA noted in describing DOE sites in the 1989 BID that the

tailings located at these sites contain residual radioactive materials, including traces of unrecovered uranium, various heavy metals and other elements.

*Background Information Document: Risk Assessments; Environmental Impact Statement; NESHAPs for Radionuclides*, Volume 2 at 8-2 (EPA/520/1-89-006-1, September 1989).

EPA believes it appropriate to define *residual radioactive material* and *tailings* for purposes of this subpart. The Agency proposed these definitions on December 31, 1991 and February 4, 1994. (56 FR 67561, 59 FR 5687). The proposed definitions for these terms were consistent with definitions contained in UMTRCA, 42 U.S.C. 7911, sections 101(7) and 101(8). The terms are defined in the Final Rule by expressly referencing UMTRCA, to ensure consistency with that Act. The Agency does not believe these definitions would be problematic if the Agency decided to reinstate subpart T since EPA would amend subpart T at that time to apply to the Title II sites and to include appropriate definitions.

*Comment:* The provisions of subpart T, with the exception of § 61.226, should only apply to Title I sites and some apparent references to Title II sites remain.

*Response:* EPA is rescinding subpart T as applied to NRC or Agreement State licensed non-operational uranium mill tailings disposal sites, and thus, does not intend any provision of subpart T excepting § 61.226 and applicable definitions, to apply to these sites. EPA has revised § 61.220(a) to reflect this intent.

*Comment:* Section 61.226(c)(2) as proposed suggests that no future action can be taken to resolve EPA's concerns after EPA notifies NRC of its intent to initiate a rulemaking to reinstate subpart T.

*Response:* EPA disagrees with the commenter's suggestion that no further action may be taken to resolve the Agency's then existing concerns after EPA notifies NRC of its intent to proceed with a rulemaking to reinstate subpart T. The purpose of consulting with NRC about the Agency's concerns prior to notifying NRC and the subsequent 60-day period is to provide EPA and NRC with an opportunity to address EPA's concerns prior to EPA actually initiating such a rulemaking. Additionally EPA expects that the two agencies would continue consultations during the rulemaking process to attempt to resolve any remaining concerns. Section 61.226(c)(2) would not limit such continued consultations.

#### 4.2. Provisions for Reconsideration of the Rescission and Reinstatement of Subpart T

*Comment:* Many commenters, although generally opposed to the idea of reinstatement of subpart T favored including provisions for reconsideration and reinstatement of subpart T on either a site-specific or programmatic basis, as set forth in the Agency's 1991 proposal to rescind subpart T.

*Response:* EPA reviewed the various reconsideration options proposed in December 1991, taking into consideration the comprehensive details added to the terms of the MOU by the settlement agreement finalized in April 1993. In its 1994 supplemental proposal, EPA proposed an additional reconsideration option that was a combination of the options originally proposed. EPA did not withdraw the original options, but instead announced the Agency's preference for provisions on reconsideration and reinstatement of subpart T on both programmatic and site-specific bases. The Agency has reviewed carefully all comments submitted on the proposed reconsideration provisions and has revised the regulatory text and preamble where deemed appropriate. The Agency believes the provisions for reconsideration and reinstatement of subpart T adopted today represent a comprehensive approach based on EPA's current evaluation of the NRC regulatory program, and a regulatory structure designed to address future evaluations of the program.

*Comment:* EPA received a variety of comments dealing with the consistency of the proposed regulations with the settlement agreement between EPA, EDF NRDC, AMC, and individual site owners described above; to which NRC agreed in principle. These commenters suggested various minor revisions to the regulations.

*Response:* EPA has adopted certain comments and suggested minor language changes while rejecting others, depending on whether they effectively implement the goal of rescission of subpart T.

*Comment:* Several commenters contend the site-specific reconsideration and reinstatement options contained in the December 1991 proposal would unduly restrict NRC's waiver authority since EPA proposed a non-discretionary duty to reinstate subpart T on a site-specific basis if NRC exercises its waiver authority.

*Response:* As described in the proposals, EPA was concerned over the potential for deviation from the agreements contained in the MOU and

the requirements of revised subpart D. In response, EPA proposed and is now adopting procedural and substantive provisions for site-specific and programmatic reconsideration and reinstatement if certain criteria are met. In promulgating subpart T, the CAA did not permit, and EPA did not consider, site-specific waivers from ultimate compliance with that standard. Thus, in evaluating NRC's regulatory program, EPA recognized in its December 1991 proposal that NRC's waiver authority under the AEA might be exercised in a manner not addressed in the MOU even after the revisions to 40 CFR part 192, subpart D and 10 CFR part 40, appendix A have been promulgated and the licenses amended. However, EPA has no reason to believe such relaxation of the standards will actually occur. EPA believes the provisions adopted today represent a comprehensive approach based on EPA's current evaluation of the NRC regulatory program, and a regulatory structure designed to address future evaluations of the program.

Additionally in response to the 1994 proposal, EPA received subsequent comments from these commenters supporting the rescission of subpart T. Furthermore, these commenters supported the proposed reconsideration and reinstatement provisions with certain modifications. These commenters believe the 1994 proposal to rescind subpart T is consistent with the terms of the settlement agreement between EPA, EDF NRDC, AMC and individual sites. Thus, based on the above reasons for adopting reconsideration and reinstatement provisions, and due to the inconsistency between the earlier comments received and the subsequent expressions of support for the rescission of subpart T, EPA is rejecting the earlier comments.

*Comment:* Many commenters to the 1991 proposal believe that reconsideration of the rescission of subpart T and subsequent reinstatement on a programmatic basis is inappropriate if one site fails to comply.

*Response:* Today's action sets forth provisions for the reconsideration of the rescission of subpart T and reinstatement of that subpart. The regulations adopted today include provisions for programmatic and site-specific reinstatement with separate but somewhat parallel criteria. At this time, EPA is not aware of a situation which would cause it to reinstate subpart T on a programmatic basis if one site fails to comply and would not expect to reinstate subpart T on that basis.

However, the Agency cannot predict all future circumstances, and cannot at this time preclude the possibility of such

reinstatement. EPA does, however, believe the criteria adopted today appropriately address both programmatic and site-specific reinstatement.

EPA rejects this comment for the above reasons, and because of the inconsistent responses to the 1991 and 1994 proposals received from the same commenters.

*Comment:* Some commenters assert, in response to the 1991 proposal that EPA lacks the authority to reinstate subpart T on a site-specific basis, since section 112(d)(9) is concerned only with NRC's regulatory program.

*Response:* EPA believes that section 112(d)(9) does not preclude site-specific reinstatement. Section 112(d)(9) of the CAA as amended authorizes EPA to decline to regulate radionuclide emissions from any category or subcategory of facilities licensed by the Nuclear Regulatory Commission (or an Agreement State) if the Administrator determines, by rule, and after consultation with the Nuclear Regulatory Commission, that the regulatory program established by the Nuclear Regulatory Commission pursuant to the Atomic Energy Act for such category or subcategory provides an ample margin of safety to protect the public health. The text of this section does not appear to preclude reinstatement on a site-specific basis. Section 112(d)(9) allows EPA to categorize and subcategorize, and for any such category or subcategory determine whether the public health is protected with an ample margin of safety by the NRC regulatory program from a particular source of radionuclide emissions. EPA believes that under the appropriate circumstances, the Agency may want to specifically categorize sites. The CAA as amended does not appear to preclude such specific categories on its face.

EPA rejects this comment for the above reasons, and because of the contradictory and inconsistent nature of the comments received from the same commenters in response to the 1991 and 1994 proposals, and the commenters' support of EPA's 1994 proposal which contains provisions for site-specific reinstatement.

*Comment:* One commenter appears to recognize EPA's authority for site-specific reinstatement of subpart T but is opposed to EPA's exercise of such authority and questions its appropriateness, since it appears to the commenter that NRC's existing inspection and enforcement programs address site-specific failures.

*Response:* This commenter does not oppose the proposed reinstatement

provisions and expresses the clear opinion that EPA committed in the settlement agreement to include provisions for site-specific reconsideration and reinstatement of subpart T. EPA anticipates that before initiating a rulemaking to reinstate subpart T on a site-specific basis, there would be extensive consultation with NRC. Based on the actions of NRC to date in implementing the terms of the MOU, EPA hopes that all concerns could be resolved. EPA is adopting the provisions for site-specific reconsideration and reinstatement as part of a comprehensive approach based on EPA's current evaluation of the NRC regulatory program, and a regulatory structure designed to address future evaluations of the program.

*Comment:* Some commenters contend that in reconsidering the rescission and reinstatement of subpart T on a programmatic basis, section 112(d)(9) requires EPA to determine whether public health is threatened by the failure of a particular site to meet the 20 pCi/m<sup>2</sup>-s flux standard.

*Response:* The Agency disagrees with the commenters' interpretation of section 112(d)(9) as applying to provisions for reinstatement. Section 112(d)(9) does not establish the criteria for reinstatement, rather it authorizes EPA to decline to regulate radionuclide emissions from NRC or Agreement State licensees if the Administrator determines, by rule, and after consultation with the NRC, that the NRC regulatory program protects the public health with an ample margin of safety. Under section 112(d)(9) EPA may rescind subpart T if EPA determines that the NRC regulatory program provides an equivalent level of public health protection (i.e., an ample margin of safety) as would implementation of subpart T in order to rescind subpart T. Section 112(d)(9) does not limit EPA's authority to reinstate subpart T. EPA believes the criteria adopted today appropriately address both programmatic and site-specific reinstatement.

Additionally, this comment was received in response to the 1991 proposal. EPA rejects this comment for the above reasons, and because of the inconsistent responses to the 1991 and 1994 proposals received from the same commenters.

*Comment:* Some commenters contend in response to the 1994 proposal that EPA should not treat reinstatement at the Administrator's initiative on the same terms as reinstatement based on a third party petition. These comments suggest revising the proposed regulations to reflect the differences

between the two, including adding a provision for a third possible result (i.e., a finding that NRC is in compliance).

*Response:* EPA disagrees with the commenters' suggestion that reinstatement at the Administrator's initiative should be treated differently from reinstatement based on a third party petition.

The commenters are basing their contentions on the terms of the settlement agreement which the Agency entered into with EDF NRDC, AMC and individual sites in February 1993. That agreement adds comprehensive details to the regulatory approach of the MOU between EPA, NRC and the affected Agreement States. EPA has reviewed the terms of the settlement agreement pertaining to the reconsideration of rescission and reinstatement of subpart T. The settlement agreement specifies at paragraph III.e. that upon completion of a rulemaking reconsidering the rescission of subpart T EPA may (1) reinstate subpart T on a programmatic basis if certain criteria are met; (2) reinstate subpart T on a site-specific basis if certain criteria are met; or (3) issue a finding that NRC is in compliance with certain criteria and that reinstatement of subpart T is not appropriate.

The Agency believes the criteria in § 61.226(a) for requiring reinstatement upon completion of a reconsideration rulemaking should apply whether the rulemaking is at the Administrator's initiative or based on a third party petition. These criteria are: (1) Failure by the NRC or an Agreement State on a programmatic basis to implement and enforce, in significant part, the regulations governing the disposal of uranium mill tailings promulgated by EPA and NRC or the tailings closure plan (radon) requirements (i.e., contained in the license) establishing milestones for the purpose of emplacing a permanent radon barrier that will achieve compliance with the 20 pCi/m<sup>2</sup>-s flux standard; or (2) failure by NRC or an affected Agreement State on a site-specific basis to achieve compliance by the operator of the site or sites with applicable license requirements, regulations, or standards implemented by NRC and the affected Agreement States. Additionally EPA would not be required to reinstate subpart T under § 61.226(a) unless those failures may reasonably be anticipated to significantly interfere (i.e., more than de minimis) with the timely emplacement of a permanent radon barrier constructed to achieve compliance with the 20 pCi/m<sup>2</sup>-s flux standard at uranium mill tailings disposal sites.

The commenters contend that the nature of the party initiating the reconsideration rulemaking should determine whether reinstatement is discretionary (for initiation by the Administrator) or mandatory (for a third party petition), apparently based on a desire to provide EPA with greater flexibility to address concerns over failures of NRC or an Agreement State to implement or enforce applicable requirements. The Agency believes that the nature of the initiating party properly may trigger different procedural requirements. For example, when a private party initiates the process by filing a petition, EPA has established a requirement that it take final action on such a petition within a set time period. However, EPA believes that the nature of the party initiating the process leading to a rulemaking is not relevant to deciding whether to reinstate, assuming the relevant criteria for reinstatement are met under either circumstance. EPA believes that if the Administrator determines, based on the record, that (1) NRC or an Agreement State failed on a programmatic basis to implement and enforce, in significant part, the regulations governing the disposal of uranium mill tailings promulgated by EPA and NRC or the tailings closure plan (radon) (i.e., contained in the license) requirements establishing milestones for the purpose of emplacing a permanent radon barrier that will achieve compliance with the 20 pCi/m<sup>2</sup>-s flux standard or (2) NRC or an affected Agreement State failed in significant part, on a site-specific basis, to achieve compliance by the operator of the site or sites with applicable license requirements, regulations, or standards implemented by NRC and the affected Agreement States, then there would be the same reason for the Agency to reinstate subpart T whether the process was initiated by a private petition or at EPA's own initiation. If the Agency makes the determination required to reinstate subpart T based on reconsideration of rescission at the Administrator's initiative and such reinstatement is considered discretionary the Agency is not aware of circumstances which would lead the Agency not to reinstate subpart T. In any case, if the Administrator should make the determination in § 61.226(a) (1) or (2) but decide in her discretion not to reinstate subpart T in a proceeding initiated by the Administrator, then the Agency believes it would promptly receive third party petitions based on the finding made at the Administrator's initiative, and the Agency would then be obligated to

reinstate subpart T. Additionally, upon completion of the reconsideration of rescission pursuant to § 61.226(c) the Administrator may in her discretion issue a finding that reinstatement of this subpart is not appropriate if the Administrator makes certain findings. However, the discretion to issue such a finding is not relevant to the situation where the Administrator has found that the criteria for reinstatement have already been met, since the two findings are mutually exclusive. Finally, the commenters apparently believe that reinstatement at the Administrator's initiative should be discretionary so that EPA and NRC can continue attempts to resolve concerns and thereby avoid the need to reinstate. EPA believes that such ongoing consultation is not precluded by the regulations adopted today, and EPA expects the agencies would continue consultations and make all possible efforts to resolve the concerns during the rulemaking process. The regulation does not establish a time limit for final agency action in this case, and the agency would have discretion to extend the rulemaking if appropriate to continue such inter-agency consultations.

EPA agrees with the commenters that the settlement agreement provides an additional possible result upon completion of a reconsideration rulemaking initiated by the Administrator, namely that the Agency may issue a finding that reinstatement is not appropriate if the Agency finds: (1) NRC and the affected Agreement States are on a programmatic basis implementing and enforcing, in significant part, the regulations governing the disposal of uranium mill tailings promulgated by EPA and NRC or the tailings closure plan (radon) (i.e., contained in the license) requirements establishing milestones for the purpose of emplacing a permanent radon barrier that will achieve compliance with the 20 pCi/m<sup>2</sup>-s flux standard; or (2) NRC or an affected Agreement State are, in significant part, on a site-specific basis achieving compliance by the operator of the site or sites with applicable license requirements, regulations, or standards implemented by NRC and the affected Agreement States. EPA believes addition of this provision to the regulations will clarify the existence of this option and has revised § 61.226(a) of the reinstatement provisions to provide for this additional result.

*Comment:* One commenter asserts that EPA's characterization of its authority to reconsider rescission of subpart T in the preamble to the 1994 proposal appears overly broad and reinstatement should be clearly limited

to those conditions proposed in § 61.226(a).

