

EPA-1421

Susan Stahle/DC/USEPA/US

04/06/2011 10:00 AM

To Travis Stills

cc "Bedig, Laurel (ENRD)", Sara Laumann

bcc Reid Rosnick

Subject Re: Radon Subpart W

Hi Travis--

I got your voicemail and saw your email yesterday regarding your subpart W questions. It was my first day back in the office after being out for 7 days so I'm still catching up on things, but I wanted to get back to you as soon as I could.

As your voicemail and email indicate, it appears you may have two types of questions. If so, I'd like to involve others in our conversation, as appropriate.

If you have questions regarding the settlement agreement, I'd like to include Laurel Bedig, our DOJ counsel, in that conversation.

If you have questions about Region 8 and their interpretation and/or application of subpart W in Colorado, I'd like to include Sara Laumann, counsel in R8 on these matters, in that conversation.

If so, it may be best to set up two different conversations, or structure the call so that Laurel and Sara can participate as needed. If you can let me know your availability today and tomorrow, I'll coordinate a time that works with Laurel and Sara.

Thanks,

Susan Stahle  
Air and Radiation Law Office (Rm 7502B)  
Office of General Counsel  
U.S. Environmental Protection Agency  
1200 Pennsylvania Avenue, NW (ARN: MC 2344A)  
Washington, D.C. 20460  
ph: (202) 564-1272  
fax: (202) 564-5603  
stahle.susan@epa.gov

Travis Stills

Hi Susan, I left a message regarding th...

04/04/2011 05:35:44 PM

From: Travis Stills <stills@frontier.net>  
To: Susan Stahle/DC/USEPA/US@EPA  
Date: 04/04/2011 05:35 PM  
Subject: Radon Subpart W

---

Hi Susan,

I left a message regarding the Subpart W settlement.

I would enjoy a few minutes to to discuss a couple of concerns regarding the settlement and Region 8's ongoing reliance on existing Subpart W in Colorado.

Thanks,

## 40 CFR Part 192

### Deliverable Dates for Major Milestones

Fiscal Yr:	Deliverable Product:	Date Due:
	2nd review of draft Post-Closure Monitoring Report from Contractor	June 2011
	Package to SAB: <ul style="list-style-type: none"> <li>• Final Charge to SAB (Mike Flynn signatory)</li> <li>• Draft Post-Closure Monitoring Report to SAB</li> <li>• Background materials</li> </ul>	June 2011
	EPA prepares TENORM website to hold draft Post-Closure Monitoring Report and all background documents	June 2011
	EPA posts draft Post-Closure Monitoring Report to website ( <a href="http://www.epa.gov/radiation/tenorm/pubs.html">http://www.epa.gov/radiation/tenorm/pubs.html</a> )	June 2011
	SAB posts Federal Register Notice, Charge, and link to draft Post-Closure Monitoring Report	June 2011
	Submit Task Order for Peer Review of Risk Assessment	June 2011
	Workgroup Meeting	End June 2011
	2011 Q4	Conference Call with SAB
SAB Face-to-Face Meeting		July 18-19, 2011
Draft Risk Assessment from Contractor		July 2011
Workgroup Meeting(s)		July 27, 2011 TBD
Economic Analysis		August 2011
2012 Q1	Workgroup Meeting(s)	TBD
	Peer Review of Risk Assessment	October 2011
	Peer Review of Post-Closure Monitoring Report	October 2011
	Options Selection	November 2011
	Distribute FAR package to participating AAs and RAs	December 2011
2012 Q2	Final Agency Review	January, 2012
	Transmit final package to OPEI	February 2012
	OMB Review	February 2012
2012 Q3	Proposed Rule to the Office of Federal Register	May 2012

EPA-2605

Tom Peake/DC/USEPA/US

06/24/2011 01:57 PM

To Alan Perrin

cc Reid Rosnick, Andrea Cherepy, Daniel Schultheisz

bcc

Subject Re: schedules

Alan,

Files are attached.

Andrea and Reid, please send Alan an email confirming these. Andrea, note that I made some changes, mostly deleting specific days but also deleting a couple of deliverables that aren't needed for this request.

Tom Peake  
Director  
Center for Waste Management and Regulations  
US EPA (6608J)  
1200 Pennsylvania Ave, NW  
Washington, DC 20460  
phone: 202-343-9765

Physical Location and for deliveries:  
Room 529  
1310 L St, NW  
Washington, DC 20005



Subpart W Deliverable Dates.docx 40 CFR 192 milestones\_2011\_June.docx

Alan Perrin

Tom, I need the latest versions of the 192 and S...

06/24/2011 10:14:08 AM

From: Alan Perrin/DC/USEPA/US  
To: Tom Peake/DC/USEPA/US@EPA  
Date: 06/24/2011 10:14 AM  
Subject: schedules

Tom, I need the latest versions of the 192 and SP W schedules.

---

Alan Perrin, Deputy Director  
Radiation Protection Division, USEPA  
office (202) 343-9775 | bb (202) 279-0376  
perrin.alan@epa.gov

Travis

--

~~~~~  
Travis E. Stills  
Managing Attorney  
Energy Minerals Law Center  
1911 Main Avenue, Suite 238  
Durango, Colorado 81301  
[stills@frontier.net](mailto:stills@frontier.net)  
phone: (970) 375-9231

This is a transmission from a law office and may contain information which is privileged, confidential, and protected by the attorney-client or attorney work-product privileges. If you are not the proper addressee, note that any disclosure, copying, distribution, or use of the contents of this message or any attachment is prohibited. If you have received this transmission in error, please destroy it and notify this office immediately at (970) 375-9231.

~~~~~

EPA-1423

Reid Rosnick/DC/USEPA/US

To Tom Peake

04/06/2011 10:16 AM

cc

bcc

Subject Fw: Radon Subpart W

FYI

---

Reid J. Rosnick  
Radiation Protection Division (6608J)  
U.S. Environmental Protection Agency  
1200 Pennsylvania Ave., NW  
Washington, DC 20460  
202.343.9563  
rosnick.reid@epa.gov

----- Forwarded by Reid Rosnick/DC/USEPA/US on 04/06/2011 10:16 AM -----

From: Susan Stahle/DC/USEPA/US  
To: Travis Stills <stills@frontier.net>  
Cc: "Bedig, Laurel (ENRD)" <Laurel.Bedig@usdoj.gov>, Sara Laumann/R8/USEPA/US@EPA  
Date: 04/06/2011 10:00 AM  
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Travis

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Travis E. Stills  
Managing Attorney  
Energy Minerals Law Center  
1911 Main Avenue, Suite 238  
Durango, Colorado 81301  
[stills@frontier.net](mailto:stills@frontier.net)  
phone: (970) 375-9231

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~~~~~

EPA-1301

**Deborah  
Lebow-Aal/R8/USEPA/US**  
04/06/2011 01:22 PM

To Reid Rosnick, Kenneth Distler, Angelique Diaz, Robert  
Duraski, Sara Laumann  
cc  
bcc

Subject Fw: Titan Uranium USA Sheep Mountain Project, Fremont  
County, Wyoming - agenda for tomorrow's meeting

Sara, I don't think we need an attorney there, now that you can't be there, but I will leave that up to you - Reid, I think the issues up for discussion will be your lead.

[Deborah Lebow Aal](#)  
U.S. Environmental Protection Agency  
Region 8 Air Program  
Acting Director, Air Program  
1595 Wynkoop Street  
Denver, CO 80202  
303 312-6223

----- Forwarded by Deborah Lebow-Aal/R8/USEPA/US on 04/06/2011 11:19 AM -----

From: Toby Wright <[wrightenv@gmail.com](mailto:wrightenv@gmail.com)>  
To: Deborah Lebow-Aal/R8/USEPA/US@EPA  
Date: 04/06/2011 10:35 AM  
Subject: Re: Titan Uranium USA Sheep Mountain Project, Fremont County, Wyoming

---

Deborah;

I am so sorry I have not sent this to you before now, I had put this together last week and thought I had sent it to you. Please find below our proposed Agenda. Our objective is to give EPA a sense of the project scope and approach so that we can identify any design and compliance issues as early as possible. Please know that any topics or issues EPA wishes to address can be added to this agenda. please call me if you have any questions or comments.

## **Agenda**

Introductions

Greg Adams/Titan Uranium USA, VP Development

Deborah Lebow-Aal/EPA Region 8 Air Program

Project Overview:

Doug Beahm/BRS Engineering

Toby Wright/Wright Env. Services

Issues for Discussion

Status of 40 CFR 192 GW standards update

Status of Active Heaps and Inactive Heaps with respect to EPA regulation

Status of the process ponds with respect to EPA regulation

--

Toby Wright  
Wright Environmental Services Inc.  
3801 Automation Way, Suite 100  
Fort Collins, CO 80525  
(970) 231-1160  
[WrightEnv@gmail.com](mailto:WrightEnv@gmail.com)

On Wed, Apr 6, 2011 at 8:47 AM, <[Lebow-Aal.Deborah@epamail.epa.gov](mailto:Lebow-Aal.Deborah@epamail.epa.gov)> wrote:

Toby, do you have an agenda for tomorrow's meeting? So far, it will be me, Angelique Diaz and/or Robert Duraski, Kenneth Distler, and Reid Rosnick will be on the phone from Washington DC.

Deborah Lebow Aal  
U.S. Environmental Protection Agency  
Region 8 Air Program  
Acting Director, Air Program  
1595 Wynkoop Street  
Denver, CO 80202  
[303 312-6223](tel:3033126223)

From: Toby Wright <[wrightenv@gmail.com](mailto:wrightenv@gmail.com)>  
To: Deborah Lebow-Aal/R8/USEPA/US@EPA  
Date: 03/22/2011 09:26 AM  
Subject: Re: Titan Uranium USA Sheep Mountain Project, Fremont  
County, Wyoming

Thanks very much. We look forward to meeting with you and the staff.

--

Toby Wright  
Wright Environmental Services Inc.  
3801 Automation Way, Suite 100



Fort Collins, CO 80525  
[\(970\) 231-1160](tel:(970)231-1160)  
[WrightEnv@gmail.com](mailto:WrightEnv@gmail.com)

On Tue, Mar 22, 2011 at 8:43 AM, <[Lebow-Aal.Deborah@epamail.epa.gov](mailto:Lebow-Aal.Deborah@epamail.epa.gov)>  
wrote:

Yes. Let me send out an invite and see who can make that time and  
date, and I will let you know.