*Response:* EPA believes that the provisions for reconsideration of rescission adopted in § 61.226 represent a comprehensive approach under both the MOU and the settlement agreement. The provisions include substantive and procedural provisions for reconsideration of rescission and the reinstatement of this subpart on a programmatic or site-specific basis. The provisions include the obligation to reinstate subpart T if certain conditions are met, procedures for reconsideration and provisions authorizing the Administrator to initiate reconsideration. Although the Agency does not intend to reconsider its decision to rescind subpart T for a site which is in fact meeting the 20 pCi/m<sup>2</sup>-s flux standard absent other factors that would indicate the need for reinstatement, the Agency recognizes that a situation may arise where reconsideration of rescission is nevertheless appropriate. For example, EPA might consider initiating reconsideration under § 61.226 where a site is meeting the 20 pCi/m<sup>2</sup>-s flux standard if there are factors which show that NRC or an Agreement State failed to implement and enforce in significant part, the applicable regulations, e.g., clear failure of that site to emplace the permanent radon barrier within the time periods established in implementing subpart D. EPA is not aware of circumstances under which EPA might reconsider rescission for a site that is meeting the 20 pCi/m<sup>2</sup>-s flux standard, other than those indicating that the milestone for emplacement of the permanent radon barrier has passed, the delay was not approved by NRC or an Agreement State and the licensee failed to emplace the permanent radon barrier, and there are indications that the licensee does not plan to emplace the barrier and NRC or an Agreement State does not plan to enforce this requirement. EPA does not envision such an unusual situation arising. EPA believes the actions taken to date by NRC, including the license amendments and the final amendments to the NRC conforming regulations, as described above, reflect the good faith effort on the part of NRC and the Agreement States to implement the MOU and EPA's subpart D regulations. However, the Agency is not now in the position to determine that there could be no circumstances which might indicate the need to reconsider the rescission of subpart T for a site that is in fact meeting the 20 pCi/m<sup>2</sup>-s flux standard.

Additionally, EPA reserves the right to initiate reinstatement of subpart T if

appropriate, since although the § 61.226 provisions adopted today establish an obligation for the Administrator to reinstate if certain conditions are met, they are not intended to be the exclusive basis for reinstatement. Under the regulations adopted today, EPA has the authority to reconsider the rescission of subpart T at the Administrator's initiative and upon the petition of a third party. The Agency is obligated to reinstate subpart T on a programmatic basis if the Administrator determines by rulemaking, based on the record, that NRC or an affected Agreement State has failed on a programmatic basis to implement and enforce, in significant part, the regulations governing the disposal of uranium mill tailings promulgated by EPA and NRC or the tailings closure plan (radon) requirements establishing milestones for the purpose of emplacing a permanent radon barrier that will achieve compliance with the 20 pCi/m<sup>2</sup>-s flux standard. Additionally, EPA is obligated to reinstate subpart T on a site-specific basis as applied to owners and operators of non-operational uranium mill tailings disposal sites if the Administrator determines by rulemaking, based on the record, that NRC or an affected Agreement State has failed in significant part on a site-specific basis to achieve compliance by the operator of the site or sites with applicable license requirements, regulations, or standards implemented by NRC and the affected Agreement States. The obligation to reinstate subpart T is limited to those failures which may reasonably be anticipated to significantly interfere with timely emplacement of the permanent radon barrier constructed to achieve compliance with the 20 pCi/m<sup>2</sup>-s flux standard. At this time, EPA is not aware of circumstances where it would consider reinstating subpart T if the failure does not significantly interfere with emplacement of the required permanent radon barrier. However, EPA reserves the right to reconsider the rescission where the criteria of § 61.226(a) have not been met, under the Agency's authority to issue NESHAPs contained in section 112 of the CAA. For example, even if the NRC or an Agreement State is implementing and enforcing, in significant part, the applicable regulations and license amendments, the Agency may decide to reconsider the rescission if new information indicated that the public health is not protected with an ample margin of safety. The Agency cannot predict all future circumstances and cannot at this time preclude the possibility of such reconsideration and

possible reinstatement. Despite reserving this authority, the Agency believes this is a theoretical situation and has no current intention to act on this authority.

## 5. Miscellaneous

### 5.1. Monitoring

*Comment:* EPA must ensure that the single monitoring event currently required by subpart T would remain in effect if subpart T is reinstated, particularly in light of the recently proposed "enhanced monitoring" regulations.

*Response:* Subpart T currently requires monitoring to occur only once to demonstrate compliance with the 20 pCi/m<sup>2</sup>-s flux standard of § 61.222. However, EPA published a proposed Enhanced Monitoring Program on October 22, 1993, which would require owners and operators of sources subject to existing NESHAPs to perform enhanced monitoring at emissions units. (58 FR 54648). It appears that the proposal applies the enhanced monitoring requirements for hazardous air pollutants to all emissions units which would be required to obtain an operating permit. (58 FR 54651, October 22, 1993). Additionally, although asbestos demolition and renovation projects (subpart M) were exempted from the enhanced monitoring provisions, it does not appear subpart T would be exempted. The rationale for the proposed asbestos demolition exemption, that EPA was not requiring states to permit those sources and the permit program is the established method for implementing the enhanced monitoring program, does not appear to apply to uranium mill tailings disposal sites. It would be premature for EPA to determine today that in the event subpart T is reinstated for Title II sites, the proposed enhanced monitoring provisions would not apply.

### 5.2 Discussion of 40 CFR part 192, Subpart D Extension Provisions

*Comment:* EPA's discussion of the extension provisions contained in 40 CFR 192.32(a)(3)(ii), (iii) is confusing and should be revised to equally consider the possibility of extensions for factors beyond the control of the licensee.

*Response:* EPA believes its discussion of the extension provisions contained in the Agency's amendments to its UMTRCA regulations at 40 CFR 192.32(a)(3)(ii) and (iii) does not need further clarification. EPA disagrees with the commenter's claim that an extension based upon "factors beyond the control of the licensee" should be considered

equally with the delay provisions encompassed in EPA's UMTRCA regulations. 40 CFR 192.32(a)(3)(ii) and (iii) specifically provide that NRC may grant an extension on either one of two bases. However, an extension due to "factors beyond the control of the licensee" is implicit in the definition of "as expeditiously as practicable." The term "factors beyond the control of the licensee" would be one element for NRC to evaluate in reconsidering a prior decision establishing a date for emplacement of the permanent radon barrier that meets the definition of "as expeditiously as practicable." A change in any one of the factors considered in establishing a date that meets the "as expeditiously as practicable" standard would not automatically lead to an extension, rather NRC would need to evaluate all the relevant factors under § 192.32(a)(3)(i) before it could change a previously established milestone or date for emplacement of the permanent radon barrier.

### 5.3 Discussion of Amendment of NRC and Agreement State Licenses

*Comment:* There is some concern that EPA may be over scrutinizing the NRC license amendment process, particularly with respect to the Atlas site located in Moab, Utah.

*Response:* In order to determine that the NRC regulatory program protects the public health with an ample margin of safety and rescind subpart T, EPA must conclude, *inter alia* that NRC and the affected Agreement States are or will be implementing and enforcing the license requirements (tailings closure plan (radon)) that establish the milestones for emplacement of a permanent radon barrier that will achieve compliance with the 20 pCi/m<sup>2</sup>-s flux standard as expeditiously as practicable considering technological feasibility. The Agency is applying the same basic approach in reviewing all of the license amendments. Presently, Atlas is the only site where the site license has not yet been amended, but the tailings closure plan (radon) milestones are in jeopardy. There is a wealth of information for EPA to review due to the unique circumstances of this site.

EPA is interested in the Atlas site because the license amendment incorporating the reclamation plan has not yet been completed, and this may jeopardize the dates contained in the tailings closure plan (radon). The MOU established a target closure date of 1996. EPA recognizes that this is the only site for which a license amendment incorporating the reclamation plan has not been established, thereby possibly impacting the dates currently contained

in the approved tailings closure plan (radon) adopted pursuant to the MOU and EPA's revised subpart D regulations, and that the circumstances surrounding the delay are unique. EPA believes NRC, the affected Agreement States and the licensees have acted in good faith to amend the site licenses.

The Agency does not believe it is overly scrutinizing the license amendment process. The Agency believes its interest in the Atlas site reflects EPA's commitment to and review of the applicable criteria in finally determining that NRC and the affected Agreement States are or will be implementing and enforcing the license requirements (tailings closure plan (radon)) to achieve compliance with the 20 pCi/m<sup>2</sup>-s flux standard. EPA is merely reviewing current information and monitoring the progress of NRC in implementing the requirements of subpart D. The Agency has not suggested any course of action to NRC.

### 5.4 Public Participation

*Comment:* An industrial site, other than a uranium mill tailings disposal site, commented that publishing a notice in the Federal Register does not provide sufficient notice for citizens of communities where uranium mill tailings disposal sites are located.

*Response:* The EPA made every effort to notify the affected public of the proposed rulemaking action. EPA published a NPR on December 31, 1991, and a supplement to that proposal on February 7, 1994, in the Federal Register. There was a public comment period after each proposal; public hearings were held in Washington, DC and Santa Fe, NM after the 1991 proposal and no request for a hearing was received after the 1994 proposal. EPA believes it has afforded the public with full opportunity to participate in this proceeding, as well as satisfied all such requirements under Clean Air Act section 307.

## V Miscellaneous

### A. Disposition of Pending Judicial Challenges and Petitions for Reconsideration

By taking today's action rescinding subpart T as applied to owners and operators of uranium mill tailings disposal sites regulated under Title II of UMTRCA, the stay of subpart T is no longer effective. Thus, the challenge to the stay of subpart T filed by EDF is moot, and EPA expects that the pending litigation will be promptly resolved by dismissal. Based on the terms of the settlement agreement between EDF, NRDC, AMC, individual sites and EPA

as described above, and based on today's rescission of subpart T, AMC's pending administrative petition for reconsideration of subpart T is denied as moot. Additionally, all other pending petitions for reconsideration of subpart T as applied to Title II sites are denied as moot under today's action.

#### B. Paperwork Reduction Act

There are no information collection requirements in this rule.

#### C. Executive Order 12866

Under Executive Order 12866, (58 FR 57735, October 4, 1993) the Agency must determine whether this regulation, if promulgated, is "significant" and therefore subject to OMB review and the requirements of the Executive Order. The Order defines "significant regulatory action" as one that is likely to result in a rule that may:

(1) Have an annual effect on the economy of \$100 million or more or adversely affect in a material way the economy, a sector of the economy, productivity, competition, jobs, the environment, public health or safety, or State, local or tribal governments or communities;

(2) Create a serious inconsistency or otherwise interfere with an action taken or planned by another agency;

(3) Materially alter the budgetary impact of entitlements, grants, user fees, or loan programs or the rights and obligations of recipients thereof; or

(4) Raise novel legal or policy issues arising out of legal mandates, the President's priorities, or the principles set forth in the Executive Order.

This action is not a significant regulatory action as that term is defined in Executive Order 12866, since it will not result in an annual effect on the economy of \$100 million or another adverse economic impact; it does not create a serious inconsistency or interfere with another agency's action; it does not materially alter the budgetary impacts of entitlements, grants, user fees, etc., and it does not raise novel legal or policy issues. Thus, EPA has determined that rescinding subpart T as it applies to owners and operators of uranium mill tailings disposal sites that are licensed by the NRC or an affected Agreement State is not a "significant regulatory action" under the terms of Executive Order 12866 and is therefore not subject to OMB review.

#### D. Regulatory Flexibility Analysis

Section 603 of the Regulatory Flexibility Act, 5 U.S.C. 603, requires EPA to prepare and make available for comment an "initial regulatory flexibility analysis" which describes the

effect of this rule on small business entities. However, section 604(b) of the Act provides that an analysis not be required when the head of an Agency certifies that the rule will not, if promulgated, have a significant economic impact on a substantial number of small entities.

Most firms that own uranium mill tailings piles are divisions or subsidiaries of major U.S. and international corporations. Many are parts of larger diversified mining firms which are engaged in a number of raw materials industries; the disposal of uranium mill tailings piles represents only a small portion of their overall operations. Others are owned by major oil companies and electric utilities which were engaged in horizontal and vertical integration, respectively during the industry's growth phase in the 1960s and 1970s.

It was found in the 1989 rulemaking that there was no significant impact on small business entities. There has been no change in this, and no new tailings piles have been constructed since 1989. I certify that this final rule to rescind 40 CFR part 61, subpart T as applied to owners and operators of NRC licensed non-operational uranium mill tailings disposal sites, will not have significant economic impact on a substantial number of small entities.

#### List of Subjects in 40 CFR Part 61

Environmental protection, Air pollution control, Arsenic, Asbestos, Benzene, Beryllium, Hazardous substances, Mercury, Radionuclides, Radon, Reporting and recordkeeping requirements, Uranium, Vinyl chloride.

Dated: June 29, 1994.

Carol M. Browner,  
Administrator.

Part 61 of chapter 1 of title 40 of the Code of Federal Regulations is amended as follows:

#### PART 61—[AMENDED]

1. The authority citation for part 61 is revised to read as follows:

Authority: 42 U.S.C. 7401, 7412, 7414, 7416, 7601.

2. Section 61.220 is amended by revising paragraph (a) and removing and reserving paragraph (b) to read as follows:

#### § 61.220 Designation of facilities.

(a) The provisions of this subpart apply to owners and operators of all sites that are used for the disposal of tailings, and that managed residual radioactive material during and following the processing of uranium

ores, commonly referred to as uranium mills and their associated tailings, that are listed in, or designated by the Secretary of Energy under Title I of the Uranium Mill Tailings Radiation Control Act of 1978, except § 61.226 of this subpart which applies to owners and operators of all sites that are regulated under Title II of the Uranium Mill Tailings Radiation Control Act of 1978.

(b) [Reserved]

3. Section 61.221 is amended by revising the introductory text, revising paragraphs (a) and (c), and by adding paragraphs (d) and (e) to read as follows:

#### § 61.221 Definitions.

As used in this subpart, all terms not defined here have the meanings given them in the Clean Air Act or subpart A of Part 61. The following terms shall have the following specific meanings:

(a) *Long term stabilization* means the addition of material on a uranium mill tailings pile for the purpose of ensuring compliance with the requirements of 40 CFR 192.02(a). These actions shall be considered complete when the Nuclear Regulatory Commission determines that the requirements of 40 CFR 192.02(a) have been met.

(c) *Residual radioactive materials* shall have the same meaning as in section 101(7) of the Uranium Mill Tailings Radiation Control Act of 1978, 42 U.S.C. 7911(7).

(d) *Tailings* shall have the same meaning as in section 101(8) of the Uranium Mill Tailings Radiation Control Act of 1978, 42 U.S.C. 7911(8).

(e) *In significant part* means in a manner that is not reasonably expected to materially (i.e., more than de minimis) interfere with compliance with the 20 pCi/m<sup>2</sup>-s flux standard as expeditiously as practicable considering technological feasibility (including factors beyond the control of the licensee).

4. Section 61.222 is amended by revising paragraph (b) to read as follows:

#### § 61.222 Standard.

(b) Once a uranium mill tailings pile or impoundment ceases to be operational it must be disposed of and brought into compliance with this standard within two years of the effective date of the standard. If it is not physically possible for an owner or operator to complete disposal within that time, EPA shall, after consultation with the owner or operator, establish a compliance agreement which will assure that disposal will be completed as quickly as possible.

5. Section 61.223 is amended by revising paragraph (b)(5) to read as follows:

**§ 61.223 Compliance procedures.**

(b)

(5) Each report shall be signed and dated by a public official in charge of the facility and contain the following declaration immediately above the signature line:

I certify under penalty of law that I have personally examined and am familiar with the information submitted herein and based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the submitted information is true, accurate and complete. I am aware that there are significant penalties for submitting false information including the possibility of fine and imprisonment. See 18 U.S.C. 1001.

6. Section 61.226 is added to subpart T to read as follows:

**§ 61.226 Reconsideration of rescission and reinstatement of this subpart.**

(a) Reinstatement of this subpart upon completion of reconsideration of rescission.

(1) The Administrator shall reinstate 40 CFR part 61, subpart T as applied to owners and operators of non-operational uranium mill tailings disposal sites that are licensed by the NRC or an affected Agreement State if the Administrator determines by rulemaking, based on the record, that NRC or an affected Agreement State has:

(i) Failed on a programmatic basis to implement and enforce, in significant part, the regulations governing the disposal of uranium mill tailings promulgated by EPA and NRC or the tailings closure plan (radon) (i.e., contained in the license) requirements establishing milestones for the purpose of emplacing a permanent radon barrier that will achieve compliance with the 20 pCi/m<sup>2</sup>-s flux standard; and

(ii) Those failures may reasonably be anticipated to significantly interfere (i.e., more than de minimis) with the timely emplacement of a permanent radon barrier constructed to achieve compliance with the 20 pCi/m<sup>2</sup>-s flux standard at the uranium mill tailings disposal site.

(2) The Administrator shall reinstate 40 CFR part 61 subpart T on a site-specific basis as applied to owners and operators of non-operational uranium mill tailings disposal sites that are

licensed by the NRC or an affected Agreement State if the Administrator determines by rulemaking, based on the record:

(i) That NRC or an affected Agreement State has failed in significant part on a site-specific basis to achieve compliance by the operator of the site or sites with applicable license requirements, regulations, or standards implemented by NRC and the affected Agreement States; and

(ii) Those failures may reasonably be anticipated to significantly interfere (i.e., more than de minimis) with the timely emplacement of a permanent radon barrier constructed to achieve compliance with the 20 pCi/m<sup>2</sup>-s flux standard at the uranium mill tailings disposal site.

(3) Upon completion of the reconsideration of rescission pursuant to § 61.226(c) the Administrator may issue a finding that reinstatement of this subpart is not appropriate if the Administrator finds:

(i) NRC and the affected Agreement States are on a programmatic basis implementing and enforcing, in significant part, the regulations governing the disposal of uranium mill tailings promulgated by EPA and NRC or the tailings closure plan (radon) (i.e., contained in the license) requirements establishing milestones for the purpose of emplacing a permanent radon barrier that will achieve compliance with the 20 pCi/m<sup>2</sup>-s flux standard; or

(ii) NRC or an affected Agreement State are on a site-specific basis, in significant part, achieving compliance by the operator of the site or sites with applicable license requirements, regulations, or standards implemented by NRC and the affected Agreement States.

(b) Procedures to Petition for Reconsideration of Rescission of this subpart.

(1) A person may petition the Administrator to reconsider the rescission and seek reinstatement of this subpart under § 61.226(a).

(2) EPA shall summarily dismiss a petition to reconsider rescission and seek reinstatement of this subpart under § 61.226(a)(1) (programmatic basis), without prejudice, unless the petitioner demonstrates that written notice of the alleged failure(s) was provided to NRC at least 60 days before filing the petition with EPA. This notification shall include a statement of the grounds for such a petition and this notice

requirement may be satisfied by but is not limited to, submissions or pleadings submitted to NRC during a proceeding conducted by NRC.

(3) EPA shall summarily dismiss a petition to reconsider rescission and seek reinstatement of this subpart under § 61.226(a)(2) (site-specific basis), without prejudice, unless the petitioner demonstrates that a written request was made to NRC or an affected Agreement State for enforcement or other relief at least 60 days before filing its petition with EPA, and unless the petitioner alleges that NRC or the affected Agreement State failed to respond to such request by taking action, as necessary to assure timely implementation and enforcement of the 20 pCi/m<sup>2</sup>-s flux standard.

(4) Upon receipt of a petition under § 61.226(b)(1) that is not dismissed under § 61.226(b)(2) or (b)(3), EPA will propose to grant or deny an authorized petition to reconsider, take comments on the Agency's proposed action, and take final action granting or denying such petition to reconsider within 300 days of receipt.

(c) Reconsideration of Rescission of this Subpart Initiated by the Administrator.

(1) The Administrator may initiate reconsideration of the rescission and reinstatement of this subpart as applied to owners and operators of non-operational uranium mill tailings disposal sites if EPA has reason to believe that NRC or an affected Agreement State has failed to implement and enforce, in significant part, the regulations governing the disposal of uranium mill tailings promulgated by EPA and NRC or the tailings closure plan (radon) requirements establishing milestones for the purpose of emplacing a permanent radon barrier that will achieve compliance with the 20 pCi/m<sup>2</sup>-s flux standard.

(2) Before the Administrator initiates reconsideration of the rescission and reinstatement of this subpart under § 61.226(c)(1), EPA shall consult with NRC to address EPA's concerns and if the consultation does not resolve the concerns, EPA shall provide NRC with 60 days notice of the Agency's intent to initiate rulemaking to reinstate this subpart.

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BILLING CODE 6560-60-P

**ENVIRONMENTAL PROTECTION  
AGENCY**
**40 CFR Part 61**
**[AO-FR-3060-7]**
**National Emission Standards for  
Hazardous Air Pollutants (NESHAPs);  
Standards for Radon-222 Emissions  
From Licensed Uranium Mill Tailings**
**AGENCY:** Environmental Protection  
Agency (EPA).

**ACTION:** Final rule.

**SUMMARY:** This final rule establishes work practices that apply to tailings at licensed uranium mill sites. Radon-222 is emitted from these tailings in amounts sufficient to produce a risk to public health. The work practices established here will limit the emissions of radon-222 in accordance with Section 112 of the Clean Air Act.

**EFFECTIVE DATE:** The final rule is effective on September 24, 1986.

**ADDRESSEES:** The rulemaking record is contained in Docket No. A-79-11. This docket is available for public inspection between 8:00 a.m. and 4:00 p.m., Monday through Friday, at EPA's Central Docket Section, West Tower Lobby, Gallery One, Waterside Mall, 401 M Street, SW., Washington, DC 20460. A reasonable fee may be charged for copying.

**FOR FURTHER INFORMATION CONTACT:** Terrence A. McLaughlin, Chief, Environmental Standards Branch, Criteria and Standards Division (ANR-460), Office of Radiation Programs, U.S. Environmental Protection Agency, Washington, DC 20460, (202) 475-9610.

**SUPPLEMENTARY INFORMATION:**
**I. Supporting Documents**

The draft background information document and draft economic analysis issued in support of the proposed rule have been revised in response to public comments and are now issued in final form titled, respectively, "Background Information Document—Final Rule for Radon-222 Emissions from Licensed Uranium Mill Tailings" (EPA 520/1-86-009) and "Economic Analysis—Final Rule for Radon-222 Emissions from Licensed Uranium Mill Tailings" (EPA 520/1-86-010).

The documents contain projections of radon emissions and the resulting risks to nearby individuals and to populations due to the operation of the uranium milling industry, a description of radon control technology and associated costs, and an environmental and economic analysis of the effects of alternative control strategies on the industry.

In addition, the Agency's summary of public comments on the proposed rule, together with the Agency's reply to these comments, are contained in the document "Response to Comments—Final Rule for Radon-222 Emissions from Licensed Uranium Mill Tailings" (EPA 520/1-86-011).

Single copies of these documents may be obtained from the Program Management Office (ANR-459), Office of Radiation Programs, Environmental Protection Agency, Washington, DC 20460, (202) 475-8386.

**II. Basic Terms Used in the Notice**

Definitions of basic terms used in this notice are given below:

1. *ALARA*—A practice in radiation protection that encourages radionuclide emissions to be kept "as low as reasonably achievable."

2. *Continuous disposal*—A method of tailings management and disposal in which tailings are dewatered by mechanical methods soon after generation. The dried tailings are then placed in trenches or other disposal areas and immediately covered.

3. *Covered*—Disposal of tailings in accordance with specifications required by regulations appearing at 40 CFR Part 192 and issued under the Uranium Mill Tailings Radiation Control Act (UMTRCA).

4. *Mill tailings*—The waste resulting from conventional milling of uranium ore. Tailings are classified as either sands or slimes depending on particle size. Processing 1 ton of ore produces approximately 1 ton of tailings.

5. *Phased disposal*—A method of tailings management and disposal that uses a series of small impoundments. Tailings are pumped to one impoundment until it is filled and then pumped to the next impoundment. The filled impoundment is actively dewatered, or allowed to dry naturally, and then immediately reclaimed.

6. *Radon*—Radon-222; an inert radioactive gas.

7. *Radon decay products*—The seven principal radionuclides that are produced as radon-222 decays to nonradioactive lead. Radon-222 short-lived decay products means the four radionuclides with half-lives less than 20 minutes produced as radon-222 decays to lead-210.

8. *Single cell disposal*—A method of tailings management that uses a large impoundment designed to contain all tailings generated during the lifetime of the mill. At the end of the mill life the impoundment is actively dewatered or allowed to dry and is then immediately reclaimed.

9. *Tailings pile*—The on-site waste impoundment in which tailings are deposited.

**III. Background**
**A. Industry Description**

Uranium milling involves the handling of large quantities of ore containing uranium and its decay products. In this ore, the concentration of uranium and its decay products is about one thousand times greater than in other rocks and soils. Uranium milling recovers the uranium in the ore by mechanical and chemical processes that generate waste tailings. The ore is first crushed, blended, and ground to the proper size for the leaching process, which extracts uranium. Several leaching processes are used, including the use of acid, alkali, and a combination of the two. After uranium is leached from the ore, it is concentrated from the leachate through ion exchange or solvent extraction. The concentrated uranium is then extracted from the concentrating medium, precipitated, dried, and packaged. The depleted ore, in the form of tailings, is pumped to a tailings pile as a slurry.

Since ore generally contains less than 0.5 percent uranium by weight, every ton of ore processed results in almost a ton of tailings. The tailings contain virtually all of the uranium decay products present in the ore, including thorium-230 and radium-226, which decay to radon. Previous risk analyses have shown that radon presents the highest risk of any radionuclide released to air at uranium mills and that the tailings pile is the most significant source of radon.

The 26 licensed uranium mills in the United States are located in Colorado, New Mexico, South Dakota, Texas, Utah, Washington, and Wyoming. In addition, four mills have been licensed but not built. The milling industry is depressed due to a decline in the demand for uranium and competition from low-cost foreign sources. Three mills are actively processing ore, 17 are on standby and could process ore in the future if market conditions improve, and 6 are being decommissioned and will no longer process ore. The 20 licensed mills that are actively processing ore or on standby were considered in the analyses reported in the supporting documentation. These 20 mills have about 35 tailings impoundments associated with them. Recently, three of these mills have indicated to the NRC that they will no longer process ore and intend to reclaim the sites.

Past milling activities have generated about 200 million tons of tailings. Production at conventional mills peaked

in 1980, when 21 mills recovered more than 17 thousand tons of uranium and generated more than 14 million tons of tailings. The industry is currently operating at about 10 percent of capacity due to the depressed market. At this level of production, the industry is recovering about 1.8 thousand tons of uranium and generating about 1.4 million tons of new tailings annually. At full capacity, the industry could generate approximately 14 million tons of tailings a year.

#### *B. Estimates of Exposure and Risk*

Exposure estimates are based on radon emissions from tailings piles, since emissions and risks from other parts of a uranium mill are small in comparison. Radon emission rate estimates are based on the radium-226 concentration in the tailings using the relationship of 1 picocurie of radon emitted per square meter per second for each picocurie of radium-226 per gram of tailings. It is assumed that the radium-226 is evenly mixed throughout the tailings and that radon is emitted from all dry exposed surfaces of tailings. The radium-226 content of the tailings is derived from the relationship of one-tenth of one percent of uranium in ore equalling 280 picocuries of radium-226 per gram of ore and the assumption that all the radium-226 in the ore finds its way into the tailings pile.

Standard meteorological transport models are used to estimate radon concentrations in air at various distances from the piles. Exposure to radon decay products is then estimated from the radon concentration in air. The final risk estimates are a product of the units of radon decay product exposure levels and a risk factor that relates risk to a single unit of exposure.

Two measures of human exposure are of particular interest: "nearby individual risk" and "total population impact". The former refers to the estimated increased lifetime risk to individuals who spend their entire life at the location of existing residences where predicted concentrations of the pollutant are highest. Nearby individual risk is expressed as a probability; for example, a risk of one in one thousand means that a person spending his lifetime at the point of maximum exposure has an estimated increased risk of one in one thousand of developing a fatal cancer. Estimates of nearby individual risk are best estimates, and are not upper bound estimates.

The second measure, "total population impact", considers people exposed at all concentrations, low as well as high, and it considers people exposed throughout the United States,

as appropriate. It is expressed in terms of annual number of fatal cancer cases and provides a measure of the overall impact on public health. For example, a total population impact of 0.5 fatal cancer cases per year means that emissions of the specific pollutant are predicted to cause one case of cancer every 2 years. As distance from a source increases, risks to specific persons decrease and become extremely small; but, considering the total population exposed, the sums of these risks may be significant.

The two estimates together provide a better description of the magnitude and distribution of risk than either number alone. "Nearby individual risk" gives an estimate of the highest risk, but not how many people may bear that risk. "Total population impact" describes the overall estimated health impact on the entire exposed population, but not how much risk the most exposed persons may bear. For example, two sources of radionuclide or chemical emissions could have similar population impacts but very different maximum individual risks, or vice versa. Both estimates are important and both are used in making risk management decisions. The risk estimates should not be viewed as precise determinations of likely health damage, but rather as a general indication of estimated health risk.

EPA's analysis of risks due to radon emissions from existing uranium tailings piles concluded:

1. Lung cancer, which is caused by the short-lived decay products of radon, is the dominant health hazard from tailings. Estimated effects of gamma radiation and of long-lived decay products of radon are less significant, although high gamma radiation exposures may sometimes occur.

2. Individuals living near an uncontrolled tailings pile are subject to high risks due to radon emitted from tailings. Radon contained in the ambient air enters homes and other structures built near the mill through doors and other openings in the structure. The resulting radon decay products tend to concentrate indoors, thus exposing the occupants to potentially harmful levels of these radionuclides. The EPA estimates that, at present, some persons may be exposed to risks that are as high as one in one hundred. This estimate is based on median risk estimates and an assumed exposure of 70-years during which emission levels remain the same as present values. Of course, this time period is longer than assumed in EPA's "40-year" analysis. Using the 40-year analysis, an exposure posing this level of risk could only occur if an individual remained at that location for the full 70-

year period, and the pile presenting that risk was replaced after closure by another pile presenting the same risk factors.

3. Based on models for the risk to all exposed populations (local, regional, and national), about one to five fatal cancers per year are estimated from emissions of radon from tailings at the 20 mill sites being considered here, if no controls are present. If the tailings at all sites were to dry out, it is estimated that the risk could rise to about two to nine fatal cancers per year. However, not all of the piles are expected to dry out at the same time. Approximately one half of these deaths are estimated to occur within 80 kilometers of the tailings piles.

There is substantial uncertainty in these estimates because of uncertainties in the emission rates of radon from tailings sites, in the exposure people will receive from its decay products, and from incomplete knowledge of the effects on people due to these exposures. The values presented here represent best estimates based on current knowledge. Examples of factors leading to possible underestimation of risk include: the use of median rather than upper bound risk factors, ignoring radon sources at a mill site other than the tailings pile, and not considering piles where owners have indicated intent to reclaim their pile but have not done so for long periods. Risks could be overestimated if owners reclaim piles faster than EPA assumes, if radon emissions are smaller due to less radium-226 in a pile than is estimated, or if the radon emanation rate is lower than EPA estimates it to be. Additionally, since these estimates are based on current pile sizes and population distributions, as nearby populations increase or decrease in the future, the estimated impacts would vary. If specific information indicates radon emissions rates were lower, then risk estimates could be lower.

In general, much more is known about the risks from exposure to radiation than exposure to most chemicals. While there is uncertainty in risk estimates from assessments of chemical emissions and radionuclide emissions, there is much less uncertainty in estimates of risk from radionuclide emissions because of the extensive data base on the effects of human exposure to radiation. Therefore, a risk estimate resulting from exposure to radionuclides is likely to be more accurate than the same estimate for chemical exposures.

#### *C. History of Standard Development*

The Agency's standards for Nuclear Power Operation (40 CFR Part 190)

issued under the Atomic Energy Act (42 FR 2858 (January 13, 1977)) limit the total individual radiation dose caused by emissions from facilities that make up the uranium fuel cycle, including licensed uranium mills. However, when 40 CFR Part 190 was promulgated, considerable uncertainty existed about the public health impact of existing levels of radon in the air, as well as uncertainty about the best method for management of new man-made sources of radon. The EPA exempted radon from coverage under 40 CFR Part 190 since the problems associated with emissions of this radionuclide were sufficiently different from those of other radioactive materials associated with the fuel cycle to warrant separate consideration.

EPA has also issued standards (48 FR 45926 (October 7, 1983)) for uranium and thorium mill tailings at commercial processing licensed sites under the Uranium Mill Tailings Radiation Control Act of 1978 (UMTRCA), which amends the Atomic Energy Act (AEA). These standards for disposal of tailings require stabilization of tailings on final disposal so that the associated health hazards will be controlled and limited for 1000 years to the extent reasonably achievable, in any case, for at least 200 years. The standards limit releases of radon to the air after disposal, and require measures to limit releases of radionuclides and other hazardous substances to water (40 CFR Part 192, Subparts D and E). In the preamble to these standards, the Agency discussed the relationship between UMTRCA and the Clean Air Act (CAA) and indicated its intent to publish an Advanced Notice of Proposed Rulemaking (ANPR) to consider additional control of radon emissions during the operational phase of mills.

Section 122 of the CAA required EPA to determine whether or not to regulate radioactive pollutants based on an assessment of risks to public health. After seeking public comment (44 FR 21704 (April 11, 1979)), EPA listed airborne emissions of radionuclides as hazardous air pollutants under section 112 of the CAA (44 FR 76738 (December 27, 1979)). Based on that listing, EPA subsequently promulgated standards under section 112 for Department of Energy (DOE) facilities, Nuclear Regulatory Commission (NRC) licensed facilities and non-DOE Federal facilities, elemental phosphorus plants, and underground uranium mines (50 FR 5190 (February 6, 1985 and 50 FR 15386 (April 17, 1985))).