Deborah Lebow Aal  
U.S. Environmental Protection Agency  
Region 8 Air Program  
Indoor Air, Toxics, & Transportation Unit

1595 Wynkoop Street  
Denver, CO 80202  
[303 312-6223](tel:303312-6223)

-----Toby Wright <[wrightenv@gmail.com](mailto:wrightenv@gmail.com)> wrote: -----

To: Deborah Lebow-Aal/R8/USEPA/US@EPA

From: Toby Wright <[wrightenv@gmail.com](mailto:wrightenv@gmail.com)>

Date: 03/21/2011 09:09PM

Cc: Gregory L Adams <[gla1wyo@bresnan.net](mailto:gla1wyo@bresnan.net)>, Doug Beahm <

[dbeahm@wyoming.com](mailto:dbeahm@wyoming.com)>, Chris Healey <[cmhealey@titanuranium.com](mailto:cmhealey@titanuranium.com)>

Subject: Re: Titan Uranium USA Sheep Mountain Project, Fremont County,  
Wyoming

Ms. Lebow-Aal;

Let's plan on meeting at 2 pm on Thursday April 7th at your offices  
(1595 Wynkoop Street  
Denver). I will send an Agenda by next week. Thanks for your help  
setting this up. Could you give me an idea of who may be attending  
for EPA Region 8?

Attending for Titan Uranium USA:

Greg Adams: VP Development

Doug Beahm: BRS Engineering/Technical Lead

Toby Wright: Wright Env. Services/Permitting Lead

--

Toby Wright

Wright Environmental Services Inc.  
3801 Automation Way, Suite 100  
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[\(970\) 231-1160](tel:(970)231-1160)  
[WrightEnv@gmail.com](mailto:WrightEnv@gmail.com)

On Mon, Mar 21, 2011 at 3:23 PM, <[Lebow-Aal.Deborah@epamail.epa.gov](mailto:Lebow-Aal.Deborah@epamail.epa.gov)>  
wrote:

Why don't we go ahead and schedule for the afternoon of April 7.

You

name the time that works best for you. I am presuming you will come  
to

EPA's building in downtown Denver?

Deborah Lebow Aal  
U.S. Environmental Protection Agency  
Region 8 Air Program  
Acting Director, Air Program  
1595 Wynkoop Street  
Denver, CO 80202  
[303 312-6223](tel:303312-6223)

From: Toby Wright <[wrightenv@gmail.com](mailto:wrightenv@gmail.com)>  
To: Deborah Lebow-Aal/R8/USEPA/US@EPA  
Cc: Andrea Cherepy/DC/USEPA/US@EPA, Gregory L Adams  
<[glalwyo@bresnan.net](mailto:glalwyo@bresnan.net)>, Chris Healey  
<[cmhealey@titanuranium.com](mailto:cmhealey@titanuranium.com)>, Doug Beahm <  
[dbeahm@wyoming.com](mailto:dbeahm@wyoming.com)>  
Date: 03/18/2011 11:46 AM  
Subject: Titan Uranium USA Sheep Mountain Project, Fremont  
County,  
Wyoming

Dear Ms. Lebow;

I was referred to you by Andrea Cherepy of EPA HQ. I am working  
with  
Titan Uranium USA (Titan) on a uranium mining project and would like

to  
initiate discussion with EPA regarding this project.

Titan Uranium USA Inc. (Titan) proposes to construct and operate the Sheep Mountain uranium recovery facility (mill) to process uranium ore from Titan's adjacent mines and from area mines owned and operated by other entities in order to produce uranium oxide (U<sub>3</sub>O<sub>8</sub>) concentrate and to dispose of the resulting processing wastes in on-site tailings cells. The proposed project is located approximately 8 road miles South of Jeffrey City, Wyoming (Township 28 North, Range 92 West, Sections 4, 5, 9, 16, 17, 20, 21, 27, 29, 30, 32 and 33). The project is entirely within a previously mined and reclaimed area that maintains an active Permit to Mine (No. 381C) administrated by the Wyoming Department of Environmental Quality - Land Quality Division (WDEQ-LQD) in consultation with the US Bureau of Land Management (BLM). The mining will be regulated by the WDEQ-LQD and BLM, while the uranium recovery activities will be regulated by the U.S. Nuclear Regulatory Commission (NRC). Appropriate EPA regulations will also apply to aspects of this project

Uranium recovery will be performed by standard heap leach methods on double lined leach pads with double lined process ponds using sulfuric acid as the leach solution. The uranium recovery facility will consist of the heap leach pads, process ponds, and a processing plant. Leach solution processing will be performed in an on-site processing plant using a solvent extraction circuit, a precipitation circuit and drying and packaging circuits producing the final yellow cake product. The spent heap, after leaching is completed, would be reclaimed in-place with all appropriate dismantled mill components and associated process

wastes (tailings). An appropriate cover would be placed over these tailings to ensure long-term stabilization. The proposed uranium recovery facility is located entirely on Federal land (BLM) while the adjacent mines are located on a mixture of Federal land (BLM) and State lands.

Titan would like to initiate discussions with EPA Region 8 regarding this project and EPA's understanding of the changes to 40 CFR Part 192 that are in process and 10 CFR Part 61, subpart W. I would like to propose a meeting in the afternoon of Thursday April 7th. If that does not work for you and your staff, could you please propose an alternate date and time. Thank you in advance for your help.

--

Toby Wright  
Wright Environmental Services Inc.  
3801 Automation Way, Suite 100  
Fort Collins, CO 80525  
[\(970\) 231-1160](tel:(970)231-1160)  
[WrightEnv@gmail.com](mailto:WrightEnv@gmail.com)

EPA-2195

**Reid Rosnick/DC/USEPA/US**

04/06/2011 02:27 PM

To Albion Carlson, Andrea Cherepy, Angelique Diaz, CharlesA Hooper, Charlie Garlow, Davis Zhen, George Brozowski, Kenneth Distler, Lena Ferris, Marilyn Ginsberg, Robert Duraski, Robert Dye, Stephen Hoffman, Stuart Walker, Susan Stahle, Valentine Anoma, Tim Benner, Tom Peake

cc

bcc

Subject Website

As promised:

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

There is a lot of information available on this website regarding the revision to the rulemaking, as well as historical document.

---

Reid J. Rosnick  
Radiation Protection Division (6608J)  
U.S. Environmental Protection Agency  
1200 Pennsylvania Ave., NW  
Washington, DC 20460  
202.343.9563  
[rosnick.reid@epa.gov](mailto:rosnick.reid@epa.gov)

EPA-2336

**Deborah  
Lebow-Aal/R8/USEPA/US**  
04/06/2011 05:05 PM

To Reid Rosnick  
cc  
bcc

Subject Re: Fw: Titan Uranium USA Sheep Mountain Project,  
Fremont County, Wyoming - agenda for tomorrow's meeting

It's on the calendar invite - 866 299-3188  
code: 3033126223

If for some reason you can't get through, call my cell at 303 514-6084

[Deborah Lebow Aal](#)  
U.S. Environmental Protection Agency  
Region 8 Air Program  
Acting Director, Air Program  
1595 Wynkoop Street  
Denver, CO 80202  
303 312-6223

Reid Rosnick      [Deb, Do you have a phone-in number f...](#)      04/06/2011 12:38:24 PM

From: Reid Rosnick/DC/USEPA/US  
To: Deborah Lebow-Aal/R8/USEPA/US@EPA  
Date: 04/06/2011 12:38 PM  
Subject: Re: Fw: Titan Uranium USA Sheep Mountain Project, Fremont County, Wyoming - agenda for tomorrow's meeting

Deb,

Do you have a phone-in number for me? If not we can use my call in number:

866-299-3188

code:2023439563

---

Reid J. Rosnick  
Radiation Protection Division (6608J)  
U.S. Environmental Protection Agency  
1200 Pennsylvania Ave., NW  
Washington, DC 20460  
202.343.9563  
rosnick.reid@epa.gov

Deborah Lebow-Aal      [Sara, I don't think we need an attor...](#)      04/06/2011 01:22:01 PM

From: Deborah Lebow-Aal/R8/USEPA/US  
To: Reid Rosnick/DC/USEPA/US@EPA, Kenneth Distler/R8/USEPA/US@EPA, Angelique Diaz/R8/USEPA/US@EPA, Robert Duraski/R8/USEPA/US@EPA, Sara Laumann/R8/USEPA/US@EPA  
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Subject: Fw: Titan Uranium USA Sheep Mountain Project, Fremont County, Wyoming - agenda for tomorrow's meeting

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Deborah Lebow-Aal/EPA Region 8 Air Program

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Doug Beahm/BRS Engineering

Toby Wright/Wright Env. Services

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Deborah Lebow Aal  
U.S. Environmental Protection Agency  
Region 8 Air Program  
Indoor Air, Toxics, & Transportation Unit

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[dbeahm@wyoming.com](mailto:dbeahm@wyoming.com)>, Chris Healey <[cmhealey@titanuranium.com](mailto:cmhealey@titanuranium.com)>

Subject: Re: Titan Uranium USA Sheep Mountain Project, Fremont County, Wyoming

Ms. Lebow-Aal;

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Toby Wright: Wright Env. Services/Permitting Lead

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Region 8 Air Program  
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Cc: Andrea Cherepy/DC/USEPA/US@EPA, Gregory L Adams  
<[glalwyo@bresnan.net](mailto:glalwyo@bresnan.net)>, Chris Healey  
<[cmhealey@titanuranium.com](mailto:cmhealey@titanuranium.com)>, Doug Beahm <  
[dbeahm@wyoming.com](mailto:dbeahm@wyoming.com)>  
Date: 03/18/2011 11:46 AM  
Subject: Titan Uranium USA Sheep Mountain Project, Fremont  
County,  
Wyoming

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I was referred to you by Andrea Cherepy of EPA HQ. I am working with Titan Uranium USA (Titan) on a uranium mining project and would like to initiate discussion with EPA regarding this project.

Titan Uranium USA Inc. (Titan) proposes to construct and operate the

Sheep Mountain uranium recovery facility (mill) to process uranium ore from Titan's adjacent mines and from area mines owned and operated by other entities in order to produce uranium oxide (U<sub>3</sub>O<sub>8</sub>) concentrate and to dispose of the resulting processing wastes in on-site tailings cells. The proposed project is located approximately 8 road miles South of Jeffrey City, Wyoming (Township 28 North, Range 92 West, Sections 4, 5, 9, 16, 17, 20, 21, 27, 29, 30, 32 and 33). The project is entirely within a previously mined and reclaimed area that maintains an active Permit to Mine (No. 381C) administrated by the Wyoming Department of Environmental Quality - Land Quality Division (WDEQ-LQD) in consultation with the US Bureau of Land Management (BLM). The mining will be regulated by the WDEQ-LQD and BLM, while the uranium recovery activities will be regulated by the U.S. Nuclear Regulatory Commission (NRC). Appropriate EPA regulations will also apply to aspects of this project

Uranium recovery will be performed by standard heap leach methods on double lined leach pads with double lined process ponds using sulfuric acid as the leach solution. The uranium recovery facility will consist of the heap leach pads, process ponds, and a processing plant. Leach solution processing will be performed in an on-site processing plant using a solvent extraction circuit, a precipitation circuit and drying and packaging circuits producing the final yellow cake product. The spent heap, after leaching is completed, would be reclaimed in-place with all appropriate dismantled mill components and associated process wastes (tailings). An appropriate cover would be placed over these tailings to ensure long-term stabilization. The proposed uranium recovery facility is located entirely on Federal land (BLM) while the

adjacent mines are located on a mixture of Federal land (BLM) and State lands.