On October 31, 1984, EPA issued its ANPR to inform interested parties that the Agency was considering issuing

standards under the CAA to limit radon emissions from licensed uranium mills (49 FR 43916 (October 31, 1984)). Subsequently, EPA entered into a stipulation with the Sierra Club to promulgate such standards, or delist radionuclides, by May 1, 1986. This agreement was entered as a consent order by the United States District Court for the Northern District of California (Civil No. C-84-0856 WHO).

On February 21, 1986, EPA issued proposed standards for radon emissions from licensed uranium mills and announced a public hearing (51 FR 6382 (February 21, 1986)). The hearing was held in Denver, Colorado, on March 25, 1986 (51 FR 8205 (March 10, 1986)). A transcript of the hearing was placed in the Docket and the comment period was extended to April 28, 1986.

Due to the complexity of the proposed rule and the need for an extended comment period, EPA and the Sierra Club entered into a second stipulation to extend the deadline to August 15, 1986. The district court granted the extension on motion of the parties.

#### IV. Summary of Proposed Standards

As noted earlier, EPA published a proposed rulemaking regarding control of radon-222 emissions from tailings piles at licensed sites on February 21, 1986 (51 FR 6382). That notice announced that EPA was considering various work practice standards for limiting such emissions based on its preliminary conclusions that it is not feasible to set an emissions standard, and that the nature of the risk involved warrants a regulatory response.

In its proposal, EPA presented three work practices, including improved methods for disposal of newly generated tailings, various timing requirements for use of these improved methods, and interim covers. The improved methods of disposal of newly generated tailings were a large, single pile with immediate closure, phased disposal, and continuous disposal involving dewatering and covering of tailings. EPA also stated it was considering alternatives of allowing new tailings to be added to existing piles over a range of times, including 5 years, 10 years, 15 years and an indefinite period of time into the future. (An exception from the latter requirements was proposed where existing tailings impoundments were lined.)

That proposal also discussed two available options for controlling radon-222 emissions from existing piles. It concluded that earthen covers might be placed over dry tailings beaches and embankments constructed of sand tailings. It noted that dry beaches

typically cover 60 percent of the total tailings area during the operational phase of a mill and that this percentage could be significantly larger during periods of extended shutdown. It also noted that use of existing tailings piles could be terminated. While a dry out period would ensue during which emissions would unavoidably increase prior to disposal in accordance with Federal standards under UMTRCA, this is an unavoidable result of disposal.

#### V. Summary of Responses To Comment

The Agency has reviewed all submittals to the docket and testimony given at the public hearing. A complete discussion of all substantive comments and the Agency's response to them appears in "Response to Comments—Proposed Rule for Radon-222 Emissions from Licensed Uranium Mills Tailings" (EPA 500/1-86-011); the document may be obtained from the Program Management Office (ANR-459), Office of Radiation Programs, Environmental Protection Agency, Washington, DC 20460. A summary of major concerns, together with the Agency's responses, are presented below.

#### Legal and Procedural

Many commenters stated that there is no need for regulation under the CAA because existing regulations developed under the AEA and the UMTRCA and license conditions administered by the NRC and its agreement States adequately protect the public from risk due to radon. The Agency estimates the individual lifetime risk may be as high as 1 in 100, assuming 70 years of exposure. The population risk is estimated to be 1 to 5 deaths per year under current industry and regulatory conditions. The Agency believes that these risks are significant and that there is a need for standards under the CAA to protect public health with an ample margin of safety.

A number of commenters addressed ground water quality and stated that it should not be considered in regulating radon under the CAA. The Agency has not developed this rule to regulate ground water. Ground water protection standards are currently in force and being implemented under the UMTRCA standards (40 CFR Part 192). However, potential effects of various alternatives on ground water were considered as part of the analysis of the impacts of this rule, since EPA has a responsibility to consider the impacts that its rules may have on the total environment. In part, this is done to ensure that regulations do not control pollution in one environmental medium only to degrade

another. Consequently, there may be some additional ground water protection incidental to these standards.

Some commenters stated that EPA should not consider cost and technical feasibility of regulation under section 112 of the CAA. They maintain that the Congressional mandate directs EPA to adopt standards based exclusively on protection of public health. The EPA interprets the requirement of section 112 to establish emission standards at a level which "provides an ample margin of safety" as not implying that these standards must ensure that there is no remaining level of risk. Consequently, the standard being adopted today requires the use of work practices that will reduce radionuclide emissions and therefore risks to the practical minimum. The standard reflects consideration of the magnitude of the risks, the costs and availability of further controls and associated risk reduction potential, and the potential societal impacts of regulatory alternatives. The Agency, in considering the impacts, weighed the estimated risks achieved by and remaining after application of controls and their uncertainties against the costs to achieve the emission reduction and the potential for widespread closure.

Some commenters stated that the Agency must promulgate an emission standard to be consistent with the mill tailings disposal standards (40 CFR Part 192), which are partly in the form of a design standard; an emission rate limit per square meter of pile surface. These comments are based on a misconception of the disposal standards. The disposal standards had multiple environmental goals including preventing misuse of tailings, reducing radon emissions for a long period of time, and protecting ground water. The Agency determined that the best way to accomplish these goals is through the use of a design standard based on a thick barrier. The Agency found that a design standard limiting the rate of radon release was most appropriate given the many variables of location, tailings and earth characteristics. For example, a minimum thickness of barrier might not provide adequate protection under all conditions. The prescribed standard, which requires the release of radon not to exceed an average of 20 picocuries per square meter per second, is a design standard requiring a certain effectiveness from a cover. The Agency stated that the standard was not to be construed as an emission standard, "(T)he standard applies to design. Monitoring for radon after installation of an appropriately designed cover is not required," making it analogous to a

work practice standard or design standard authorized under section 112(e). The Agency, thus, finds no inconsistency between the work practice standards for operations and the design standards for disposal.

The NRC questioned why EPA did not issue an emission standard, such as already exists in NRC and State regulations, instead of proposing a work practice standard. The Agency judges that it is not feasible to prescribe an emission standard since most of the radon emitted by a uranium mill comes from the surface of mill tailings piles. A typical pile may be from a few to hundreds of acres in area, and emissions from its surface cannot be controlled through a conveyance designed and constructed to emit or capture radon. It is also not practical to accurately and consistently measure emissions because of the large size of the tailings pile and the continued modifications of the pile that take place during operations. For these and other reasons, a work practice standard is being promulgated. It should be noted that the NRC and State regulations establish a concentration limit at the site boundary in units of quantity per cubic meter of air, but do not directly limit the quantity or rate of radon emissions.

A commenter argued that EPA may not use a phased application of the work practice requirements, since section 112 of the CAA permits only a two-year compliance waiver for the installation of technology to meet an emission standard. However, the two-year compliance waiver discussed by the commenter is not applicable to the standard adopted in this rulemaking. The Administrator has concluded that neither of the available interim work practices, wetting or interim cover, is an appropriate measure to be imposed generally under section 112. Also, as discussed in this notice, the requirements for new tailings impoundments cannot be implemented within two years. Consequently, the two-year period that section 112(c)(1)(b)(ii) provides "for the installation of controls" has no meaning or applicability here. As a result, the Agency has adopted a comprehensive set of risk management requirements for limiting radon emissions that fall under the general category of "design, equipment, work practice, or operational standard[s] . . ." section 112(e). These requirements were designed as an integrated program to require the maximum reduction of long-term cancer incidence attributable to uranium mill tailings piles that can be reasonably achieved. These standards operate in

phases. During the first six-year phase, the operator may continue to place tailings on existing piles. In the second phase, this practice is terminated except for certain small piles and for those operators that make a satisfactory, individualized showing of low interim risk. In the third phase, without exception, tailings may only be placed in impoundments meeting size and operating limitations designed to minimize exposed area and associated radon emissions. Taken as a whole, this scheme provides protection of public health that meets the Act's requirements of "an ample margin of safety".

#### Technical

Several commenters, in commenting on the continuous disposal method, stated that the industry has minimal experience with dewatering sands and no experience with dewatering slimes. The Agency has found that although continuous disposal has never been actually practiced on uranium mill tailings in the United States, it has been proposed by industry as the preferred method of tailings disposal at three sites. These proposals were never put into practice because of the downturn in uranium production. The EPA believes that these proposals, submitted by industry, adequately demonstrate that continuous disposal can be a viable option. It should be noted that the method has been included as an allowable alternative for industry, but is not the sole practice required for new piles. It was included to provide industry with flexibility in the management of new tailings.

Several commenters said that technology to dewater tailings exists, but increased energy and manpower to accomplish this are probably not economically feasible. The Final Background Information Document and the Economic Analysis reflect the additional costs and uncertainties in dewatering tailings for the continuous disposal option. The method has been selected as a suitable work practice that an operator may choose in lieu of phased disposal.

Several commenters stated that EPA's assumption of 40 years of standby is excessive. One commenter stated that the assumption of a 40-year period between the end of an impoundment's useful life and compliance with UMRCA requirements is reasonable. The EPA judges that a 40-year standby period (which in practice could be several different periods totaling 40 years) before reclamation to Federal standards is a "worst-case" scenario. The Agency has estimated the fatal lung

cancers committed under this scenario to serve as a point of reference and has also evaluated a 20-year standby period scenario. Both periods were considered when the final rule was selected.

Several commenters stated that it would take about 6 years to design, license and construct a new tailings management process. One commenter said it could take more than 10 years, and one commenter said 5 years was sufficient. The EPA agrees that, based on the comments received from the NRC, States, and individual companies, a 3-year period to design, license, and construct a new tailings impoundment is unrealistically short. The Agency judges that a period of 6 years is the time needed to design, permit, and construct a new tailings impoundment. Extensions to allow more time will be available, if due to circumstances beyond their control, mill operators are unable to complete a new impoundment within that period.

Several commenters stated that more accurate site-specific emanation factors should be used as opposed to using the relationship of 1 pCi/m<sup>2</sup>-s per pCi Ra-228/g tailings. The Agency used a factor of 1 pCi/m<sup>2</sup>-s per pCi Ra-228/g of tailings for all dry areas and a factor of zero for wet areas. This same factor was used for the UMTRCA rulemaking and is the factor used by NRC. An attempt was made to develop a formula, using site specific characteristics, that would provide a more precise estimate of emissions. However, the formula has not been verified by the Agency's internal review process or by independent experts and data on the site-specific characteristics needed to derive such estimates are not available. For these reasons, the Agency decided to continue the use of the previously accepted factor.

The NRC stated that recent literature indicates that a water cover may not be as effective in reducing radon emissions as previously thought. Recent technical assessments of radon emissions from tailings covered with water are less than 2 percent of emissions from dry tailings. The Agency believes that assuming no emissions from wet tailings as compared to the more accurate 2 percent emission rate is an insignificant error in the context of this rulemaking. The Agency assumed an emission rate of zero for all tailings covered with water or saturated with water in estimating radon emissions.

#### **Risk**

A commenter stated that a site-specific rule based on a lifetime risk of one in a million should be set for each mill to determine the allowable exposed

surface area. The EPA has not accepted the proposition that the standard must reduce risk to a predefined value, such as a level of one in a million. The EPA believes that it must protect the public with an ample margin of safety and that this requirement provides the Agency with flexibility to consider the magnitude of the risks, the practicality of measures to reduce risks, and other relevant factors. This is a judgment based on many factors specific to the source category under consideration.

Several commenters stated that radon exposure from mill tailings on a regional and national level is overshadowed by background radon sources. Therefore, regional and national risk estimates are meaningless. The EPA agrees that radon exposures due to mill tailings, at locations distant from mill tailings sites, are small compared to exposures from some other large sources. However, it does not follow that it is meaningless to calculate exposure and risk due to emissions from such sites. These calculations are based on procedures generally regarded as sufficiently accurate to support the setting of regulatory standards. The significance of the risk is judged based on the value of the individual and population risk, and the regulatory options are assessed based on the degree of risk reduction and the practicality and reasonableness of control measures.

Many commenters stated that the significance of effects of radon from mill tailings on total population is negligible because there are no proven adverse health effects. The Agency agrees that the adverse health effects due to radon emissions from mill tailings piles cannot be directly measured due to the high incidence of lung cancer from other causes. However, it would be imprudent to use this as a reason not to regulate exposure to carcinogens. The risk estimates were derived from relative risk coefficients, the use of which was recommended by the Agency's Science Advisory Board and represent current scientific knowledge. It is EPA's position that, based on current scientific evidence, excess lung cancers result from radon emitted by tailings piles and that the projected numbers of cancers calculated in the support documents are sufficient to support a rulemaking.

#### **Economic**

Several commenters said that the proposed rules will have significant adverse effects on industry's ability to contain costs and will threaten the industry's future. EPA's analysis shows that the control measures for new tailings disposal practices required in this rulemaking are similar in cost to

alternative practices already required by existing regulations and, therefore, the control measures required by this rule are not expected to affect the industry's viability. With respect to existing tailings, the major cost of this rule to industry is moving the timetable for final cover for existing piles forward in time because the sooner new work practices are implemented, the sooner industry must undertake the expense of reclamation. Additional costs may arise in those cases where new capacity for tailings disposal will have to be created to replace the capacity lost during disposal of the existing piles. As indicated in the Economic Analysis for this rulemaking, EPA projects that this impact will not threaten the viability of this industry. The Agency concluded that the costs are reasonable in relation to the benefits derived and that this action is consistent with previous Agency actions.

## **VI. Summary and Rationale of Final Rule**

### **A. Summary**

Based on currently available information, EPA has determined that it is not feasible to prescribe an emission standard for radon emissions from uranium mills. Radon is emitted from the surfaces of tailings piles in a manner analogous to fugitive dust emissions and cannot be emitted through a conveyance designed and constructed to capture such radon emissions. Instead, EPA is requiring an improved work practice for the disposal of newly generated tailings and is specifying a date by which all newly generated tailings must be managed by this work practice.

EPA expects that, when tailings can no longer be placed on an existing pile, Federal and State regulatory agencies will promptly move to require disposal of the piles to Federal standards established by the EPA and implemented by the NRC under the AEA as amended by UMTRCA.

This work practice requires that new tailings be disposed of either in impoundments that are no larger than 40 acres or by the use of continuous disposal in which no more than 10 acres of tailings are exposed at any one time. All new tailings impoundments must be designed and constructed to meet this work practice. Using the first alternative would require a series of impoundments, each constructed with earthen dikes or in a excavated pit and each having a liner as required by 40 CFR 192. As each impoundment is filled, it would be dried out and covered with earthen materials immediately. This design permits the use

of a water cover over all tailings during operations without risk of contaminating ground water. The water cover seals in the radon, greatly reducing radon emissions to air. Also, a series of impoundments significantly reduces the amount of unreclaimed tailings at the end of a mill's lifetime because only one or two impoundments would still require closure. By making final reclamation easy, the potential for larger areas of dry tailings to remain uncovered is avoided, and this too, greatly reduces radon emissions.

The second procedure, continuous disposal, is similarly effective. If tailings are dewatered and immediately buried on a continuous basis, radon emissions during the operational phase of the mill are greatly reduced. At the end of the mill's lifetime, only about 10 acres of tailings require final reclamation. There is, thus, no potential for large areas of tailings to remain dry and uncovered as a source of radon emissions. A liner is used to protect ground water.

At mill sites where there are existing tailings piles, this work practice is to be phased in on a reasonable schedule. No later than 2 years after the effective date of this rule, all owners will either certify to the Administrator that they do not intend to build a new tailings impoundment, or if they wish to build new tailings impoundments they must apply to the Administrator for approval to construct. Within 60 days following the Administrator's approval, the owner must apply to the NRC for a license to construct. Following the granting of a license by NRC, construction must begin promptly and must be completed in not less than 30 months. The entire process must be completed by December 31, 1992. If the owner is in compliance with this schedule, new tailings can continue to be placed on existing piles until the new impoundments are ready. Those owners not building new impoundments may also continue to use their existing piles until December 31, 1992.

An exception from the preceding schedule allowing for continued use of an existing tailings pile will be granted upon petition to the Administrator, provided the existing pile meets one of the following conditions: (1) The existing pile is 40 acres or less and is lined or, (2) the combined area of all piles at the site is less than 20 acres. Each exception will last for five years, at which time the owner may request a new exception.