Titan would like to initiate discussions with EPA Region 8 regarding this project and EPA's understanding of the changes to 40 CFR Part 192

that are in process and 10 CFR Part 61, subpart W. I would like to propose a meeting in the afternoon of Thursday April 7th. If that does

not work for you and your staff, could you please propose an alternate

date and time. Thank you in advance for your help.

--

Toby Wright  
Wright Environmental Services Inc.  
3801 Automation Way, Suite 100  
Fort Collins, CO 80525  
[\(970\) 231-1160](tel:(970)231-1160)  
[WrightEnv@gmail.com](mailto:WrightEnv@gmail.com)

EPA-2196

**Angelique Diaz/R8/USEPA/US** To Reid Rosnick  
04/07/2011 09:31 AM cc  
bcc  
Subject Re: Website

Hi, Reid! I'm back at work part time. I'm in the office Tuesdays and telecommuting Thursdays. Irena is 9 weeks old already and that time went by quickly. Today is day 2 of daycare and the first day was of course emotional for me but she was fine - as expected. Deb told me that I should be working on summarizing the comments we receive from the public on Pinon Ridge and to work to identify RadNet operators in our remaining cities, but let me know if there is any Subpart W workgroup work you need me to work on and I'll run it past her. The busier I am the better, then the days will go by quickly.

I'm guessing ORIA is very busy with all that is going on in Japan. I'll have to do my best to skim the many e-mails regarding the happenings.

I also have to send you Irena's 4 and 8 week pictures. As you can imagine she is SO CUTE!! She's smiling and "talking" quite a bit now and crying less. She went through a fussy phase and is still working her way out of it. I look forward to the summer when she's a bit older and hopefully even less fussy!

I'll try to call you next week.

-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

Reid Rosnick As promised: <http://www.epa.gov/radiat...> 04/06/2011 12:27:33 PM

From: Reid Rosnick/DC/USEPA/US  
To: Albion Carlson/R8/USEPA/US@EPA, Andrea Cherepy/DC/USEPA/US@EPA, Angelique Diaz/R8/USEPA/US@EPA, CharlesA Hooper/R7/USEPA/US@EPA, Charlie Garlow/DC/USEPA/US@EPA, Davis Zhen/R10/USEPA/US@EPA, George Brozowski/R6/USEPA/US@EPA, Kenneth Distler/R8/USEPA/US@EPA, Lena Ferris/DC/USEPA/US@EPA, Marilyn Ginsberg/DC/USEPA/US@EPA, Robert Duraski/R8/USEPA/US@EPA, Robert Dye/R7/USEPA/US@EPA, Stephen Hoffman/DC/USEPA/US@EPA, Stuart Walker/DC/USEPA/US@EPA, Susan Stahle/DC/USEPA/US@EPA, Valentine Anoma/DC/USEPA/US@EPA, Tim Benner/DC/USEPA/US@EPA, Tom Peake/DC/USEPA/US@EPA  
Date: 04/06/2011 12:27 PM  
Subject: Website

As promised:

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

There is a lot of information available on this website regarding the revision to the rulemaking, as well as historical document.

---

Reid J. Rosnick  
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U.S. Environmental Protection Agency  
1200 Pennsylvania Ave., NW  
Washington, DC 20460  
202.343.9563  
rosnick.reid@epa.gov

EPA-1771

**Susan Stahle/DC/USEPA/US**

04/07/2011 03:16 PM

To Travis Stills, "Bedig, Laurel (ENRD)", Sara Laumann, wmap,  
Deborah Lebow-Aal, Reid Rosnick

cc

bcc

Subject Subpart W call - conference call-in number, list of  
participants, and topics

Hello --

We are scheduled for a call Friday, April 8, at 11:30 am eastern time / 9:30 am mountain time. The call-in number is 1-866-299-3188, 2025645559#.

The following have been invited to participate on the call:

Travis Still - Energy Minerals Law Center  
Jeff Parsons - Western Mining Action Project

Laurel Bedig - U.S. Department of Justice

Deborah Lebow-Aal - U.S. EPA, Region 8  
Sara Laumann, - U.S. EPA, Region 8

Reid Rosnick - U.S. EPA, Office of Air and Radiation, Office of Radiation and Indoor Air (OAR/ORIA)  
Sue Stahle - U.S EPA/OGC

As I understand it, the two topics of the call are as follows (taken from Travis' email to me on 4/4/11):

1. "a couple of concerns regarding the [Subpart W] settlement [agreement]."
2. "Region 8's ongoing reliance on existing Subpart W in Colorado."

Talk with you all tomorrow.

Susan Stahle  
Air and Radiation Law Office (Rm 7502B)  
Office of General Counsel  
U.S. Environmental Protection Agency  
1200 Pennsylvania Avenue, NW (ARN: MC 2344A)  
Washington, D.C. 20460  
ph: (202) 564-1272  
fax: (202) 564-5603  
stahle.susan@epa.gov

EPA-2225

Reid Rosnick/DC/USEPA/US

04/08/2011 10:07 AM

To Tony Nesky

cc Tom Peake

bcc

Subject Reporter Contact

Tony,

I received a voice mail fro Steve Barrett of KOTO in Telluride, CO. ( 970-728-3206) His questions were about the proposed new Uranium mill in Pinon Ridge CO, and about the Subpart W time frame to proposal.

His first question was: Why is Region 8 approving the construction of the mill without waiting for the Subpart W revision? The answer is that we have an existing regulation in place that is protective of human health and the environment, and that is the regulation that Region 8 used to make the determination. I would also refer him to Deborah Lebow-Aal (303-312-6223) in the Region 8 office for more detailed explanations of the Region's process for approving the construction of the facility.

The second question is, What is the timeframe for proposal of a revised Subpart W? The answer is that we hope to propose around the end of the year. After that, we generally allow 60-90 days for comment, and we will also hold several public hearings to receive comment. After the comment period closes we will respond to all comments, and begin writing the final regulation. This process could take till the end of 2012.

Thanks. Please let me know if you have questions or need clarification.

Reid

---

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Washington, DC 20460  
202.343.9563  
rosnick.reid@epa.gov



EPA-2538

**Cathy Milbourn/DC/USEPA/US**

To Tony Nesky

04/08/2011 11:18 AM

cc Glenna Shields, Reid Rosnick

bcc

Subject Re: Press Inquiry on Uranium Mill and Revision of Subpart W, NESHAP for Radon Emissions from Tailings Ponds

Thanks Tony- I will work with OAR to get this answered.

Cathy

Catherine C. Milbourn  
Senior Press Officer  
Office of Media Relations  
U.S. Environmental Protection Agency  
Headquarters  
202-564-7849

Tony Nesky

Dear Cathy: A reporter from KOTO in C...

04/08/2011 10:14:38 AM

From: Tony Nesky/DC/USEPA/US  
To: Cathy Milbourn/DC/USEPA/US@EPA  
Cc: Reid Rosnick/DC/USEPA/US@EPA, Glenna Shields/DC/USEPA/US@EPA  
Date: 04/08/2011 10:14 AM  
Subject: Press Inquiry on Uranium Mill and Revision of Subpart W, NESHAP for Radon Emissions from Tailings Ponds

Dear Cathy:

A reporter from KOTO in Colorado left a voice mail message with Reid Rosnick asking some questions about our upcoming revision to Subpart W and how it relates to a proposed uranium mill. The reporter's contact information, the questions he asked, and Reid's responses are in Reid's email below. We haven't responded to the reporter, but are forwarding this up to the Press Office for response.

Thanks for your help!

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

----- Forwarded by Tony Nesky/DC/USEPA/US on 04/08/2011 10:09 AM -----

From: Reid Rosnick/DC/USEPA/US  
To: Tony Nesky/DC/USEPA/US@EPA  
Cc: Tom Peake/DC/USEPA/US@EPA  
Date: 04/08/2011 10:07 AM  
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Thanks. Please let me know if you have questions or need clarification.

Reid

---

Reid J. Rosnick  
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1200 Pennsylvania Ave., NW  
Washington, DC 20460  
202.343.9563  
rosnick.reid@epa.gov

EPA-5411

**Cathy Milbourn/DC/USEPA/US**

To Tony Nesky

04/08/2011 11:18 AM

cc Glenna Shields, Reid Rosnick

bcc

Subject Re: Press Inquiry on Uranium Mill and Revision of Subpart W, NESHAP for Radon Emissions from Tailings Ponds

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Catherine C. Milbourn  
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202-564-7849

Tony Nesky

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04/08/2011 10:14:38 AM

From: Tony Nesky/DC/USEPA/US  
To: Cathy Milbourn/DC/USEPA/US@EPA  
Cc: Reid Rosnick/DC/USEPA/US@EPA, Glenna Shields/DC/USEPA/US@EPA  
Date: 04/08/2011 10:14 AM  
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Tony Nesky  
Center for Radiation Information and Outreach  
Tel: 202-343-9597  
nesky.tony@epa.gov

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To: Tony Nesky/DC/USEPA/US@EPA  
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Date: 04/08/2011 10:07 AM  
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Thanks. Please let me know if you have questions or need clarification.

Reid

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rosnick.reid@epa.gov

EPA-1033

"Uranium Workshop"  
<UraniumWorkshop@nma.org  
>

04/08/2011 02:29 PM

To Reid Rosnick

cc

bcc

Subject Uranium Recovery Workshop 2011 NMAID=108150

**Registration Now** for the [Uranium Recovery Workshop 2011](#), May 25-26 at The Grand Hyatt, Denver, Colorado. **The Grand Hyatt in Denver has a special rate of \$141 per night until May 3.**

### **Who Should Attend?**

Uranium producers, representatives from the Nuclear Regulatory Commission, U.S. Department of Energy, Environmental Protection Agency, uranium recovery licensees and other stakeholders should attend this two-day workshop. Along with sessions highlighting critical issues affecting the uranium recovery industry, the workshop promotes a better understanding of regulatory trends and the uranium licensing program.

An agenda will be available shortly.

### **Registration**

NMA Member and Government Employee Rate: \$110.00

Non-NMA Member Rate: \$225.00

It is easy to register and to make your hotel reservation on line at <http://www.uraniumrecoveryworkshop2011.myevent.com/>. If you have any questions, please contact National Mining Association's Manager of Meetings Ashley West at [awest@nma.org](mailto:awest@nma.org) or (202) 463-2632.

EPA-4812

**Susan Stahle/DC/USEPA/US**

To

04/18/2011 04:58 PM

cc

bcc

Subject Discuss subpart W options paper

**Meeting**

Date 04/19/2011

Time 01:00:00 PM to 02:00:00 PM

Chair Susan Stahle

Invitees

Required Reid Rosnick

Optional

FYI

Location I will call you

EPA-4813

**Reid Rosnick/DC/USEPA/US**

04/19/2011 06:25 AM

To Susan Stahle

cc

bcc

Subject Accepted: Discuss subpart W options paper

EPA-1891

Reid Rosnick/DC/USEPA/US

To: Rafaela Ferguson

04/20/2011 07:00 AM

cc

bcc

Subject: Re: Write-ups for CRCPD

Rafie,

Looks good except for one thing. On the Subpart W paragraph, please change late winter 2012 to late winter 2011. That's it! Thanks

Reid

---

Reid J. Rosnick  
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1200 Pennsylvania Ave., NW  
Washington, DC 20460  
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rosnick.reid@epa.gov

Rafaela Ferguson

Reid, Are the write-ups below for 192...

04/19/2011 06:48:42 PM

From: Rafaela Ferguson/DC/USEPA/US  
To: Reid Rosnick/DC/USEPA/US@EPA  
Date: 04/19/2011 06:48 PM  
Subject: Write-ups for CRCPD

Reid,

Are the write-ups below for 192 and Subpart W accurate for RPD's report out to CRCPD? Would you let me know what changes you have, if any, to either write-up tomorrow, 4/20? Thanks!

Rafie

**Health and Environmental Standards for Uranium and Thorium Milling Facilities:** EPA is reviewing and may potentially revise its regulations for uranium and thorium milling to bring them up-to-date. The regulations now in effect, 40 CFR Part 192, were originally issued in 1983 under the authority of the Uranium Mill Tailings Radiation Control Act (UMTRCA), and last revised in 1995. They establish standards for protection of the public health, safety, and the environment from radiological and non-radiological hazards associated with uranium and thorium ore processing, possession, transfer, and disposal of resulting waste materials. The final cross-media standards must be adopted by the Nuclear Regulatory Commission and, subsequently, their Agreement States, as well as the Department of Energy. EPA is reviewing all of its standards in the existing regulations to take into account: changes in uranium industry technologies (such as utilization of the In-Situ Leaching recovery process as the principal current technology for extracting uranium) and their potential environmental impacts; revisions in EPA drinking and groundwater protection standards; judicial decisions concerning the existing regulations; issues relating to environmental justice, Tribal, and low-income populations; updated dose and risk factors, and scenarios, for assessing radiological and non-radiological risk;



facilities proposed in states outside existing uranium mining and milling areas; costs and benefits of possible revisions. To ensure an open and transparent rulemaking process, EPA has developed a Web site with postings of relevant documents, notices of opportunities for public input to the process, and notices of meetings at which the proposal may be discussed. Members of the public interested in this issue should visit <http://www.epa.gov/radiation/tenorm/>.

**Subpart W Activity:** NESHAP Subpart W is a radon emission standard for operating uranium mill tailings. In accordance with the Clean Air Act Amendments of 1990, EPA has formed a workgroup to review, and possibly revise the standard. EPA invites and encourages the public to provide comments on our review of Subpart W. As the Workgroup on Subpart W develops its tentative rulemaking, EPA will provide up-to-date information on recent or upcoming conference calls, resource documents, and relevant technical issues. EPA plans to propose a decision on Subpart W in late winter of 2011. After allowing for public comment and or hearings we plan to have a final decision in late winter of 2012. This estimate will be revised as needed. Please check the web site regularly, as more items will be added:  
<http://epa.gov/radiation/neshaps/subpartw>.

Rafaela Ferguson  
Special Assistant/Regional Coordinator  
Radiation Protection Division (6608J)  
Office of Radiation and Indoor Air  
U.S. Environmental Protection Agency  
1200 Pennsylvania Avenue, NW  
Washington, DC 20460  
Voice: 202-343-9362  
Fax: 202-343-2304  
Email: [ferguson.rafaela@epa.gov](mailto:ferguson.rafaela@epa.gov)

EPA-2627

Reid Rosnick/DC/USEPA/US

To Raymond Lee

04/26/2011 09:22 PM

cc

bcc

Subject Re: Subpart W Update

Hi Ray,

Hope all is well with you, we're all proud of everyone's hard work at the EOC. Yes, we are still on track for the Options Selection meeting in June. I'm going to call Wanda Farrar to set up the meeting tomorrow. It will be sometime in June. Hope to see you soon.

Reid

-----  
-----  
Reid J. Rosnick  
Radiation Protection Division (6608J)  
U.S. Environmental Protection Agency  
1200 Pennsylvania Ave., NW  
Washington, DC 20460  
202.343.9563  
[rosnick.reid@epa.gov](mailto:rosnick.reid@epa.gov)

-----Raymond Lee/DC/USEPA/US wrote: -----

To: Reid Rosnick/DC/USEPA/US@EPA  
From: Raymond Lee/DC/USEPA/US  
Date: 04/26/2011 05:46PM  
Subject: Subpart W Update

Hi Reid,

We have our monthly reg. briefing on Thursday and I wanted to double-check to see if everything was still on track for your rule. The next milestone we have is on 6/15/11, which is Options Selection. Is this still good? And is there anything you'd like me to mention to OAR staff?

Thanks!

Ray

Ray Lee | Center for Radiation Information and Outreach (CRIO) | US EPA | Phone 202.343.9463 | Fax 202.343.2305 | [lee.raymond@epa.gov](mailto:lee.raymond@epa.gov)

EPA-2643

Reid Rosnick/DC/USEPA/US

To Susan Stahle

04/27/2011 02:58 PM

cc

bcc

Subject Re: Accepted: Subpart W Workgroup Meeting

Thanks, Sue,

I took your suggestions, and I think the paper is much better thanks to your comments.

Reid

---

Reid J. Rosnick  
Radiation Protection Division (6608J)  
U.S. Environmental Protection Agency  
1200 Pennsylvania Ave., NW  
Washington, DC 20460  
202.343.9563  
rosnick.reid@epa.gov

Susan Stahle

Accepted: Subpart W Workgroup Meeting

04/27/2011 02:55:50 PM

**Accepted: Subpart W Workgroup Meeting**

**Thu 05/12/2011 1:00 PM - 2:00**

**PM**

Location: 1310 L St., NW Room 502 Rooms: 1310L Room 502/DC-1310L-OAR@EPA  
Call-in number - 866-299-3188

Conference Code 2023439563

**Susan Stahle** has accepted this meeting invitation

Required:

Albion Carlson/R8/USEPA/US@EPA, Andrea Cherepy/DC/USEPA/US@EPA, Angelique Diaz/R8/USEPA/US@EPA, CharlesA Hooper/R7/USEPA/US@EPA, Charlie Garlow/DC/USEPA/US@EPA, Davis Zhen/R10/USEPA/US@EPA, George Brozowski/R6/USEPA/US@EPA, Kenneth Distler/R8/USEPA/US@EPA, Lena Ferris/DC/USEPA/US@EPA, Marilyn Ginsberg/DC/USEPA/US@EPA, Robert Duraski/R8/USEPA/US@EPA, Robert Dye/R7/USEPA/US@EPA, Stephen Hoffman/DC/USEPA/US@EPA, Stuart Walker/DC/USEPA/US@EPA, Susan Stahle/DC/USEPA/US@EPA, Tim Benner/DC/USEPA/US@EPA, Tom Peake/DC/USEPA/US@EPA, Valentine Anoma/DC/USEPA/US@EPA

**Description**



EPA-4807

Susan Stahle/DC/USEPA/US

To Reid Rosnick

04/27/2011 03:05 PM

cc

bcc

Subject Re: Accepted: Subpart W Workgroup Meeting

It's a good team effort. :)

And speaking of teams, nice job Caps....

Susan Stahle  
Air and Radiation Law Office (Rm 7502B)  
Office of General Counsel  
U.S. Environmental Protection Agency  
1200 Pennsylvania Avenue, NW (ARN: MC 2344A)  
Washington, D.C. 20460  
ph: (202) 564-1272  
fax: (202) 564-5603  
stahle.susan@epa.gov

Reid Rosnick

Thanks, Sue, I took your suggestions, a...

04/27/2011 02:58:31 PM

From: Reid Rosnick/DC/USEPA/US  
To: Susan Stahle/DC/USEPA/US@EPA  
Date: 04/27/2011 02:58 PM  
Subject: Re: Accepted: Subpart W Workgroup Meeting

Thanks, Sue,

I took your suggestions, and I think the paper is much better thanks to your comments.

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Susan Stahle

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04/27/2011 02:55:50 PM

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**Description**

EPA-1336

Reid Rosnick/DC/USEPA/US

To Susan Stahle

04/28/2011 06:15 AM

cc

bcc

Subject Re: Accepted: Subpart W Workgroup Meeting

Yeah, someone to root for, since my Penguins went down last night ;(

---

Reid J. Rosnick  
Radiation Protection Division (6608J)  
U.S. Environmental Protection Agency  
1200 Pennsylvania Ave., NW  
Washington, DC 20460  
202.343.9563  
rosnick.reid@epa.gov

Susan Stahle

It's a good team effort. :) And speaking...

04/27/2011 03:05:45 PM

From: Susan Stahle/DC/USEPA/US  
To: Reid Rosnick/DC/USEPA/US@EPA  
Date: 04/27/2011 03:05 PM  
Subject: Re: Accepted: Subpart W Workgroup Meeting

It's a good team effort. :)

And speaking of teams, nice job Caps....

Susan Stahle  
Air and Radiation Law Office (Rm 7502B)  
Office of General Counsel  
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1200 Pennsylvania Avenue, NW (ARN: MC 2344A)  
Washington, D.C. 20460  
ph: (202) 564-1272  
fax: (202) 564-5603  
stahle.susan@epa.gov

Reid Rosnick

Thanks, Sue, I took your suggestions, a...