A discretionary extension for all or some of the milestones on the preceding schedule, allowing for continued use of an existing tailings pile, may be granted upon application to the Administrator for one of the following reasons: (1) The owner demonstrates it cannot, due to

circumstances beyond its control, complete a new impoundment before a construction schedule milestone date or (2) the owner or operator demonstrates that an extension is consistent with the CAA. To make such a demonstration, the owner must certify that the mill is in compliance with applicable EPA standards and NRC regulations and license conditions, and makes a submittal showing that the public is protected with an ample margin of safety taking into account the size and condition of the pile, risks to nearby individuals and population, length of extension requested, risk reduction practices in effect, and the expected level of future mill activity. An extension may be granted for a period not to exceed 5 years, although the mill owner will be able to apply for more than one extension.

No exception or extension is effective after December 31, 2001 and no new tailings may be placed on any existing tailings pile after that date.

#### *B. Options Considered*

In developing this rule, EPA reviewed a variety of options in the light of comments received on its proposal. A fundamental step in this process was recognizing that the opportunities for regulatory response to the risks involved were different for existing tailings and for new tailings. EPA's analysis of regulatory options proceeded on the basis of this recognition.

With respect to tailings that would be generated in the future, EPA recognizes that improved work practices were available that could limit the period during which tailings were exposed prior to disposal. Limiting this exposure would correspondingly limit risk to health. The work practices that EPA examined reduced this exposure in two ways: first, by placing the tailings on sites smaller than is now the practice; second, by placing cover on the tailings continuously or at intervals. EPA analyzed options for new tailings that varied both as a function of size and as a function of time.

With respect to tailings that already existed, EPA's ability to identify work practice improvements that would limit emissions was more limited. The most direct means for reducing exposures, i.e., a permanent thick earth cover or water cover, could conflict with continued use of the pile or exacerbate ground water problems. Measures involving interim or partial use of earth or water covers were also evaluated. These options are described elsewhere in this notice. Indirect means of reducing exposures were also explored. These basically involve limiting the use of the existing

pile for deposition of new tailings by limiting the period during which new tailings could be placed on the piles. On analysis, EPA concluded that volume restrictions would prove difficult to administer and that a more feasible approach would be to limit the future use of existing piles. In the end, EPA decided that risk reductions should be reconciled with continuity of mill operations by phasing in the transition to new disposal methods. The best currently available information indicates that it will require about six years for a source to phase in new capacity. The specific options considered are discussed below.

#### *Interim Cover for Existing Piles*

The Agency's proposed rule contained an alternative work practice for existing tailings piles consisting of interim earth covers placed on the sides and tops of dry tailings piles. An interim cover on dry tailings acts to reduce emissions of radon. In a wet pile, water acts to prevent radon emissions so that interim covers are not needed for the wet surfaces. Upon reexamination of the interim cover alternatives and after consideration of the comments received on that issue, the Agency has determined that such covers are not an appropriate work practice to be required under this generally applicable rule.

EPA's model of the interim cover alternative used in the analysis of the proposed rule was overly simplistic. Sources of error included the following factors:

1. The model did not consider tailings piles that go on and off standby repeatedly. In these situations, the interim cover is buried under new tailings followed by application of a new interim cover.
2. The model assumed the dry areas of the pile are covered immediately and that the pile remained on standby for an extended period of time. This is unlikely, because regulatory agencies would require the operator to reclaim sooner than 40 years.
3. Maintenance costs for interim covers were ignored.
4. Covering high, steep slopes with 1 meter of earth is a difficult engineering feat and may be more expensive and impractical than the model assumed it to be, and in practice may endanger workers.
5. Slimes may underlie tailings considered to be dry, making such tailings uncoverable because heavy equipment necessary to apply the cover would sink into the pile. If dry tailings cannot be covered, this would reduce benefits.

The Final Background Information Document and Economic Assessment contains a revised model that attempts to account for these factors. The Agency now believes that interim cover is inappropriate as a generally applicable work practice.

The appropriateness of interim cover can only be evaluated on a site-by-site basis. Though its use in some cases would be practicable and could lead to significant risk reduction, in others it would have dubious risk reduction benefits, costs that appear unwarranted in relation to those benefits, and would present hazards to the safety of workers. Moreover, enforcement of a requirement for interim covers would be difficult and controversial because it would not be obvious which parts of the pile are dry enough to cover and whether future operational plans are firm enough so that it is reasonable to delay application of an interim cover.

The Agency believes that in establishing generally applicable standards it should seek permanent solutions rather than temporary ones. Interim earth covers are temporary because they are often covered by new tailings when the mill returns to operation. The new tailings on top of the interim cover release radon, removing the beneficial effect of the cover. The value of the interim earth cover is also lost when the final cover required by Federal Regulations is put in place. Final reclamation normally requires piles with steep sand dams to be recontoured to a more stable shape. Any interim cover would be lost due to mixing with the tailings during the recontouring. A better use for the limited resources available to the producers of uranium would be final disposal consistent with federal standards.

The State of New Mexico expressed concern about severe additional environmental impacts due to the disruption of many additional acres of land to obtain cover material. The NRC raised serious safety concerns for interim covers. The NRC stated that interim covers on dams would interfere with important safety practices, such as movement monitors for tailings dams. They also stated that covering of certain drain portions of the dams could seriously reduce their stability.

In summary, the Agency concluded that requiring operators of existing tailings piles to immediately add and maintain interim earth covers on all dry surfaces is not an appropriate generally applicable work practice.

#### Phased Disposal

The Agency is selecting phased disposal for new tailings impoundments

as one of two alternative work practices required by the final rule because it reduces health risks due to radon from tailings, providing public health protection with an ample margin of safety during the operating lifetime of a uranium mill tailings impoundment. In this disposal scheme, a series of small impoundments is constructed over the lifetime of a mill. Each small impoundment would be constructed with earthen dikes or in an excavated pit and, under existing Federal regulations, must be lined to prevent ground water contamination. After each impoundment fills, it will be dried out and covered with earth as soon as practical. Disposal costs will be spread over the operating life of the mill. The design permits the use of a water cover over most of the tailings, with only a small risk of contaminating ground water.

An important benefit of phased disposal is that it eliminates the difficulties and expense of reclaiming large tailings piles at the end of the impoundment life. By limiting the size of the piles, very large areas of tailings are prevented from becoming exposed to air, drying out, and emitting radon during extended standby periods. At the end of the mill's lifetime, only one or two impoundments will still require reclamation.

These characteristics of phased disposal combine to reduce radon emissions. The liner under the tailings pile helps maintain wetness of the tailings by preventing water from leaching into the ground. This not only protects ground water, but also greatly reduces radon emissions by keeping the tailings wet. Experience with phased disposal shows that the tailings often stay so wet that water must be pumped out of the impoundments.

Since control of radon emissions is achieved by keeping the tailings saturated or covered with water, it is important that impoundment liners have water retention capability. In most cases eligible for this exception, impermeable synthetic liners will be required. However, UMRCA standards (40 CFR Part 192) allow an exception from the synthetic liner requirement if it is demonstrated that ground water contamination will not occur.

The size of the pile also helps reduce emissions. It does so by reducing the time for the dry out and standby periods that precede final closure, when radon emissions are at their highest. Since the piles are smaller, they dry sooner, and the exposed surface area is reduced. Closure is relatively easy and inexpensive, reducing the incentive for the owner to delay disposal. To further

reduce the time before closure, this rule allows a company to operate a maximum of two tailings impoundments at once. Companies can legitimately need two operating piles to work most efficiently (especially when one pile is almost full), but by limiting an owner to only two operating piles, an owner must close its first pile before it opens its third pile (or close its second before it opens the fourth, etc.). This incentive will work to reduce standby periods.

Phased disposal, therefore, is a tailings management system in which tailings are kept wet until they are dried and disposed. Radon emissions are reduced while the pile is in use and while the pile is on standby. This results in a large reduction of the total emissions from mill tailings pile and, therefore, protects public health with an ample margin of safety.

Constructing, filling, and reclaiming tailings impoundments in series costs less than using a single, large impoundment when a reasonable (5%) discount rate is used. This lower cost reflects the lower initial capital expenditures for phased disposal. Further cost savings may be realized in phased disposal by using excavated earth from future impoundments to reclaim filled, dry impoundments.

Phased disposal is the best available demonstrated technology for uranium mill tailings management. The two mills most recently licensed by the Nuclear Regulatory Commission use phased disposal designs.

The Agency also considered a 20-acre limit for each phased disposal impoundment in the proposal (51 FR 6382). One commenter found a 20-acre limit acceptable but stressed the need for economic assessment of size limits. Several commenters argued that the Agency should allow flexibility for site-specific considerations and should not dictate a specific limitation. The Agency evaluated both 20- and 40-acre phased disposal options. It found that the 40-acre impoundment provides about the same health protection as the 20-acre impoundment, but at a slightly lower cost. The Agency concludes that a 40-acre size limit for phased disposal protects health with an ample margin of safety, as required by section 112. The 40-acre impoundment is the maximum size allowed under the rule; an operator can choose to build a smaller one.

The 40-acre phased disposal work practice provides considerable flexibility for construction and operation of tailings impoundments, although all existing rules (including 10 CFR Part 40 and 40 CFR Part 192) must still be followed. For example, under this work

practice, impoundments can be constructed in hollows by building a dam across the hollow and storing the tailings on the upstream side. The standard only limits the total area of any impoundment used for storage of uranium mill tailings; other site-specific design considerations are not affected.

Liners are required at all new uranium tailings impoundments under existing rules (40 CFR Part 192). The tradeoffs between potential problems and the advantages of liners were considered in that previous rulemaking (48 FR 45926).

#### Continuous Disposal

The Agency selected continuous disposal as an alternative work practice under the final rule because it reduces health risks from radon from tailings to the same extent as phased disposal and provides quick reclamation of the site. This disposal method calls for tailings to be dewatered as they are generated, placed in pits or on pads, and covered with about 3 meters of earthen materials on a continuous basis. Disposal pits or pads would be constructed with impermeable liners. This method would rely on a thick earth cover to reduce radon emissions rather than on water as in the phased method disposal. During operation, no more than 10 acres of tailings could be uncovered at any given time. To assure that the water remaining in the tailings after dewatering (which is never completely effective) and rain water does not seep through the tailings and contaminate ground water, a continuous disposal impoundment is lined in accordance with 40 CFR 192.32. The potential for ground water contamination is negligible.

A second important benefit of continuous disposal is that it would eliminate the difficulties of reclaiming large tailings piles at the end of the impoundment life. By requiring disposal of tailings as they are generated, very large areas of tailings are prevented from being exposed to air, drying out, and emitting radon during extended standby periods.

The technology of continuous disposal has not been demonstrated for uranium mill tailings in the United States. However, the industry has proposed this method for use at three sites. The decline in uranium demand is one of the major reasons why none of these proposals was put into practice. Tailings dewatering systems have been used successfully at nonferrous ore beneficiation mills. The Agency believes that these proposals and experiences demonstrate that continuous disposal can be a viable work practice.

Flexibility is provided to allow designs that can take advantage of site-

specific characteristics. For example, there is no requirement that tailings be disposed of below surface level and no restrictions that limit the use of topographical features of a site as tailings dams. However, all existing regulations still apply.

Although the industry commented that continuous disposal is not practical, this is not a persuasive argument, since at least three companies have chosen this method as their preferred disposal method in detailed site design plans and applications. Also, as noted above, dewatering tailings has been performed in other extraction industries. The Agency decided to allow the industry to select either continuous or phased disposal because both methods provide similar levels of radon reduction and either method could be preferable to the other, depending on the specific physical, environmental, or economic conditions that exist at the site.

#### C. Existing Piles

The regulation of uranium mill tailings disposal piles requires different approaches to new and existing tailings impoundments. From the standpoint of risk reduction, new impoundments can readily be designed and operated in order to achieve substantial reduction of risk at a reasonable cost. EPA, thus, has adopted standards that have the effect of limiting the total exposed surface area during the active phase of an impoundment's existence. Existing impoundments present more difficult regulatory problems. They were constructed over a thirty year period, range in size from a few acres to several hundred acres, and are located in different areas with different topography, soil characteristics, tailings characteristics, and other factors affecting health risks. Consequently, they are not susceptible to a single regulatory scheme of the sort adopted here for new impoundments. In addition, the NRC and their agreement States regulate practices at these sites on a site-by-site basis. For example, the NRC has stated in comments that it typically requires interim cover for the purpose of dust control on appropriate portions of existing piles.

EPA investigated work practices that might be imposed generally upon existing tailings piles that would reduce risks until they are closed and replaced with new piles. As discussed previously, the Agency found that the two principal options, wetting and interim cover, made no sense to impose as across-the-board requirements. While interim cover has theoretical applicability, its risk reduction is not great in many situations, and costs are

disproportionate to that limited reduction of risk. Wetting, particularly in unlined impoundments in arid areas of the Southwest, yields some risk reduction but again at a disproportionate cost. Moreover, wetting at unlined impoundments can lead to ground water contamination, exacerbating a problem that several operators are now trying to remedy.

EPA believes that the reasonable course to deal with these impoundments is to adopt requirements that will encourage their closure, in the long term, in accordance with requirements set by EPA and the NRC. At the same time, these requirements must be tempered with flexibility for the particular circumstances of individual impoundments. It is reasonable to do this in light of the wide disparity in risk from different existing impoundments, and the small number of those impoundments.

Accordingly, the final rule generally requires the cessation of disposal of tailings at existing impoundments six years after promulgation of these regulations. The requirement for cessation of disposal will remove any obstacle for the NRC or an agreement state to require, after an appropriate dry out period, final closure of the impoundment, since it can no longer be used for disposal of newly generated tailings. In EPA's view, the risk that will result from this phase in period of continued disposal at existing impoundments is consistent with the protection of public health with an ample margin of safety.

#### Exception for Existing Lined Impoundments

The Agency has determined that certain existing tailings management impoundments presently meet the requirements of the new work practice standards. Therefore, the Agency is providing an exception from the schedule requirements, which are specified below, for impoundment designs that are no larger than 40 acres and have a liner meeting the specifications of 40 CFR 192.32. This requirement assures that the impoundment has the capability to retain water, thereby keeping tailings wet and greatly reducing radon emissions.

#### Exception for Small Tailings Piles

The Agency, in its examination of the uranium milling industry, has discovered that each mill is unique and that not all mills present a significant health risk to the public. The Agency found that one of the most important mill characteristics

that affect risk is the size of the mill tailings pile. The Agency also found that mills having combined pile areas smaller than 20 acres have very small radon emissions. The Agency believes that such a mill does not threaten public health. Therefore, the Agency has decided to except them from the 6-year schedule. Such an exception is consistent with protection of public health with an ample margin of safety.

#### *D. Schedule for Standards Implementation*

The Agency is requiring that all tailings generated at existing mill sites after December 31, 1992, be managed by one of the work practices specified in the final rule. By phasing out existing tailings piles and requiring new tailings generated at existing mill sites to be placed in impoundments subject to the new work practice, risks to individuals and populations are reduced and the public is protected with an ample margin of safety. The Agency is assuming that, when tailings can no longer be placed on existing piles, Federal and State regulatory agencies will promptly move to require reclamation of the piles to Federal standards established under the AEA through UMTRCA.

The Agency is aware that section 112 has provided for only a 2-year compliance waiver. However, it is impossible to design, license, and build a new tailings impoundment in that short period of time. The operators of existing mills are given the time necessary to install new impoundments. To assure that new tailings impoundments are built and used as soon as practical, the Agency has established a strict schedule with milestones for meeting regulatory requirements and construction of the facility. Industry is provided with sufficient time to prepare new impoundments while, simultaneously, there is a strict timetable that must be met. This timetable is designed to be flexible to assure that if time is saved in one part of the process the impoundment will be ready sooner. The rule also provides an extension mechanism to give operators a chance to have more time if, due to circumstances beyond their control, they are unable to meet the schedule.

The Agency has examined the effect from the continued use of existing piles during the 6 years required for the construction of new tailings impoundments. In performing the analysis of the effect of allowing all mills to operate for 6 years, relevant radon emissions come only from some of the mills. Since EPA's original

analysis, 3 of the 20 mills have stated an intent to go to closure and, therefore, are not effected by this standard. The resulting risk from radon emissions in allowing all other mills to operate for 6 years is not significant. The use of these mills for this short time period represents a marginal risk that does not justify the economic waste of requiring a mill owner to build an impoundment that the owner has no intention of using. Because of these low risks, operators of existing piles who want to continue to use their existing piles may do so for the 6-year period.