04/27/2011 02:58:31 PM

From: Reid Rosnick/DC/USEPA/US  
To: Susan Stahle/DC/USEPA/US@EPA  
Date: 04/27/2011 02:58 PM  
Subject: Re: Accepted: Subpart W Workgroup Meeting

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Location: 1310 L St., NW Room 502 Rooms: 1310L Room 502/DC-1310L-OAR@EPA  
Call-in number - 866-299-3188

Conference Code 2023439563

**Susan Stahle** has accepted this meeting invitation

Required:

Albion Carlson/R8/USEPA/US@EPA, Andrea Cherepy/DC/USEPA/US@EPA, Angelique Diaz/R8/USEPA/US@EPA, CharlesA Hooper/R7/USEPA/US@EPA, Charlie Garlow/DC/USEPA/US@EPA, Davis Zhen/R10/USEPA/US@EPA, George Brozowski/R6/USEPA/US@EPA, Kenneth Distler/R8/USEPA/US@EPA, Lena Ferris/DC/USEPA/US@EPA, Marilyn Ginsberg/DC/USEPA/US@EPA, Robert Duraski/R8/USEPA/US@EPA, Robert Dye/R7/USEPA/US@EPA, Stephen Hoffman/DC/USEPA/US@EPA, Stuart Walker/DC/USEPA/US@EPA, Susan Stahle/DC/USEPA/US@EPA, Tim Benner/DC/USEPA/US@EPA, Tom Peake/DC/USEPA/US@EPA, Valentine Anoma/DC/USEPA/US@EPA

**Description**





EPA-1010

**Scott Clow**  
<[sclow@utemountain.org](mailto:sclow@utemountain.org)>  
05/02/2011 01:21 PM

To Reid Rosnick  
cc Angelique Diaz, Dakota Hargett, Tomoe Natori  
bcc  
Subject RE: Notice of a Public Meeting to discuss NESHAP Subpart W

Dear Mr. Rosnick,  
Can you update on the current status of the NESHAP Subpart W review if it has changed since you presentation last year in White Mesa, UT?  
Thanks,  
Scott Clow  
Environmental Programs Director  
Ute Mountain Ute Tribe

-----Original Message-----

From: Rosnick.Reid@epamail.epa.gov [mailto:[Rosnick.Reid@epamail.epa.gov](mailto:Rosnick.Reid@epamail.epa.gov)]  
Sent: Monday, March 29, 2010 7:36 AM  
To: Scott Clow; [dfinerfrock@utah.gov](mailto:dfinerfrock@utah.gov); Cheryl Heying  
Cc: Diaz.Angelique@epamail.epa.gov  
Subject: Notice of a Public Meeting to discuss NESHAP Subpart W

Good Morning,

My name is Reid Rosnick, and I am an Environmental Scientist in the Office of Radiation and Indoor Air in EPA headquarters in Washington, DC. I am writing to you today to request opening a dialogue with you and alert you to some activities that EPA is or will be conducting regarding the re-evaluation of its NESHAP Subpart W regulation, radon emission standards for operating uranium mill tailings.

By way of background, the radon emission standard for operating uranium mill tailings was promulgated in 1989. Existing tailings piles (as of 12/89) had a radon emission standard. New facilities would meet work practice standards that limit size and number of tailings piles. The Clean Air Act Amendments of 1990 required review/revision of Subpart W within 10 years. Not long after promulgation of the standards, the uranium bust occurred, and most mills shut down. EPA resources were diverted to other projects, and the review/revision of the standard did not happen.

EPA was sued in 2008 for failure to review/revise the Subpart W standard in a timely manner. The plaintiffs agreed to settlement, and EPA has committed to review/revise the regulation in a timely manner. Additionally, we have developed a website ( <http://www.epa.gov/radiation/neshaps/subpartw/rulemaking-activity.html> ) that provides stakeholders with information regarding EPA's rulemaking activities, including historical documents from the 1989 rulemaking. We have committed to hosting a technical webinar this spring to provide ongoing information on our progress. We have also organized a number of public meetings to provide information to stakeholders regarding how EPA is approaching the review of the existing standard. We have already held meetings in Canon City CO, and Rapid City SD. We are also holding a meeting in the White Mesa Ute community on May 24, 2010 at the White Mesa Community Center. It is our attempt to hold these meetings in or

near communities that have been impacted by uranium mining and milling. We hope to receive input and advice from stakeholders regarding how we revise the radon standard.

Please feel free to contact me with any questions or comments you may have. Thank you

-----  
-----

Reid J. Rosnick  
Radiation Protection Division (6608J)  
U.S. Environmental Protection Agency  
1200 Pennsylvania Ave., NW  
Washington, DC 20460  
202.343.9563  
rosnick.reid@epa.gov

EPA-2372

Reid Rosnick/DC/USEPA/US

05/03/2011 08:10 AM

To Scott Clow

cc Angelique Diaz, Dakota Hargett, Tomoe Natori

bcc

Subject RE: Notice of a Public Meeting to discuss NESHAP Subpart W

Hello Scott,

The status of the Subpart W rule is progressing forward. We are headed into a phase called options selection, where we present the viable options for revising the regulation to our upper management. They then give us the proper direction on how to revise the standard and we set off writing the proposed regulation. We are on track to have that proposal around the end of the year. Please contact me if you need more information, or clarification of any issues. Thanks

Reid

---

Reid J. Rosnick  
Radiation Protection Division (6608J)  
U.S. Environmental Protection Agency  
1200 Pennsylvania Ave., NW  
Washington, DC 20460  
202.343.9563  
rosnick.reid@epa.gov

Scott Clow

Dear Mr. Rosnick, Can you update on t...

05/02/2011 01:23:11 PM

From: Scott Clow <sclow@utemountain.org>  
To: Reid Rosnick/DC/USEPA/US@EPA  
Cc: Angelique Diaz/R8/USEPA/US@EPA, Dakota Hargett <dhargett@utemountain.org>, Tomoe Natori <tnatori@utemountain.org>  
Date: 05/02/2011 01:23 PM  
Subject: RE: Notice of a Public Meeting to discuss NESHAP Subpart W

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Thanks,  
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Environmental Programs Director  
Ute Mountain Ute Tribe

-----Original Message-----

From: Rosnick.Reid@epamail.epa.gov [mailto:Rosnick.Reid@epamail.epa.gov]  
Sent: Monday, March 29, 2010 7:36 AM  
To: Scott Clow; dfinerfrock@utah.gov; Cheryl Heying  
Cc: Diaz.Angelique@epamail.epa.gov  
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U.S. Environmental Protection Agency  
1200 Pennsylvania Ave., NW  
Washington, DC 20460  
202.343.9563  
rosnick.reid@epa.gov

EPA-2720

**Scott Clow**  
<[sclow@utemountain.org](mailto:sclow@utemountain.org)>  
05/03/2011 10:44 AM

To Reid Rosnick  
cc Angelique Diaz, Dakota Hargett, Tomoe Natori, Celene  
Hawkins, Colin Larrick  
bcc  
Subject RE: Notice of a Public Meeting to discuss NESHAP Subpart  
W

Reid-

I will follow up with Region 8 regarding the actual implementation of the program where we are concerned.

Thanks,  
SCott

**From:** Rosnick.Reid@epamail.epa.gov [mailto:Rosnick.Reid@epamail.epa.gov]  
**Sent:** Tuesday, May 03, 2011 6:11 AM  
**To:** Scott Clow  
**Cc:** Diaz.Angelique@epamail.epa.gov; Dakota Hargett; Tomoe Natori  
**Subject:** RE: Notice of a Public Meeting to discuss NESHAP Subpart W

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Reid

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Radiation Protection Division (6608J)  
U.S. Environmental Protection Agency  
1200 Pennsylvania Ave., NW  
Washington, DC 20460  
202.343.9563  
[rosnick.reid@epa.gov](mailto:rosnick.reid@epa.gov)

From: Scott Clow <[sclow@utemountain.org](mailto:sclow@utemountain.org)>  
To: Reid Rosnick/DC/USEPA/US@EPA  
Cc: Angelique Diaz/R8/USEPA/US@EPA, Dakota Hargett <[dhargett@utemountain.org](mailto:dhargett@utemountain.org)>, Tomoe Natori  
<[tnatori@utemountain.org](mailto:tnatori@utemountain.org)>  
Date: 05/02/2011 01:23 PM  
Subject: RE: Notice of a Public Meeting to discuss NESHAP Subpart W

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Sent: Monday, March 29, 2010 7:36 AM  
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U.S. Environmental Protection Agency  
1200 Pennsylvania Ave., NW  
Washington, DC 20460  
202.343.9563  
rosnick.reid@epa.gov



EPA-1321

**Reid Rosnick/DC/USEPA/US**

05/04/2011 10:30 AM

To Albion Carlson, Andrea Cherepy, Angelique Diaz, CharlesA Hooper, Charlie Garlow, Davis Zhen, George Brozowski, Kenneth Distler, Lena Ferris, Marilyn Ginsberg, Robert Duraski, Robert Dye, Stephen Hoffman, Stuart Walker, Susan Stahle, Valentine Anoma, Tim Benner, Tom Peake

cc

bcc

Subject POC in AA/RAship

Good morning,

In preparation for the NESHAP Subpart W Options Selection briefing, which will be scheduled for sometime in late June, I would appreciate it if you could send the name of your AA/RA who should receive the invitation. You will also be copied on the invitation, along with representative to the Regulatory Steering Committee. Thanks in advance for your help, and I look forward to our discussion at the workgroup meeting next week.

Reid

---

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Radiation Protection Division (6608J)  
U.S. Environmental Protection Agency  
1200 Pennsylvania Ave., NW  
Washington, DC 20460  
202.343.9563  
rosnick.reid@epa.gov

EPA-1531

**Robert Dye/R7/USEPA/US**

To Reid Rosnick

05/04/2011 10:32 AM

cc

bcc

Subject Re: POC in AA/RAship

The Region VII Regional Administrator is Karl Brooks.

\_\_\_\_\_  
Bob Dye  
Radiation and Indoor Air  
EPA Region 7  
901 N. 5th Street  
Kansas City, KS 66101  
(913) 551-7605  
fax (913)551-7844  
dye.robert@epa.gov

Reid Rosnick

Good morning, In preparation for the N...

05/04/2011 09:30:48 AM

From: Reid Rosnick/DC/USEPA/US  
To: Albion Carlson/R8/USEPA/US@EPA, Andrea Cherepy/DC/USEPA/US@EPA, Angelique Diaz/R8/USEPA/US@EPA, CharlesA Hooper/R7/USEPA/US@EPA, Charlie Garlow/DC/USEPA/US@EPA, Davis Zhen/R10/USEPA/US@EPA, George Brozowski/R6/USEPA/US@EPA, Kenneth Distler/R8/USEPA/US@EPA, Lena Ferris/DC/USEPA/US@EPA, Marilyn Ginsberg/DC/USEPA/US@EPA, Robert Duraski/R8/USEPA/US@EPA, Robert Dye/R7/USEPA/US@EPA, Stephen Hoffman/DC/USEPA/US@EPA, Stuart Walker/DC/USEPA/US@EPA, Susan Stahle/DC/USEPA/US@EPA, Valentine Anoma/DC/USEPA/US@EPA, Tim Benner/DC/USEPA/US@EPA, Tom Peake/DC/USEPA/US@EPA  
Date: 05/04/2011 09:30 AM  
Subject: POC in AA/RAship

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U.S. Environmental Protection Agency  
1200 Pennsylvania Ave., NW  
Washington, DC 20460  
202.343.9563  
rosnick.reid@epa.gov

EPA-1322

Tim Benner/DC/USEPA/US

To Reid Rosnick

05/04/2011 10:33 AM

cc

bcc

Subject Re: POC in AA/RAship

Our assistant administrator is Paul Anastas. He will probably delegate the meeting to our office (OSP).

Tim Benner  
ORD / OSP  
202-564-6769

Reid Rosnick

Good morning, In preparation for the N...

05/04/2011 10:30:47 AM

From: Reid Rosnick/DC/USEPA/US  
To: Albion Carlson/R8/USEPA/US@EPA, Andrea Cherepy/DC/USEPA/US@EPA, Angelique Diaz/R8/USEPA/US@EPA, CharlesA Hooper/R7/USEPA/US@EPA, Charlie Garlow/DC/USEPA/US@EPA, Davis Zhen/R10/USEPA/US@EPA, George Brozowski/R6/USEPA/US@EPA, Kenneth Distler/R8/USEPA/US@EPA, Lena Ferris/DC/USEPA/US@EPA, Marilyn Ginsberg/DC/USEPA/US@EPA, Robert Duraski/R8/USEPA/US@EPA, Robert Dye/R7/USEPA/US@EPA, Stephen Hoffman/DC/USEPA/US@EPA, Stuart Walker/DC/USEPA/US@EPA, Susan Stahle/DC/USEPA/US@EPA, Valentine Anoma/DC/USEPA/US@EPA, Tim Benner/DC/USEPA/US@EPA, Tom Peake/DC/USEPA/US@EPA  
Date: 05/04/2011 10:30 AM  
Subject: POC in AA/RAship

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Washington, DC 20460  
202.343.9563  
rosnick.reid@epa.gov

EPA-1737

Charlie Garlow/DC/USEPA/US

To Reid Rosnick

05/04/2011 10:37 AM

cc

bcc

Subject Re: POC in AA/RAship

OECA's AA is Cynthia Giles.

Charlie Garlow, Attorney-Advisor  
US Environmental Protection Agency  
Air Enforcement Division  
202-564-1088 phone  
202-564-0068 fax  
1200 Pennsylvania Ave, NW, MC 2242A  
Washington, DC 20460 mail or 20004 courier

"Life's most urgent question is what are you doing to help others?" - - Martin Luther King, Jr.  
"Through the centuries, men [and women - ed.] of law have been persistently concerned with the resolution of disputes in ways that enable society to achieve its goals with a minimum of force and maximum of reason." - - Archibald Cox

Reid Rosnick

Good morning, In preparation for the N...

05/04/2011 10:30:48 AM

From: Reid Rosnick/DC/USEPA/US  
To: Albion Carlson/R8/USEPA/US@EPA, Andrea Cherepy/DC/USEPA/US@EPA, Angelique Diaz/R8/USEPA/US@EPA, CharlesA Hooper/R7/USEPA/US@EPA, Charlie Garlow/DC/USEPA/US@EPA, Davis Zhen/R10/USEPA/US@EPA, George Brozowski/R6/USEPA/US@EPA, Kenneth Distler/R8/USEPA/US@EPA, Lena Ferris/DC/USEPA/US@EPA, Marilyn Ginsberg/DC/USEPA/US@EPA, Robert Duraski/R8/USEPA/US@EPA, Robert Dye/R7/USEPA/US@EPA, Stephen Hoffman/DC/USEPA/US@EPA, Stuart Walker/DC/USEPA/US@EPA, Susan Stahle/DC/USEPA/US@EPA, Valentine Anoma/DC/USEPA/US@EPA, Tim Benner/DC/USEPA/US@EPA, Tom Peake/DC/USEPA/US@EPA  
Date: 05/04/2011 10:30 AM  
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U.S. Environmental Protection Agency  
1200 Pennsylvania Ave., NW  
Washington, DC 20460  
202.343.9563  
rosnick.reid@epa.gov



EPA-2614

Reid Rosnick/DC/USEPA/US

To Davis Zhen

05/04/2011 11:03 AM

cc

bcc

Subject Re: POC in AA/RAship

Hi Davis,

I don't think so. The protocol is to invite the RA, who has the discretion to send it to other levels.

Reid

---

Reid J. Rosnick  
Radiation Protection Division (6608J)  
U.S. Environmental Protection Agency  
1200 Pennsylvania Ave., NW  
Washington, DC 20460  
202.343.9563  
rosnick.reid@epa.gov

Davis Zhen

Dennis McLerran, Region 10 Do you ne...

05/04/2011 11:02:16 AM

---

From: Davis Zhen/R10/USEPA/US  
To: Reid Rosnick/DC/USEPA/US@EPA  
Date: 05/04/2011 11:02 AM  
Subject: Re: POC in AA/RAship

Dennis McLerran, Region 10

Do you need the DRA and Air Directors?

Davis

Reid Rosnick

Good morning, In preparation for the N...

05/04/2011 07:30:49 AM

---

From: Reid Rosnick/DC/USEPA/US  
To: Albion Carlson/R8/USEPA/US@EPA, Andrea Cherepy/DC/USEPA/US@EPA, Angelique Diaz/R8/USEPA/US@EPA, CharlesA Hooper/R7/USEPA/US@EPA, Charlie Garlow/DC/USEPA/US@EPA, Davis Zhen/R10/USEPA/US@EPA, George Brozowski/R6/USEPA/US@EPA, Kenneth Distler/R8/USEPA/US@EPA, Lena Ferris/DC/USEPA/US@EPA, Marilyn Ginsberg/DC/USEPA/US@EPA, Robert Duraski/R8/USEPA/US@EPA, Robert Dye/R7/USEPA/US@EPA, Stephen Hoffman/DC/USEPA/US@EPA, Stuart Walker/DC/USEPA/US@EPA, Susan Stahle/DC/USEPA/US@EPA, Valentine Anoma/DC/USEPA/US@EPA, Tim Benner/DC/USEPA/US@EPA, Tom Peake/DC/USEPA/US@EPA  
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202.343.9563  
[rosnick.reid@epa.gov](mailto:rosnick.reid@epa.gov)

EPA-1721

Mike Boyd/DC/USEPA/US  
05/04/2011 06:50 PM

To OAR-ORIA-RPD-CST, OAR-ORIA-RPD-CWMMR  
cc  
bcc

Subject Fw: Public comment review period now open for ATSDR  
Toxicological Profile for Uranium

If you're interested in reviewing and providing comments, ATSDR has just released its proposed update of the toxicological profile for uranium.

Mike

----- Forwarded by Mike Boyd/DC/USEPA/US on 05/04/2011 06:43 PM -----

From: "Keith, Sam (ATSDR/DTEM/ATB)" <ldk4@cdc.gov>  
To: Mike Boyd/DC/USEPA/US@EPA  
Date: 05/04/2011 05:28 PM  
Subject: Public comment review period now open for ATSDR Toxicological Profile for Uranium

---

Mike,

I appreciate your interest in receiving a copy of the new public comment draft of the Toxicological Profile for Uranium, developed by the Agency for Toxic Substances and Disease Registry. We welcome your review comments and encourage you to share this message with others.

The document is available on the Internet at  
<http://www.atsdr.cdc.gov/ToxProfiles/TP.asp?id=440&tid=77>.

Please note the end date for receiving comments is July 29, 2011, and that information on submitting comments is located in the foreword, which says:

Comments should be sent to:  
Agency for Toxic Substances and Disease Registry  
Division of Toxicology and Environmental Medicine  
Applied Toxicology Branch

Regular Mailing Address:	Physical Mailing Address:
1600 Clifton Road, N.E.	4770 Buford Highway
Mail Stop F-62	Building 106, 8th floor, MS F-62
Atlanta, Georgia 30333	Chamblee, Georgia 30341

Electronic Comments may be submitted via: [www.regulations.gov](http://www.regulations.gov) .  
Follow the on-line instructions for submitting comments identified by Docket ID No. CDC-2011-0005.

Best regards,  
Sam Keith



EPA-2430

Reid Rosnick/DC/USEPA/US

05/05/2011 08:29 AM

To Andrea Cherepy

cc

bcc

Subject Fw: Uranium Recovery Workshop 2011 NMAID=108150

Registration information/link is at the bottom

---

Reid J. Rosnick  
Radiation Protection Division (6608J)  
U.S. Environmental Protection Agency  
1200 Pennsylvania Ave., NW  
Washington, DC 20460  
202.343.9563  
rosnick.reid@epa.gov

----- Forwarded by Reid Rosnick/DC/USEPA/US on 05/05/2011 08:28 AM -----

From: "Uranium Workshop" <UraniumWorkshop@nma.org>  
To: Reid Rosnick/DC/USEPA/US@EPA  
Date: 05/02/2011 09:20 AM  
Subject: Uranium Recovery Workshop 2011 NMAID=108150



**National Mining Association (NMA)/Nuclear Regulatory Commission (NRC)**  
**Uranium Recovery Workshop 2011**  
The Grand Hyatt - Denver, Colorado  
May 25-26, 2011

**Registration is open** for the [Uranium Recovery Workshop 2011!](#) The workshop will be held May 25-26 at the Grand Hyatt in Denver, Colorado.

The Uranium Recovery Workshop 2011 hotel room block at the Grand Hyatt Denver is sold out. The Grand Hyatt Denver does have rooms available on the evenings of May 25 and May 26 at their best available rate. To make hotel reservations please contact the Grand Hyatt Denver directly at (303) 295-1234 or (800) 233-1234. The workshop website has a list of hotels that are close to the Grand Hyatt Denver.

**Workshop topics include:**

- Review of NRC's regulatory program for uranium recovery activities, NRC fees
- Uranium Market Overview

- Application of Numerical Ground Flow Models to Uranium ISR Projects
- Using MILDOS –AREA to Determine Maximally Exposed Member of the Public to Demonstrate Companies with 10 CFR 20.1301 & .1302
- Performance-Based Licenses for Uranium Recovery Facilities
- Evaluating Risk of Release from Engineered Containments
- Coupling a Geochemical Model to Site Hydrogeological Models to Optimize Uranium Ore Production and Establish Achievable Restoration Objectives
- Update of In Situ Recovery in Colorado
- EPA Update: Subpart W Activities, Planned Review of EPA UMTRCA-Based Regulations
- Department of Transportation Regulations Related to Uranium Recovery Facilities
- Suggested Paths Forward: NRC/Industry Health Physics Focus Group
- Lessons Learned, Stakeholder Forums and more.

To schedule a “side-bar meeting” with NRC staff on May 24, please contact Steve Cohen at of NRC at [Stephen.cohen@nrc.gov](mailto:Stephen.cohen@nrc.gov) or (301) 415-7182 by May 10, 2011.

### **Who Should Attend?**

Uranium producers, representatives from the Nuclear Regulatory Commission, U.S. Department of Energy, Environmental Protection Agency, uranium recovery licensees, land holders and other stakeholders should attend the two-day workshop. Along with the sessions highlighting critical issues affecting the uranium recovery industry, the workshop promotes a better understanding of regulatory trends and the uranium licensing program.

### **Registration and Hotel Information**

NMA Member and Government Employee Rate: \$110.00 per person

Non-NMA Member Rate: \$225.00 per person

Registration and a list of hotels near the Grand Hyatt Denver may be made on line at <http://www.uraniumrecoveryworkshop2011.myevent.com/>. If you have any questions, please contact the National Mining Association’s Manager of Meetings Ashley West at [awest@nma.org](mailto:awest@nma.org) or (202) 463-2639.