Any owner or operator of a licensed uranium mill who wishes to continue to use existing tailings impoundments must submit an application to the Administrator for approval to construct a new impoundment or certify that they do not intend to build a new impoundment. This should be done as soon as possible, but no later than 2 years after the effective date of this rule. This period is necessary to provide the time needed for owners to decide whether or not to build a new impoundment and, if they decide to build a new impoundment, it also provides the time needed for the purchase of a site, for the collection of site data and for the design and preparation of licensing material for EPA and NRC. Owners not building new impoundments may continue to use their existing piles until December 31, 1992.

The Agency anticipates an internal review and decision period following submittal of a complete application. After the Agency's approval to construct, the owner or operator must apply to the NRC within 60 days for a license to construct a new tailings impoundment under 10 CFR 40. The Agency anticipates that NRC will act promptly on the application. Following the receipt of a license from the NRC, the owner or operator must then start construction of an impoundment within 90 days, weather permitting, and must complete construction within 30 months.

The Agency proposed alternative schedules of immediate, 10 years, 15 years, and no time limit for mandatory use of work practice standards. Comments from the NRC and the industry agreed that new impoundments probably could be built in 6 years. Although one industry commenter estimated that it would take more than 10 years to finish new impoundments, in general, the record did not support a 10-year option.

#### *E. Schedule Extension*

The Agency recognizes that strict adherence to the schedule may not always be possible or reasonable. The

Agency may grant an extension for any schedule milestone for certain reasons.

The first reason for the extension is practicality. The Agency is allowing mill owners 6 years to build new impoundments, because it is the Agency's estimate, supported by the record, that 6 years is normally a sufficient time to design, license and build a new uranium mill tailings impoundment. But the Agency recognizes that, due to circumstances beyond the mill owner's control, situations can arise that delay completion. In these situations, the mill owner can apply for a schedule extension to provide him with sufficient time to complete the new impoundment.

There are other reasons why an extension may be required. For example, as previously noted, each mill is unique and individual mills may present small risks to public health. To take care of any of these situations, the Agency may grant an extension, provided that the mill owner can demonstrate that the extension, under conditions existing at the time of the request, is consistent with protection of public health with an ample margin of safety as specified in § 61.252(e). This extension may be granted for any schedule milestone. For example, the Agency expects that extensions would be granted for mills with moderately sized piles and that have no people living nearby. Such mills present small risks to maximally exposed individuals and small risks to regional and national populations. The Agency may grant an extension, conditionally if required, only upon finding that this extension protects public health with an ample margin of safety.

The Agency may grant these extensions based on an examination of factors relating to the overall remaining health risk, including the size, condition, and location of the pile, the length of extension requested, the expected level of future activity, and any risk reduction practices the mill owner has undertaken or pledges to undertake.

#### **VII. Implementation of the Final Rule**

Operators of new tailings impoundments constructed after the promulgation date of this rule must apply to the Administrator of EPA for approval to construct a new impoundment pursuant to section 61.07 of the Clean Air Act.

Operators of existing tailings impoundment should follow the implementation plan detailed in § 61.252 (b) or (c). If the Administrator finds, on the basis of any available information that there is a violation of any

requirement of an applicable implementation plan, the Administrator will enforce with remedies described in section 113 of the Act.

Operators of existing tailings piles who wish an exception listed in § 61.252(d) from the schedules listed in § 61.252 (b) or (c) in order to continue to use a pile should write to the Administrator, providing the reason why the exception is warranted. The Administrator will grant, grant with conditions, or deny the exception. If granted, the owner must reapply to EPA every 5 years that it still meets the criteria for exception. If at anytime neither of the exceptions criteria apply, the owner must notify the Agency and immediately cease use of the pile.

Operators of existing tailings piles who wish extensions from the schedule milestones listed in § 61.252 (b) or (c) in order to continue to use an existing tailings pile should write to the Administrator providing the reasons why an extension should be granted, taking care to provide the information requested in § 61.252(e). This must be done at least 1 year before the milestone date for which the extension is requested. The Administrator will grant, grant with conditions, or deny the extension within 9 months. Although multiple extensions may be granted, each extension will last no more than 5 years.

All requests should be sent to the Assistant Administrator for Air and Radiation (ANR-443), U.S. Environmental Protection Agency, 401 M Street, Washington, DC 20460.

No exception or extension will be effective after December 31, 2001. This deadline allows owners of existing tailings impoundments a chance to use those impoundments in those cases where to do so would not endanger public health, while assuring that the system of exceptions and extensions will not be subject to any potential abuse by mill owners. In this way, the rule will cause even greater reduction in radon emissions as phased or continuous disposal methods are implemented.

Nothing in this rule is intended to affect the existing regulatory authority of the NRC. EPA hopes that it will be able to reach an agreement with NRC to allow NRC to take an important role in the implementation and enforcement of this rule. This would allow EPA to take full advantage of NRC's expertise in this field and help minimize the duplication of effort and conserve administrative resources in accord with § 122 of the Clean Air Act.

## VIII. Miscellaneous

### A. Docket

The docket is an organized and complete file of all information considered by EPA in the development of this proposed standard. The docket allows interested persons to identify and locate documents so they can participate effectively in the rulemaking process. It also serves as the record for judicial review.

Transcripts of the hearings, all written statements, the Agency's response to comments, and other relevant documents are placed in the docket and are available for inspection and copying during normal working hours.

### B. Executive Order 12291

Under Executive Order 12291, issued February 17, 1981, EPA must judge whether a rule is a "major rule" and, therefore, subject to the requirement of a Regulatory Impact Analysis. The EPA has determined that this rule is not a major rule as defined in section 1(b) of the Executive Order because the annual effect of the rule on the economy will be less than \$100 million per year. Also, it will not cause a major increase in costs or prices for any geographic region. Further, it will not result in any significant adverse effects on competition, employment, investment, productivity, innovation, or the ability of the United States enterprises to compete with foreign enterprises in domestic or foreign markets. Under Executive Order 12291, this rule was submitted to the Office of Management and Budget (OMB) for review. Any comments from OMB to EPA and any response to those comments are included in the docket.

### C. Paperwork Reduction Act

The final rule does not impose any reporting or recordkeeping requirements on operators of uranium mills and associated tailings piles.

### D. Regulatory Flexibility Analysis

Section 603 of the Regulatory Flexibility Act, 5 U.S.C. 603, requires EPA to prepare and make available for comment an "initial regulatory flexibility analysis" in connection with any rulemaking for which there is a statutory requirement that a general notice of proposed rulemaking be published.

However, section 604(b) of the Regulatory Flexibility Act provides that section 603 "shall not apply to any proposed . . . rule if the head of the Agency certifies that the rule will not, if promulgated have a significant economic impact on a substantial number of small entities."

The EPA believes this final rule will have little or no impact on small business because the total costs associated with the standards will have relatively little impact on the total cost of producing uranium oxide.

For the preceding reasons, I certify that this rule will not have a significant economic impact on a substantial number of small entities.

### E. General Provisions

The general provisions of 40 CFR Part 61, Subpart A apply to all sources regulated by this rule, except as otherwise noted.

### F. State Implementation and Enforcement of Emission Standards

Under section 112(d)(1) of the CAA, any State may develop and submit to the Administrator a procedure for implementing and enforcing emission standards for hazardous air pollutants for stationary sources located in such State. If the Administrator finds a State's procedure for implementing the standard is adequate, the Federal authority then is delegated to the State. To streamline this procedure, some of EPA's Regional offices have entered into agreements with certain States for "automatic" delegation of new section 112 standards. Under this arrangement, States are delegated authority to implement and enforce all new section 112 standards when they are issued.

The Agency has decided that "automatic" delegation shall not be made for the radionuclide NESHAPs. When EPA entered into these agreements, the State's capabilities and expertise with respect to radionuclides were not considered. Therefore, States must reapply for delegation in the case of radionuclide NESHAPs.

### G. Relationship to Other Programs

It is important to note that EPA has authority to regulate mining wastes under the Resource Conservation and Recovery Act (RCRA), as well as the CAA and UMTRCA. Since the considerations under each statute may vary, the regulatory program for uranium mill tailings under the CAA and UMTRCA might well differ from the program EPA intends to develop for mining waste under RCRA. The RCRA program will be tailored to the risks associated with mining wastes and the technical feasibility of various control options (see 51 FR 24496; July 3, 1986).

### H. Communications

Communications with the Administrator regarding the reporting and recordkeeping requirements of this

rule, as well as requests for waivers, shall follow the provisions of Part 61.10, except as otherwise noted in this rule.

This rule is effective immediately for new sources and existing facilities. Those facilities that are not in compliance with the final rule based on information currently available to them, may request a compliance waiver from the Administrator under the provisions of section 112(c)(1).

#### List of Subjects in 40 CFR Part 61

Air pollution control, Hazardous materials, Asbestos, Beryllium, Mercury, Vinyl chloride, Benzene, Arsenic, and Radionuclides.

Dated: August 15, 1986.

Lee M. Thomas,  
Administrator.

#### PART 61—[AMENDED]

Part 61 of Chapter 1 of Title 40 of the Code of Federal Regulations is amended as follows:

1. The authority citation for Part 61 continues to read as follows:

Authority: Secs. 112 and 301(a) Clean Air Act, as amended [42 U.S.C. 7412 (a)].

2. By adding a new Subpart W to read as follows:

#### Subpart W—National Emission Standard for Radon-222 Emissions From Licensed Uranium Mill Tailings

Sec.  
61.250 Applicability.  
61.251 Definitions.  
61.252 Standard.

#### Subpart W—National Emission Standard for Radon-222 Emissions From Licensed Uranium Mill Tailings

##### § 61.250 Applicability.

This subpart applies to licensed sites that manage uranium byproduct materials during and following the processing of uranium ores, commonly referred to as uranium mills and their associated tailings. This subpart applies during the period of operation.

##### § 61.251 Definitions.

As used in this subpart, all terms not defined here shall have the meaning given them in the Clean Air Act or Subpart A of Part 61. The following terms shall have the following specific meanings:

(a) "Area" means the area covered by the vertical projection of the pile upon the earth's surface.

(b) "Commission" means the Nuclear Regulatory Commission or its Agreement States (where applicable).

(c) "Continuous disposal" means a method of tailings management and disposal in which tailings are dewatered

by mechanical methods immediately after generation. The dried tailings are then placed in trenches or other disposal areas and immediately covered to Federal standards.

(d) "Covered" means to cover with earth sufficient to meet Federal standards for the management of uranium byproduct materials pursuant to 40 CFR 192.32.

(e) "Dewatered" means to remove the water from recently produced tailings by mechanical or evaporative methods such that the water content of the tailings does not exceed 30 percent by weight.

(f) "Existing tailings pile" means a tailings pile that is in operation on the effective date of this rule.

(g) "Licensed site" means the area contained within the boundary of a location under the control of persons generating or storing uranium byproduct materials under a license issued by the Commission. This includes such areas licensed by Agreement States, i.e., those States which have entered into an effective agreement under Section 274(b) of the Atomic Energy Act of 1954, as amended.

(h) "New tailings" means uranium tailings produced after the effective date of this rule.

(i) "New tailings impoundment" means any location or structure at which uranium mill tailings are temporarily or permanently stored and which is placed in operation after the promulgation of this rule.

(j) "Operation" means that an impoundment is being used for the continued placement of new tailings or is in standby. An impoundment is in operation from the day that tailings are first placed in the impoundment until the day that final closure begins.

(k) "Owner" means any person who owns or operates a uranium mill or an existing tailings pile or a new impoundment.

(l) "Phased disposal" means a method of tailings management and disposal which uses lined impoundments meeting the requirements of 40 CFR Part 192.32, no greater than 40 acres in area, which immediately filled, upon becoming dried, and covered to Federal standards.

(m) "Uranium byproduct material" or "tailings" means the wastes produced by the extraction or concentration of uranium from any ore processed primarily for its source material content. Ore bodies depleted by uranium solution extractions and which remain underground do not constitute byproduct material for the purposes of this subpart.

##### § 61.252 Standard.

(a) All new tailings impoundments built after the effective date of this rule shall be designed and constructed to meet one of the two following work practice standards and in the following manner:

(1) Phased disposal in lined tailings impoundments that are no more than 40 acres in area and meet the requirements of 40 CFR 192.32(a). The owner shall have no more than two impoundments in operation at any one site at any one time.

(2) Continuous disposal of tailings such that the tailings are dewatered and immediately disposed with no more than 10 acres of tailings being uncovered at any time and operated in accordance with 40 CFR 192.32(a).

(b) Owners who build new tailings impoundments may continue to place new tailings or waste water associated with milling or mining activities on existing tailings piles only until new tailings impoundments are constructed, and only if the owner is in the process of designing, licensing, and constructing new tailings impoundments in accordance with the following schedule:

(1) As soon as practical, but no later than 2 years after the effective date of this rule, all owners who wish to build new tailings impoundments shall apply to the Administrator for approval to construct under section 61.07. The Administrator shall make a determination to grant or deny any application for approval in accordance with section 61.08, except that the time limitations of subsections (a) and (d) shall not apply.

(2) Within 60 days following the Administrator's approval to construct a new tailings impoundment, the owner shall apply to the Commission for a license to construct a new tailings impoundment.

(3) Following the granting of a license by the Commission, the owner shall begin construction of the new tailings impoundment within 90 days unless seasonal conditions do not permit, in which case construction shall begin at the start of the next construction season. This impoundment shall be completed and shall be ready to receive new tailings within 30 months of the date of licensing by the Commission.

(4) In no event shall new tailings be placed on existing tailings piles after December 31, 1992, unless the owner has received an exception or extension from the Administrator in accordance with paragraphs (d) or (e) of this section.

(c) Owners who do not intend to build a new tailings impoundment must certify to the Administrator as soon as

possible, but no later than 2 years following the effective date of this rule, that they do not intend to build a new impoundment at the mill site. Owners who make this certification will be able to use their existing tailings piles for the deposition of new tailings or waste water associated with milling and mining activities until December 31, 1992, unless they receive an exception or extension from the Administrator in accordance with paragraph (d) or (e) of this section, in which case the owner may continue to use the existing tailings piles as permitted by the terms of the exception or extension.

(d) An exception for continued use of an existing tailings pile shall be granted upon application for approval to the Administrator provided that:

(1) The existing tailings pile is 40 acres or smaller in area and meets the requirements of 40 CFR 192.32(a)(1), or

(2) The combined area of all piles at a licensed site is less than 20 acres.

The Administrator will grant, grant with conditions, or deny the application. If granted, the owner must certify to the Administrator every 5 years that it still meets at least one of the preceding criteria. Following this certification, the Administrator will grant, grant with conditions or deny the exception. At any

such time as neither of the two criteria continue to apply, the owner shall so notify the Administrator, and the exception shall terminate.

(e) An owner may apply to the Administrator on an impoundment-by-impoundment basis, for an extension to continue using an existing tailings pile.

(1)(i) An extension may be granted upon a showing that, despite a good faith effort by the owner, it cannot, due to circumstances beyond its control, meet any paragraph (b) schedule deadline.

(ii) An extension may be granted, for any paragraph (b) or (c) schedule deadline at the Administrator's discretion, upon a showing by the owner that the extension is consistent with protection of the public health with an ample margin of safety. To make this showing, the owner must first certify that it is in compliance with applicable existing NRC regulations and license conditions. In addition, the Administrator will also take into account: the size and condition of the pile, the size and location of the nearby population, the length of extension requested, the existence and effectiveness of any risk reduction practices that are or will be taken, and the expected level of future mill activity.

(2) The owner may apply for an extension at any time up to 1 year before the cease-use date. The Administrator will have 9 months from the date of application to grant, grant with conditions or deny the extension. Subject to paragraph (g) of this section, no extension will be granted for longer than 5 years, and no extension pursuant to paragraph (e)(1)(i) shall be granted for any period longer than necessary for the owner to meet applicable paragraph (b) requirements.

(3) The owner may apply for as many extensions as needed. Each extension must be applied for and proven separately.

(4) The Administrator will provide for public notice and comment on all applications for approval of extensions.

(f) All applications for approval of exceptions or extensions shall be sent to the Assistant Administrator for Air and Radiation (ANR-443), U.S. Environmental Protection Agency, 401 M Street, SW., Washington, DC 20460.

(g) New tailings shall not be placed on any existing tailings pile after December 31, 2001, and no exception or extension shall be effective after that date.