EPA-2111

**Reid Rosnick/DC/USEPA/US**

05/05/2011 10:19 AM

To Beth Miller

cc

bcc

Subject Addition to Sub W web site

Beth

The attached link goes to a draft ATSDR Toxicological Profile for Uranium. The comment period ends on July 29, 2011. Could you please post this on the Subpart W website. Let me know if you have any questions. Thanks

Reid

<http://www.atsdr.cdc.gov/ToxProfiles/TP.asp?id=440&tid=77>

---

Reid J. Rosnick  
Radiation Protection Division (6608J)  
U.S. Environmental Protection Agency  
1200 Pennsylvania Ave., NW  
Washington, DC 20460  
202.343.9563  
[rosnick.reid@epa.gov](mailto:rosnick.reid@epa.gov)

EPA-1387

Reid Rosnick/DC/USEPA/US

To Beth Miller

05/05/2011 11:33 AM

cc

bcc

Subject Re: Addition to Sub W web site

Thank you ;-)

---

Reid J. Rosnick  
Radiation Protection Division (6608J)  
U.S. Environmental Protection Agency  
1200 Pennsylvania Ave., NW  
Washington, DC 20460  
202.343.9563  
rosnick.reid@epa.gov

Beth Miller

updated <http://www.epa.gov/radiation/n...>

05/05/2011 11:14:45 AM

From: Beth Miller/DC/USEPA/US  
To: Reid Rosnick/DC/USEPA/US@EPA  
Date: 05/05/2011 11:14 AM  
Subject: Re: Addition to Sub W web site

updated

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

Reid Rosnick

Beth [The attached link goes to a draft...](#)

05/05/2011 10:19:24 AM

From: Reid Rosnick/DC/USEPA/US  
To: Beth Miller/DC/USEPA/US@EPA  
Date: 05/05/2011 10:19 AM  
Subject: Addition to Sub W web site

Beth

The attached link goes to a draft ATSDR Toxicological Profile for Uranium. The comment period ends on July 29, 2011. Could you please post this on the Subpart W website. Let me know if you have any questions. Thanks

Reid

<http://www.atsdr.cdc.gov/ToxProfiles/TP.asp?id=440&tid=77>

---

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Washington, DC 20460  
202.343.9563  
rosnick.reid@epa.gov

EPA-1766

**Stuart Walker/DC/USEPA/US**

To Reid Rosnick

05/05/2011 07:34 PM

cc

bcc

Subject Re: Subpart W Options Paper

I will try to provide some thoughts

Reid Rosnick

Hi Stuart, I'm sorry you won't be able to...

05/05/2011 10:29:59 AM

From: Reid Rosnick/DC/USEPA/US  
To: Stuart Walker/DC/USEPA/US@EPA  
Date: 05/05/2011 10:29 AM  
Subject: Subpart W Options Paper

---

Hi Stuart,

I'm sorry you won't be able to attend the workgroup meeting next week. I was hoping to get your input on the various options laid out in the draft options paper. If there is any way you can review the attached document and provide some comments or impressions I would appreciate it very much. I'm hoping we can stick to our schedule at this point, and your input would be extremely helpful. Thanks again.

Reid

[attachment "Subpart W Options Paper1.docx" deleted by Stuart Walker/DC/USEPA/US]

---

Reid J. Rosnick  
Radiation Protection Division (6608J)  
U.S. Environmental Protection Agency  
1200 Pennsylvania Ave., NW  
Washington, DC 20460  
202.343.9563  
rosnick.reid@epa.gov

EPA-1767

Reid Rosnick/DC/USEPA/US

To Stuart Walker

05/06/2011 06:18 AM

cc

bcc

Subject Re: Subpart W Options Paper

Thank you.

---

Reid J. Rosnick  
Radiation Protection Division (6608J)  
U.S. Environmental Protection Agency  
1200 Pennsylvania Ave., NW  
Washington, DC 20460  
202.343.9563  
rosnick.reid@epa.gov

Stuart Walker

I will try to provide some thoughts From...

05/05/2011 07:34:54 PM

---

From: Stuart Walker/DC/USEPA/US  
To: Reid Rosnick/DC/USEPA/US@EPA  
Date: 05/05/2011 07:34 PM  
Subject: Re: Subpart W Options Paper

I will try to provide some thoughts

Reid Rosnick

Hi Stuart, I'm sorry you won't be able to...

05/05/2011 10:29:59 AM

---

From: Reid Rosnick/DC/USEPA/US  
To: Stuart Walker/DC/USEPA/US@EPA  
Date: 05/05/2011 10:29 AM  
Subject: Subpart W Options Paper

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[attachment "Subpart W Options Paper1.docx" deleted by Stuart Walker/DC/USEPA/US]

---

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Washington, DC 20460  
202.343.9563  
rosnick.reid@epa.gov

EPA-2325

Cindy Huang/DC/USEPA/US

05/06/2011 12:31 PM

To Raymond Lee

cc Amit Srivastava, Julia Miller, Reid Rosnick, Cynthia Browne  
bcc

Subject Re: Fw: Options Selection Meeting Request

Hi Mr. Lee,

Thanks for your email - I don't mean to nitpick, but could you send it through Anna Duncan (and CC Virginia Stradford)? It's just in case she has something to add to the meeting request that doesn't come up after I put it on Gina's schedule - if she says OK, then I know it's good to schedule. I appreciate you reaching out!

Sincerely,  
Cindy

Cindy Huang  
(202) 564-7404

Raymond Lee

[Hi Amit/Julia/Cindy, Here is the Options...](#)

05/06/2011 11:07:50 AM

From: Raymond Lee/DC/USEPA/US  
To: Amit Srivastava/DC/USEPA/US@EPA, Julia Miller/DC/USEPA/US@EPA, Cindy Huang/DC/USEPA/US@EPA  
Cc: Reid Rosnick/DC/USEPA/US@EPA  
Date: 05/06/2011 11:07 AM  
Subject: Fw: Options Selection Meeting Request

---

Hi Amit/Julia/Cindy,

Here is the Options Selection meeting request for our ORIA NESHAPS reg. that I pinged Amit about a couple days ago. Please let us know if you have any questions.

Thanks!

Ray

Ray Lee | Center for Radiation Information and Outreach (CRIO) | US EPA | Phone 202.343.9463 | Fax 202.343.2305 | lee.raymond@epa.  
----- Forwarded by Raymond Lee/DC/USEPA/US on 05/06/2011 11:06 AM -----

From: Reid Rosnick/DC/USEPA/US  
To: Raymond Lee/DC/USEPA/US@EPA  
Cc: Tom Peake/DC/USEPA/US@EPA  
Date: 05/05/2011 08:32 AM  
Subject: Options Selection Meeting Request

---

Ray,

Here it is, please let me know if you have any questions. Thanks for your help.

Reid

[attachment "Assistant Administrator Options Selection - NESHAPS Uranium Mill Tailings.docx" deleted  
by Cindy Huang/DC/USEPA/US]

---

Reid J. Rosnick  
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[rosnick.reid@epa.gov](mailto:rosnick.reid@epa.gov)



EPA-2474

Susan Stahle/DC/USEPA/US

To Reid Rosnick

05/06/2011 04:17 PM

cc

bcc

Subject Re: POC in AA/RAship

I forget - is this a Tier 1 or a Tier 2 rule? If a Tier 1 rule, then I'd invite Scott Fulton, General Counsel. If a Tier 2 rule, I'd invite Avi Garbow, Deputy General Counsel.

Susan Stahle  
Air and Radiation Law Office (Rm 7502B)  
Office of General Counsel  
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Washington, D.C. 20460  
ph: (202) 564-1272  
fax: (202) 564-5603  
stahle.susan@epa.gov

Reid Rosnick

Good morning, In preparation for the N...

05/04/2011 10:30:47 AM

From: Reid Rosnick/DC/USEPA/US  
To: Albion Carlson/R8/USEPA/US@EPA, Andrea Cherepy/DC/USEPA/US@EPA, Angelique Diaz/R8/USEPA/US@EPA, CharlesA Hooper/R7/USEPA/US@EPA, Charlie Garlow/DC/USEPA/US@EPA, Davis Zhen/R10/USEPA/US@EPA, George Brozowski/R6/USEPA/US@EPA, Kenneth Distler/R8/USEPA/US@EPA, Lena Ferris/DC/USEPA/US@EPA, Marilyn Ginsberg/DC/USEPA/US@EPA, Robert Duraski/R8/USEPA/US@EPA, Robert Dye/R7/USEPA/US@EPA, Stephen Hoffman/DC/USEPA/US@EPA, Stuart Walker/DC/USEPA/US@EPA, Susan Stahle/DC/USEPA/US@EPA, Valentine Anoma/DC/USEPA/US@EPA, Tim Benner/DC/USEPA/US@EPA, Tom Peake/DC/USEPA/US@EPA  
Date: 05/04/2011 10:30 AM  
Subject: POC in AA/RAship

Good morning,

In preparation for the NESHAP Subpart W Options Selection briefing, which will be scheduled for sometime in late June, I would appreciate it if you could send the name of your AA/RA who should receive the invitation. You will also be copied on the invitation, along with representative to the Regulatory Steering Committee. Thanks in advance for your help, and I look forward to our discussion at the workgroup meeting next week.

Reid

-----  
Reid J. Rosnick  
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1200 Pennsylvania Ave., NW  
Washington, DC 20460  
202.343.9563  
rosnick.reid@epa.gov

EPA-4838

Susan Stahle/DC/USEPA/US

To Reid Rosnick

05/06/2011 04:17 PM

cc

bcc

Subject Re: POC in AA/RAship

I forget - is this a Tier 1 or a Tier 2 rule? If a Tier 1 rule, then I'd invite Scott Fulton, General Counsel. If a Tier 2 rule, I'd invite Avi Garbow, Deputy General Counsel.