[FR Doc. 86-20193 Filed 9-23-86; 8:45 am]  
BILLING CODE 6560-50-M

## Thornton, Marisa

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**From:** Rosnick, Reid  
**Sent:** Tuesday, September 02, 2014 3:20 PM  
**To:** Thornton, Marisa  
**Subject:** FW: UMUTribe/EPA Consultation - Radon NESHAP  
**Attachments:** Cell 1 Calculation Memo.pdf

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**From:** H. Michael Keller [mailto:mKeller@vancott.com]  
**Sent:** Wednesday, July 09, 2014 2:04 PM  
**To:** Rosnick, Reid  
**Cc:** 'chawkins@utemountain.org'; sclow@utemountain.org  
**Subject:** UMUTribe/EPA Consultation - Radon NESHAP

Reid, at the request of Celene Hawkins of the UMUT Justice Department, I am forwarding the attached White Mesa Mill Cell 1 Radon Emissions Calculation Brief prepared by the UMUT's Air Quality Technician, Mike King. Please contact Celene directly if you have any questions.

Mike Keller

**H. MICHAEL KELLER**  
ATTORNEY

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## Calculation Brief

Prepared By: Mike King, Air Quality Technician

Checked by: Colin Larrick, Water Quality Specialist

Scott Clow, Environmental Programs Director

Date: July 07, 2014

Re: 40 CFR Part 61 Subpart W – Radon Emissions from Operating Mill Tailings

Calculation Brief: Radon Emissions from Evaporative Ponds White Mesa Uranium Mill

### 1.1 Introduction

The U.S. Environmental Protection Agency (EPA) limits emissions of hazardous air pollutants under the authority of the Clean Air Act (CAA). The National Emission Standards for Hazardous Air Pollutants (NESHAPS) (*40 CFR Part 61 Subpart W – National Emission Standards for Radon Emissions from Operating Mill Tailings*) limit radon emissions from tailings impoundments at the White Mesa Uranium Mill. The Mill is located just three miles north of the White Mesa Ute Community (Ute Mountain Ute Reservation) in southeastern Utah and has been in operation since 1980 for the conventional processing of Uranium ore for the production of yellow cake ( $U_3O_8$ ), in addition to a byproduct Vanadium Oxide ( $V_2O_5$ ) recovery circuit. The Mill places both liquid and solid (42 U.S.C. § 2014(e)(2)) byproduct material in its tailings impoundments (three of which were built prior to 1989, and two of which were built or relined after 1989). Under the current NESHAPS, the pre-1989 tailings impoundments are subject to a 20 pCi/(m<sup>2</sup>-sec) (1.9 pCi/(ft<sup>2</sup>-sec)) limit on radon-222 emissions to protect public health and the environment.

#### *1.1.1 Statement of Problem*

Recently proposed EPA revisions to the NESHAP Subpart W propose that generally available control technology (GACT) or management practices be used to control radon emissions, thereby, removing the numeric radon standard for pre-1989 facilities. EPA would require non-conventional impoundments (also known as evaporation or holding ponds) to cover the ponds with at least one meter of liquid at all times. Based on a 2010 EPA risk assessment for Subpart W conducted by S. Cohen & Associates (SC&A 2010), tailing impoundments with radium-laden water do not reduce radon emissions to zero. The radon flux above these evaporative ponds can be significantly high relative to the numeric radon standard (20 pCi/(m<sup>2</sup>-sec)). The EPA risk assessment (*Risk Assessment Revision for 40 CFR Part 61 Subpart W – Radon Emissions from*

*Operating Mill Tailings*) (SC&A 2010) was referenced to evaluate the radon flux from Cell 1 at the White Mesa Uranium Mill as a proxy to address potential concerns regarding radon emissions from non-conventional radium-laden impoundments at the Mill. In addition, as a supplement to the rulemaking process, this evaluation can better define the applicability of impoundments subject to the EPA revised standard.

## 1.2 Radon Emissions from Evaporative Ponds using the Stagnant Film Model

### *1.2.1 Stagnant Film Model*

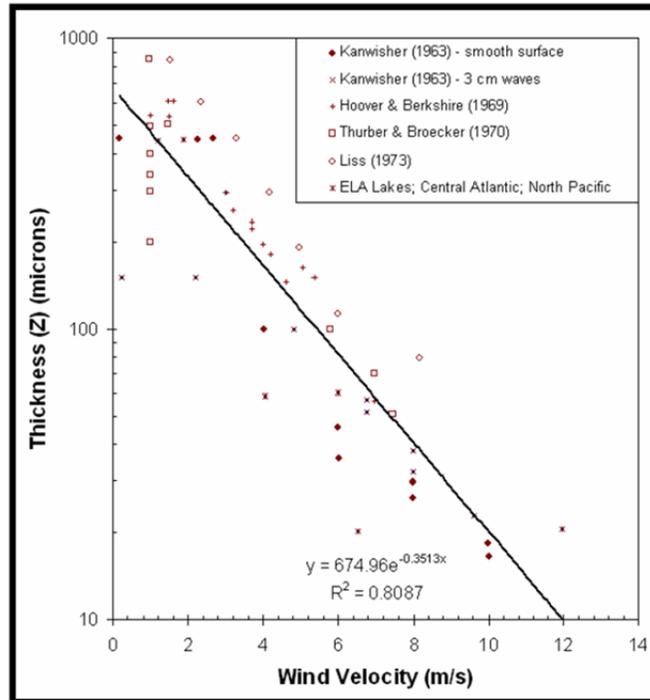
The exchange of gases between the atmosphere and bodies of water has been investigated and modeled by B.Bolin (Bolin 1960) and later by W.S. Broecker and T.H. Peng (Broecker and Peng 1975) which led to the development of the classical stagnant film model. According to the model, both the atmosphere and water are viewed as two turbulent bodies separated by a hypothetical, thin unmixed, stagnant layer, through which gases pass through by way of molecular diffusion (Schwarzenbach et al. 2003). Turbulence affects gas exchange between the stagnant layer (also referred to as the air/water interface), so that the layer becomes thinner as turbulence increases, therefore increasing exchange (SC&A 2010). In addition, advection (wave action) plays a role in the transport of gases through the water column up to the water surface (Neilson and Rogers 1986; Usman et al. 2004). Baker and Cox (2010) estimated the film thickness to be 1000 microns (0.1 cm) for air and 100 microns (0.01 cm) for water. The Stagnant Film Model can be applied to various bodies of water to determine radon flux by calculating film thickness and incorporating two release mechanisms: 1) molecular diffusion (gas exchange) and 2) turbulence caused by wind (greater than 4 mph but less than 24 mph<sup>1</sup>) impacting advection (Chambers 2009). The model assumes the radon diffusion coefficient in water is  $10^{-5}$  cm<sup>2</sup>/sec and that the radon is in secular equilibrium with the radium (ANL 1993; Schwarzenbach et al. 2003; Usman et al. 2004).

The air above the stagnant film is assumed to be well mixed as well as the water below the film. The thickness of the film is determined by agitation at the water surface, which is driven by wind speeds at the surface. Both Schwarzenbach et al. (2003) and Broecker and Peng (1975) noted mathematical agreement between the thickness of the film layer and its proportionality to the inverse of the square of the average wind speed. For example, at an average wind speed of 7 m/sec (12 knots or 13.8 mph), the film thickness was measured at 64 microns, and at an average of 12 m/sec (22 knots or 25.3 mph), the film thickness decreased to 20 microns [i.e.  $(64 \mu\text{m}/20 \mu\text{m}) = (12$

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<sup>1</sup> For typical impoundments (40 acres) and evaporative ponds, the maximum wave depth would be less than 1 ft for wind speeds of 23.4 mph (8.1 m/sec) (SENES 2011). The relationship between wind speed and film thickness are no longer in agreement for wind velocities below 4.4 mph (2 m/sec) (Emerson 1975).

$\text{m/sec})^2 / (7 \text{ m/sec})^2]$  (Broecker and Peng, 1975; SC&A, 2010). Emerson (1975) plotted various researchers' film thickness versus wind speed (semi-log plot) and a straight-line was drawn through the points. An exponential curve was fitted to the straight-line to develop the following mathematical exponential function:



**Figure 1. Boundary Layer Thickness versus Wind Speed (Emerson 1975)**

$$\text{Eq. 1} \quad Z_w = 674.9 \exp(-0.351 \cdot V)$$

Where:  $Z_w$  = Water film thickness (microns,  $\mu\text{m}$ )

$V$  = Wind speed (m/sec)

Equation 1 from the plot (Figure 1) has a coefficient of determination ( $R^2$ ) equal to 0.8087, which shows that 81% of the variation in data points can be explained by Eq. 1. Emerson (1975) noted that the relationship between wind speed and film thickness are no longer in agreement for wind velocities below 2 m/sec. Consequently, applying the Stagnant Film Model and wind correction equation for film thickness, the radon flux from surface pond waters can be estimated using the concentration of radium-226 in the pond water. Therefore, the radon flux can be calculated using this model and the following equation:

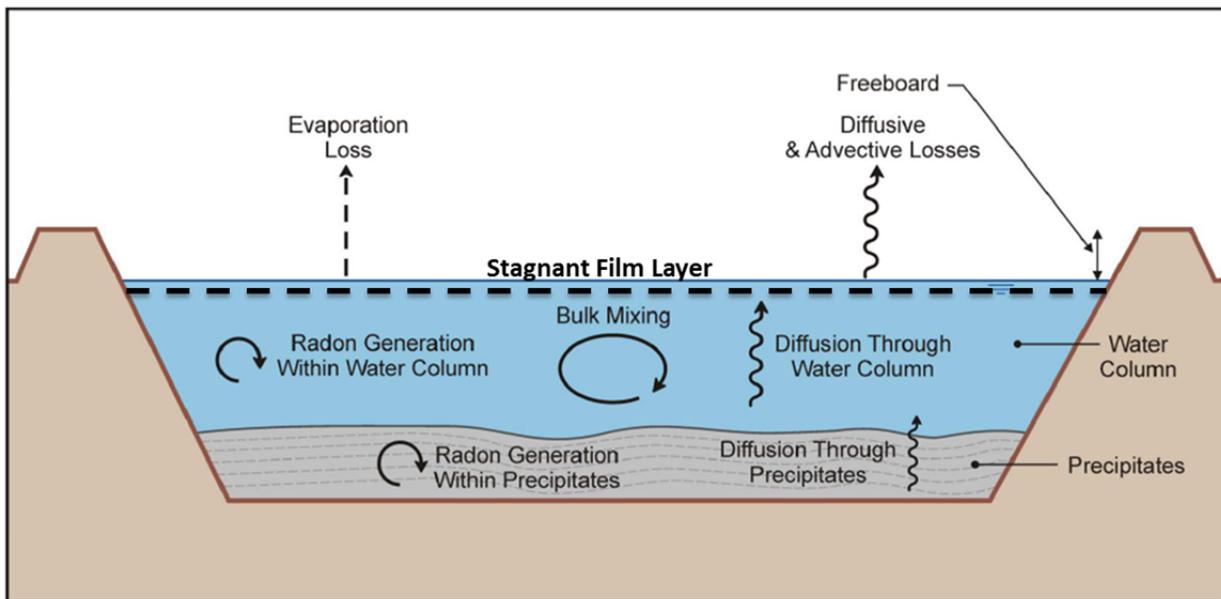
$$\text{Eq. 2} \quad J = \frac{1.48 \times 10^{-4}}{e^{-0.351V}} C_w$$

Where: J = Radon flux (pCi/m<sup>2</sup>-sec)  
 C<sub>w</sub> = Concentration of radium in the water (pCi/L)  
 V = Wind Speed (m/sec)

### 1.2.2 Radon Release Mechanisms from Evaporative Ponds

Major sources of radon in evaporative ponds at the White Mesa Uranium Mill include: 1) radon generated from radium containing sediment/precipitate deposits on the bottom of Cell 1, Cell 4B, and Roberts Pond; and 2) radon from the decay of dissolved or suspended radium within water column (Figure 2). It is important to note that both suspended sediments in the water column as well as sediment deposited on the bottom of evaporative ponds consist of the “slimes” portion of the tailings (fine material smaller than 200 mesh). The slimes portion of tailings from uranium recovery facilities has been recognized as containing up to 80% of the radioactivity (ORNL, 1975).

As mentioned earlier, the Stagnant Film Model used to estimate radon flux from pond waters consist of two release mechanisms: molecular diffusion (gas exchange) and turbulence caused by wind impacting advection.



**Figure 2. Radon Release Mechanism and Stagnant Film Layer (SENES 2011)**

### 1.2.3 Radon Generated from Radium Containing Sediments

Radon generated from radium containing sediments at the bottom of pond waters is dependent on the emanation coefficient and the diffusion coefficient. The diffusion coefficient of radon is based on Fick's law, which basically refers to the concept that a solute will move from a region of high concentration to a region of low concentration across a concentration gradient (i.e. diffusion through sediment/precipitates) (NRC 1984). The diffusion coefficient of radon in a solid matrix is 10-20 cm<sup>2</sup>/sec, so that only radon atoms in a layer 30 to 50 nm thick will enter the air or water pore spaces of sediments or soils (SC&A 2010). The emanation coefficient is the ratio of the amount of radon in the pore space to the total amount of radon produced in a solid (NRC 2001). As a result, the thickness of the sediment layer, along with its diffusion coefficient, determines how much radon will be released to the overlying water layer (SC&A 2010).

Nielson and Rogers (1986) and Usman (et al. 2004) found that diffusion is enhanced by natural advective forces in the water column (wave action) and turbulent air (wind speed). Dye movement tests conducted by Nielson and Rogers (1986) indicate that shallow (<1 m) pond water may become heavily impacted by advection, therefore transporting radon to the atmosphere in a short time (several hours). As a result, the radon flux from shallow water-covered tailings is just as great as that of bare saturated tailings. For example, as the water in sediment pores is replaced with air, more radon becomes available for exchange with air, in which radon is then better able to diffuse through the tailings to the air/tailings surface (SENES 2013).

#### *1.2.4 Radon Generated from Dissolved or Suspended Radium*

Radon released to the atmosphere from the decay of dissolved or suspended radium in water occurs since radon rapidly volatilizes from surface water and its solubility decreases with increasing temperature (Surbeck 1996). At constant temperature, Henry's Law influences the release of radon so that the amount of radon released is proportional to the partial pressure of radon in equilibrium with the water (SC&A 2010). At constant temperature, the molecular diffusion coefficient of radon in air (1.4x10<sup>-1</sup> cm<sup>2</sup>/sec at 20°C) is approximately 10,000 times larger than its diffusion coefficient in water (1.2x10<sup>-5</sup> cm<sup>2</sup>/sec at 20°C) (Drago 1988). A SENES (2010) analysis (for conventional mill recently licensed by Colorado) showed that evaporative loss of ponds is extremely insignificant compared to diffusional release of radon due to the very small diffusion coefficient in water. Indeed, conventional values for diffusion of radon in water range from 1.14x10<sup>-5</sup> to 1.56x10<sup>-5</sup> cm<sup>2</sup>/sec (Usman et al. 2004).

#### *1.2.5 Radon Emissions from Cell 1 Evaporative Pond*

The White Mesa Uranium Mill's Tailings Cell 1 is a 55-acre licensed tailings pond built before 1989, which currently receives process water, laboratory waste, and storm water runoff laden with source and by-product material, and pumped groundwater. The Mill

operator contends Cell 1 is an evaporation pond. Cell 1 has received by-product material for over thirty years and is filled to a significant depth with by-product material and raffinate crystals. Cell 1 is currently subject to the 20 pCi/(m<sup>2</sup>-sec) emissions limit set forth in 40 C.F.R. § 61.252(a). Radon emissions have not been measured on Cell 1 based on EPA's determination that evaporative (liquid-covered) ponds do not emit radon above 0 pCi/m<sup>2</sup>-sec (per pCi Ra-226/g). In the new proposed rulemaking, the EPA has suggested removing the 20 pCi/(m<sup>2</sup>-sec) emissions limit set forth in 40 C.F.R. § 61.252(a) for evaporation ponds and relying on a 1 m liquid cover to control radon emissions from liquid-covered tailings impoundments.

During its review of the proposed rulemaking, the Tribe performed some initial work calculating the anticipated radon flux from Cell 1. First, the Tribe calculated the normalized radon flux for the White Mesa Mill (using the normalized radium concentration of 1 pCi/L).<sup>2</sup> The Tribe's initial work determined that the normalized radon flux for White Mesa Mill is 0.007 pCi/m<sup>2</sup>-sec for 1 pCi/L radium in water (Table 1). This normalized radon flux is comparable to EPA's risk assessment (SC&A 2010) flux of 0.01 pCi/m<sup>2</sup>-sec for 1 pCi/L.

However, when the Tribe used the *actual* radium pond concentration from Cell 1 (instead of the normalized radium concentration of 1 pCi/L) with the same equation without incorporating measured wind speeds impacting advection to the water column, the radon flux for Cell 1 was 327 pCi/(m<sup>2</sup>-sec).

When the Tribe further refined its radon flux calculations, it still found that the radon flux was well over 100 pCi/(m<sup>2</sup>-sec). In these refined calculations, the Tribe assumed that radon is in secular equilibrium with radium and used the actual radium pond

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<sup>2</sup> The White Mesa Mill normalized radon flux was calculated using a 0.014 cm water film thickness, joint wind speed frequency distributions and the following equation:

Eq. 3       $J = \frac{D_w}{Z_w} * C_w * 10$

Where:

J	= Radon Flux	(pCi/m <sup>2</sup> -sec per 1 pCi/L radium)
C <sub>w</sub>	= Concentration of radium in the water	(pCi/L)
D <sub>w</sub>	= Diffusion coefficient (10 <sup>-5</sup> )	(cm <sup>2</sup> /sec)
Z <sub>w</sub>	= Water film thickness	(cm)

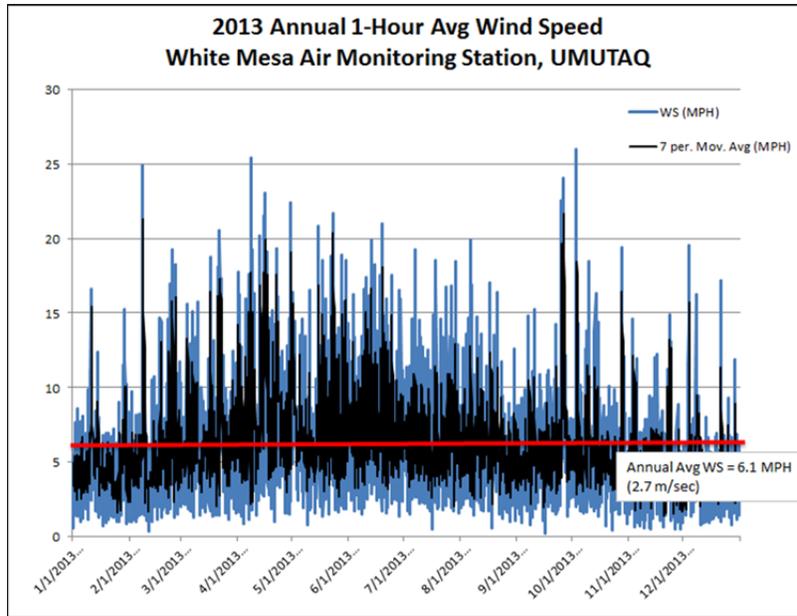
concentration from Cell 1 (Appendix A). An estimated average radon flux over a year for Cell 1 was determined using Eq. 3 and the Mill's wind speed frequency distributions derived from SC&A (2010). Each of the wind bins represents the wind speed summed over the sixteen compass directions (SC&A 2010).

**Table 1 White Mesa Uranium Mill Wind Speed Frequency Distribution – Wind Data Percentage, Film Thickness and Radon Flux for Each Wind Bin (SC&A 2010)**

	Wind Speed @ 10 meters					
Wind "Bin" (mph)	<4*	4 to 7	8 to 12	13 to 18	19 to 24	>24*
Center of Bin (mph)	1.5	5.5	10	15.5	21.5	28
Center of Bin (m/sec)	0.7	2.5	4.5	6.9	9.6	12.5
Site	Percentage of Wind Speed in Each Wind Bin					
White Mesa	16.5	42.8	27.6	10.6	2.1	0.5
Film Thickness	Stagnant Film Thickness					
Film Thickness (µm)	533.4	284.7	140.5	59.3	23.1	8.3
Film Thickness (cm)	0.053	0.028	0.014	0.006	0.002	0.001
Wind Bin	Normalized Radon Flux					
Normalized Radon Flux (pCi/m <sup>2</sup> -sec per pCi/L)	0.0019	0.0035	0.0071	0.0169	0.0432	0.1199
White Mesa	Radon Flux					
Radon Flux (pCi/m <sup>2</sup> -sec)	61.3	114.8	232.7	551.5	1414.0	3920.9
Diffusion Coefficient (cm <sup>2</sup> /sec)	0.00001					
Normalized Radium Concentration (pCi/L)	1					
White Mesa Uranium Cell 1 Radium Concentration (pCi/L)	32700					

\*Stagnant Film Model is limited to wind speeds less than 10 m/sec with wind speeds in White Mesa exceeding this limit only a small portion of the time.

In August 2013, the radium concentration in Cell 1 was reported by GEL Laboratories LLC, to be 32,700 pCi/L of total radium alpha in the pond water (Appendix A). The calculated annual radon flux for Cell 1 was 114.8 pCi/(m<sup>2</sup>-sec) based on GEL Laboratories radium concentration and wind velocity of 2.5 m/sec (center of wind bin), since 42.8% of wind speeds at White Mesa Mill fall into the 4 to 7 mph wind distribution (Table 1). Furthermore, annual (2013) average wind speed data gathered from the White Mesa air monitoring station, operated by the Ute Mountain Ute Tribe Air Quality Program (UMUTAQ), was utilized to estimate average annual radon flux (Figure 3). The UMUTAQ reported an annual average wind speed of 2.7 m/sec which yielded a radon flux of 125.8 pCi/(m<sup>2</sup>-sec); a roughly 9% difference between results using SC&A (2010) wind distributions (Table 1).



**Figure 3 White Mesa Air Monitoring Station Wind Speed (MPH). Wind velocities are higher during the spring and early summer months with significant peaks in February, April and October.**

### 1.3 Conclusion

Using calculations contained in the 2010 EPA risk assessment for revisions to the CAA Subpart W (SC&A 2010), the Tribe has initially determined that Cell 1 at the White Mesa Uranium Mill is a significant source of radon-222 emissions. Contrary to EPA (1986) determination that evaporative ponds do not emit radon above 0 pCi/(m<sup>2</sup>-sec) (per pCi Ra-226/g), calculations for Cell 1 using EPA risk assessment flux calculations (SC&A 2010) yielded an annual average radon flux of >100 pCi/(m<sup>2</sup>-sec).

The Tribe believes that additional work assessing the radon flux from Cell 1 will likely yield even higher annual average radon flux numbers. First, it has been determined that diffusional release, coupled with turbulence caused by wind impacting water column advection, is the main release mechanism of radon from evaporative ponds (Neilson and Rogers 1986; Usman et al. 2004; SENES 2010). Therefore, the radon flux above Cell 1 could be significantly even higher during high wind events observed in White Mesa, Utah (see Figure 3). Second, the Tribe's initial calculation did not include analysis of emissions from spraying activities used to enhance evaporation off the evaporation ponds at the White Mesa Mill (which release radon contained within the pond water (SC&A 2010)). Third, the Tribe's initial calculation did not address the radon emissions from submerged tailings (SC&A 2010 page 5, "since evaporation ponds are not expected to have large inventories of radium containing sludge on their bottoms, the contribution to the radon release from submerged tailings shown in Table 1 is not expected to be applicable to evaporation ponds."). Each of these subjects requires

further investigation and analysis into the presence of extremely elevated radium concentrations currently present in Cell 1 at White Mesa and the potential for similar situations at other facilities.

EPA revisions to Subpart W include the removal of the NESHAP radon limit of 20 pCi/(m<sup>2</sup>-sec) for pre-1989 tailings impoundments and requiring control of emissions from evaporative ponds by covering ponds with at least one meter of liquid. These proposed revisions do not adequately address the EPA's own determination that non-conventional impoundments can be a source of significant radon emissions (SC&A 2010). These proposed revisions also do not adequately address concerns raised by the Tribe that initial calculations using the EPA equations and methods show that radon emissions from radium-laden, heavily-sedimented evaporation ponds like Cell 1 are well over 100 pCi/(m<sup>2</sup>-sec) (without accounting for emissions from high wind speeds, spraying activities, and the presence of solid tailings in the evaporation ponds).

Because a 1 m liquid cover will not always reduce radon emissions from large, radium-laden ponds like Cell 1, the EPA must reconsider including an emissions limit, monitoring requirements, and acreage limitations<sup>3</sup> on evaporation ponds to ensure that the revised NESHAPS Subpart W protects public health and the environment.

### *References*

10 CFR 20. Title 10 of the Code of Federal Regulations, Part 20, "Standards for Protection Against Radiation."

10 CFR 40. Title 10 of the Code of Federal Regulations, Part 40, "Domestic Licensing of Source Material."

40 CFR 61. Title 40 of the Code of Federal Regulations, Part 61, "National Emission Standards for Hazardous Air Pollutants," Subpart W, "National Emission Standards for Radon Emissions from Operating Mill Tailings."

40 CFR 190. Title 40 of the Code of Federal Regulations, Part 190, "Environmental Radiation Protection Standards for Nuclear Power Operations."

40 CFR 192, Title 40 of the Code of Federal Regulations, Part 192, "Health and Environmental Protection Standards for Uranium and Thorium Mill Tailings."

40 CFR 264, Title 40, Part 264, "Standards for Owners and Operators of Hazardous Waste Treatment, Storage and Disposal Facilities."

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<sup>3</sup> This includes both acreage limitations on individual evaporation ponds and total acreage limitations on all tailings impoundments (conventional and non-conventional) at the uranium mill.

ANL (Argonne National Laboratory) 1998. MILDOSE-AREA User's Guide, Environmental Assessment Division, Argonne National Laboratory, 1998.

Baker, K.R. and A.D. Cox, 2010, "Radon Flux from Evaporation Ponds," presented at the National Mining Association/Nuclear Regulatory Commission Uranium Recovery Workshop, May 26-27, 2010. Denver, Colorado,.

Bolin B., 1960, "On the Exchange of Carbon Dioxide between the Atmosphere and the Sea," *Tellus* 12, 274-281.

Broecker H.C. and T.H. Peng, 1974, "Gas Exchange Rates Between Air and Sea," *Tellus*, 24, 21-35.

Broecker H.C. and T.H. Peng, 1980, "Gas Exchange Rates for Three Closed-Basin Lakes," *Limnol. Oceanog.*, V. 25(5), 789-796.

Brown, Steven 2010. Evaporation Pond Radon Flux Analysis, Piñon Ridge Mill Project, Montrose County, Colorado. SENES Consultants Limited, prepared for Energy Fuels Resources Corporation, August 30, 2010.

Chambers, Douglas B., 2009, "Radon Emissions From Tailings Ponds," presented at the National Mining Association/Nuclear Regulatory Commission Uranium Recovery Workshop, July 2, Denver, Colorado.

Crusius J., and R. Wanninkhof, 2003, "Gas transfer velocities measured at low wind speed over a lake," *Limnol. Oceanog.*, 48(3), 1010-1017.

Denison Mines (USA) Corp., 2007. "White Mesa Uranium Mill License Renewal Application, State of Utah Radioactive Materials License No. UT1900479, Volume 4 – Environmental Report," February 28, 2007.

Denison Mines (USA) Corp., 2011. "Reclamation Plan, White Mesa Mill, Blanding, Utah, Radioactive Materials License No. UT1900479," Revision 5.0, September 2011.

Duenas, C., M. C. Fernandez and M. Perez Martinez, 1983, "Radon-222 from the Ocean Surface," *Journal of Geophysical Research*, 85(C13), 8613-8616.

EIA (U.S. Energy Information Administration) 2013. "Domestic Uranium Production Report 2nd Quarter 2013," August, 2013.

Emerson, S., 1975, "Gas Exchange Rates in Small Canadian Shield Lakes," *Limnol. Oceanog.*, V. 20(5), 754-761.

EPA (Environmental Protection Agency) 1979. "Radiological Impacts Caused by Emission of Radionuclides into Air in the United States," EPA 520/7-79-006, Office of Radiation Programs, Environmental Protection Agency, August 1979.

EPA (Environmental Protection Agency) 1983. "Background Information Document Proposed Standards for Radionuclides," Draft Report, EPA 520/1-83-001, Office of Radiation Programs, Environmental Protection Agency, March 1983.

EPA (Environmental Protection Agency) 1984. "Final Background Information Document Proposed Standards for Radionuclides," EPA 520/1-84-022-1, Office of Radiation Programs, Environmental Protection Agency, October 1984.

EPA (Environmental Protection Agency) 1986. "Final Rule for Radon-222 Emissions From Licensed Uranium Mill Tailings Background Information Document," EPA 520/1-86-009, Office of Radiation Programs, Environmental Protection Agency, August 1986.

EPA (Environmental Protection Agency) 1989. "Risk Assessment Methodology Environmental Impact Statement NESHAPS for Radionuclides Background Information Document," Volumes 1–3, EPA 520/1-89-005, Office of Radiation Programs, Environmental Protection Agency, September 1989.

EPA (Environmental Protection Agency) 2000b. "Guidance on the Major Source Determination for Certain Hazardous Air Pollutants," John S. Seitz, Director, Office of Air Quality Planning and Standards (MD-10), August 14, 2000.

EPA (Environmental Protection Agency) 2003. "EPA Assessment of Risks from Radon in Homes," EPA 402-R-03-003, Office of Radiation and Indoor Air, U.S. Environmental Protection Agency, June 2003.

EPA (Environmental Protection Agency), 2006, "Technical Report on Technologically Enhanced Naturally Occurring Radioactive Materials from Uranium Mining," Previously published on-line and printed as Vol. 1 of EPA 402-R-05-007, January 2006, Updated June 2007 and printed April 2008 as EPA 402-R-08-005.

FR (Federal Register) 1979. EPA determination that radionuclides constitute a hazardous air pollutant within the meaning of section 112(a)(1), Volume 44, p. 78738, December 27, 1979.

FR (Federal Register) 1986. 40 CFR Part 61, National Emission Standards for Hazardous Air Pollutants, Standards for Radon-222 Emissions from Licensed Uranium Mill Tailings; Final Rule, Volume 51, p. 34056, September 24, 1986.

GEL Laboratories LLC, 2013. "Certificate of Analysis," submitted to Ute Mountain Ute Tribe Environmental Programs Department. September 13, 2013.

Golder Associates Inc. 2008, "Evaporation Pond Design Report, Piñon Ridge Project, Montrose County, Colorado," submitted to Energy Fuels Resources Corporation, October 2008.

Lawrence, C., 2005, Measurement of  $^{222}\text{Rn}$  Exhalation Rates and  $^{210}\text{Pb}$  Deposition Rates in a Tropical Environment, Thesis Queensland University of Technology, School of Physical and Chemical Sciences, Queensland, Australia, March.

Li, Pamela Y. and P.K. Chen 1994. "Relationships of Radon Diffusion Coefficient with Saturated Hydraulic Conductivity, Fine Content and Moisture Saturation of Radon/Infiltration Barriers for the UMTRA Project," Morrison Knudsen Corporation, Waste Management '94, 27 Feb–3 Mar 1994.

Mudd, G.M., 2002, Uranium Mining in Australia: Environmental impact, radiation releases and rehabilitation. Protection of the Environment from Ionising Radiation- Proceedings of the Third International Symposium, Darwin, Australia, 22-26 July, Vienna, International Atomic Energy Agency.

National Mining Association. "Experimental Determination of Radon Fluxes Over Water," Presentation. Web Access: July 2014.

NAS (National Academy of Sciences) 1988. Health Risks of Radon and Other Internally Deposited Alpha-Emitters: BEIR IV, 1988.

Nielson, K.K., and V.C. Rogers, 1986. "Surface Water Hydrology Considerations in Predicting Radon Releases from Water Covered Areas of Uranium Tailings Ponds," Proc. 8th Annual Symposium on Geotechnical & Geohydrological Aspects of Waste Management, Geotechnical Engineering Program, Colorado State University & A.A. Balkema, Fort Collins, Colorado, pp. 215–222, February 5–7, 1986.

NMA (National Mining Association) 2010. "Uranium Recovery Licensing Activities," presentation by Larry W. Camper (Director), Division of Waste Management and Environmental Protection, Nuclear Regulatory Commission, National Mining Association Uranium Recovery Workshop held in Denver, Colorado, May 26–27, 2010.

ORISE (Oak Ridge Institute for Science and Education) 2011. "Technical Bases and Guidance for Radon Flux Monitoring at Uranium Mill Tailing Sites," DCN 2042-TR-01-0, June 27, 2011.

ORNL 1975. "Correlation of Radioactive Waste Treatment Costs and the Environmental Impact of Waste Effluents in the Nuclear Fuel Cycle for Use in Establishing 'as Low as Practicable' Guides-Milling of Uranium Ore," ORNL-TM-4903 Volume 1, Sears, M.B., R.E. Blanco, R.C. Dahiman, G.S. Hill, A.D. Ryan, and J.P. Witherspoon. May 1975.