Susan Stahle  
Air and Radiation Law Office (Rm 7502B)  
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stahle.susan@epa.gov

Reid Rosnick

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05/04/2011 10:30:47 AM

From: Reid Rosnick/DC/USEPA/US  
To: Albion Carlson/R8/USEPA/US@EPA, Andrea Cherepy/DC/USEPA/US@EPA, Angelique Diaz/R8/USEPA/US@EPA, CharlesA Hooper/R7/USEPA/US@EPA, Charlie Garlow/DC/USEPA/US@EPA, Davis Zhen/R10/USEPA/US@EPA, George Brozowski/R6/USEPA/US@EPA, Kenneth Distler/R8/USEPA/US@EPA, Lena Ferris/DC/USEPA/US@EPA, Marilyn Ginsberg/DC/USEPA/US@EPA, Robert Duraski/R8/USEPA/US@EPA, Robert Dye/R7/USEPA/US@EPA, Stephen Hoffman/DC/USEPA/US@EPA, Stuart Walker/DC/USEPA/US@EPA, Susan Stahle/DC/USEPA/US@EPA, Valentine Anoma/DC/USEPA/US@EPA, Tim Benner/DC/USEPA/US@EPA, Tom Peake/DC/USEPA/US@EPA  
Date: 05/04/2011 10:30 AM  
Subject: POC in AA/RAship

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Reid

-----  
Reid J. Rosnick  
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202.343.9563  
rosnick.reid@epa.gov

EPA-2006

Reid Rosnick/DC/USEPA/US

To Raymond Lee

05/06/2011 04:40 PM

cc

bcc

Subject Fw: Re: POC in AA/RAship

Ray,

I might have messed up the OGC Rep. It should be Avi Garbow

-----  
-----  
Reid J. Rosnick  
Radiation Protection Division (6608J)  
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1200 Pennsylvania Ave., NW  
Washington, DC 20460  
202.343.9563  
[rosnick.reid@epa.gov](mailto:rosnick.reid@epa.gov)

-----Forwarded by Reid Rosnick/DC/USEPA/US on 05/06/2011 04:39PM -----

To: Reid Rosnick/DC/USEPA/US@EPA  
From: Susan Stahle/DC/USEPA/US  
Date: 05/06/2011 04:17PM  
Subject: Re: POC in AA/RAship

I forget - is this a Tier 1 or a Tier 2 rule? If a Tier 1 rule, then I'd invite Scott Fulton, General Counsel. If a Tier 2 rule, I'd invite Avi Garbow, Deputy General Counsel.

Susan Stahle  
Air and Radiation Law Office (Rm 7502B)  
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U.S. Environmental Protection Agency  
1200 Pennsylvania Avenue, NW (ARN: MC 2344A)  
Washington, D.C. 20460  
ph: (202) 564-1272  
fax: (202) 564-5603  
[stahle.susan@epa.gov](mailto:stahle.susan@epa.gov)

Inactive hide details for Reid Rosnick---05/04/2011 10:30:47 AM---Good morning, In preparation for the NESHAP Subpart W Options  
[Reid Rosnick---05/04/2011 10:30:47 AM---Good morning, In preparation for the NESHAP Subpart W Options Selection briefing, which will be sche](#)

From: Reid Rosnick/DC/USEPA/US

To: Albion Carlson/R8/USEPA/US@EPA, Andrea Cherepy/DC/USEPA/US@EPA, Angelique Diaz/R8/USEPA/US@EPA, CharlesA Hooper/R7/USEPA/US@EPA, Charlie Garlow/DC/USEPA/US@EPA, Davis Zhen/R10/USEPA/US@EPA, George Brozowski/R6/USEPA/US@EPA, Kenneth Distler/R8/USEPA/US@EPA, Lena Ferris/DC/USEPA/US@EPA, Marilyn Ginsberg/DC/USEPA/US@EPA, Robert

Duraski/R8/USEPA/US@EPA, Robert Dye/R7/USEPA/US@EPA, Stephen Hoffman/DC/USEPA/US@EPA, Stuart Walker/DC/USEPA/US@EPA, Susan Stahle/DC/USEPA/US@EPA, Valentine Anoma/DC/USEPA/US@EPA, Tim Benner/DC/USEPA/US@EPA, Tom Peake/DC/USEPA/US@EPA

Date: 05/04/2011 10:30 AM

Subject: POC in AA/RAship

---

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Reid

-----  
-----  
Reid J. Rosnick  
Radiation Protection Division (6608J)  
U.S. Environmental Protection Agency  
1200 Pennsylvania Ave., NW  
Washington, DC 20460  
202.343.9563  
[rosnick.reid@epa.gov](mailto:rosnick.reid@epa.gov)

EPA-2475

Reid Rosnick/DC/USEPA/US

To Susan Stahle

05/06/2011 04:41 PM

cc

bcc

Subject Re: POC in AA/RAship

Thanks, Sue

It's Tier 2. Don't make it any more difficult than it needs to be ;-)

-----  
-----  
Reid J. Rosnick  
Radiation Protection Division (6608J)  
U.S. Environmental Protection Agency  
1200 Pennsylvania Ave., NW  
Washington, DC 20460  
202.343.9563  
[rosnick.reid@epa.gov](mailto:rosnick.reid@epa.gov)

-----Susan Stahle/DC/USEPA/US wrote: -----

To: Reid Rosnick/DC/USEPA/US@EPA  
From: Susan Stahle/DC/USEPA/US  
Date: 05/06/2011 04:17PM  
Subject: Re: POC in AA/RAship

I forget - is this a Tier 1 or a Tier 2 rule? If a Tier 1 rule, then I'd invite Scott Fulton, General Counsel. If a Tier 2 rule, I'd invite Avi Garbow, Deputy General Counsel.

Susan Stahle  
Air and Radiation Law Office (Rm 7502B)  
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U.S. Environmental Protection Agency  
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Washington, D.C. 20460  
ph: (202) 564-1272  
fax: (202) 564-5603  
[stahle.susan@epa.gov](mailto:stahle.susan@epa.gov)

Inactive hide details for Reid Rosnick---05/04/2011 10:30:47 AM---Good morning, In preparation for the NESHAP Subpart W Options Reid Rosnick---05/04/2011 10:30:47 AM---Good morning, In preparation for the NESHAP Subpart W Options Selection briefing, which will be sche

From: Reid Rosnick/DC/USEPA/US  
To: Albion Carlson/R8/USEPA/US@EPA, Andrea Cherepy/DC/USEPA/US@EPA, Angelique Diaz/R8/USEPA/US@EPA, CharlesA Hooper/R7/USEPA/US@EPA, Charlie Garlow/DC/USEPA/US@EPA, Davis Zhen/R10/USEPA/US@EPA, George Brozowski/R6/USEPA/US@EPA, Kenneth Distler/R8/USEPA/US@EPA, Lena Ferris/DC/USEPA/US@EPA, Marilyn Ginsberg/DC/USEPA/US@EPA, Robert

Duraski/R8/USEPA/US@EPA, Robert Dye/R7/USEPA/US@EPA, Stephen Hoffman/DC/USEPA/US@EPA, Stuart Walker/DC/USEPA/US@EPA, Susan Stahle/DC/USEPA/US@EPA, Valentine Anoma/DC/USEPA/US@EPA, Tim Benner/DC/USEPA/US@EPA, Tom Peake/DC/USEPA/US@EPA

Date: 05/04/2011 10:30 AM

Subject: POC in AA/RAship

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Reid

-----  
-----  
Reid J. Rosnick  
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1200 Pennsylvania Ave., NW  
Washington, DC 20460  
202.343.9563  
[rosnick.reid@epa.gov](mailto:rosnick.reid@epa.gov)

EPA-5796

Anna Duncan/DC/USEPA/US

To Mike Flynn

05/09/2011 01:05 PM

cc

bcc

Subject Fw: Options Selection Meeting Request

Mike, you are you OK with RPD getting an option selection mtg scheduled for Uranium Mill Tailings regulations (Subpart W) updates? Cindy wants OD level OK before proceeding with mtg scheduling.

Anna Duncan  
Chief of Staff  
Office of Radiation and Indoor Air  
U.S.EPA  
Phone : 202-343-9316

----- Forwarded by Anna Duncan/DC/USEPA/US on 05/09/2011 01:02 PM -----

From: Raymond Lee/DC/USEPA/US  
To: Anna Duncan/DC/USEPA/US@EPA  
Cc: Virginia Stradford/DC/USEPA/US@EPA, Cindy Huang/DC/USEPA/US@EPA, Reid Rosnick/DC/USEPA/US@EPA  
Date: 05/06/2011 01:04 PM  
Subject: Fw: Options Selection Meeting Request

---

Hi Anna,

We were instructed by Cindy Huang in Gina's office to run this Options Selection meeting request by you. Let us know if you have anything to add to it or if we're ok with proceeding.

Thanks!

Ray

Ray Lee | Center for Radiation Information and Outreach (CRIO) | US EPA | Phone 202.343.9463 | Fax 202.343.2305 | lee.raymond@epa.gov

----- Forwarded by Raymond Lee/DC/USEPA/US on 05/06/2011 01:03 PM -----

From: Raymond Lee/DC/USEPA/US  
To: Amit Srivastava/DC/USEPA/US@EPA, Julia Miller/DC/USEPA/US@EPA, Cindy Huang/DC/USEPA/US@EPA  
Cc: Reid Rosnick/DC/USEPA/US@EPA  
Date: 05/06/2011 11:07 AM  
Subject: Fw: Options Selection Meeting Request

---

Hi Amit/Julia/Cindy,

Here is the Options Selection meeting request for our ORIA NESHAPS reg. that I pinged Amit about a couple days ago. Please let us know if you have any questions.

Thanks!

Ray

Ray Lee | Center for Radiation Information and Outreach (CRIO) | US EPA | Phone 202.343.9463 | Fax 202.343.2305 | lee.raymond@epa.  
----- Forwarded by Raymond Lee/DC/USEPA/US on 05/06/2011 11:06 AM -----

From: Reid Rosnick/DC/USEPA/US  
To: Raymond Lee/DC/USEPA/US@EPA  
Cc: Tom Peake/DC/USEPA/US@EPA  
Date: 05/05/2011 08:32 AM  
Subject: Options Selection Meeting Request

---

Ray,

Here it is, please let me know if you have any questions. Thanks for your help.

Reid

[attachment "Assistant Administrator Options Selection - NESHAPS Uranium Mill Tailings.docx" deleted  
by Anna Duncan/DC/USEPA/US]

---

Reid J. Rosnick  
Radiation Protection Division (6608J)  
U.S. Environmental Protection Agency  
1200 Pennsylvania Ave., NW  
Washington, DC 20460  
202.343.9563  
rosnick.reid@epa.gov



EPA-2711

**EAS.System@EPA**  
05/09/2011 02:23 PM

To Reid Rosnick  
cc  
bcc

Subject EAS Document Notification: For your reference: Award:  
EP-D-10-042/2-03

Award: EP-D-10-042/2-03 has been approved by Jared Van Buskirk in EAS.  
Modification: 000001  
Description: Technical/Regulatory Support for Subpart W of NESHAPS  
Owner: Valerie Daigler  
Contract Specialist: Nnenna Njoku  
Contracting Officer: Jared Van Buskirk  
Project Officer: Valerie Daigler  
Site: OAR/ORIA  
Contracting Office: RTPPOD

EPA-6235

Anna Duncan/DC/USEPA/US

To Mike Flynn

05/10/2011 07:57 AM

cc

bcc

Subject Re: Options Selection Meeting Request

I felt the same way and wasn't sure whether I had missed an RPD conversation in this Reg with you. Today's briefing is about the 190 Anpr. They are seeking the last in June for option selection mtg which is when Gina plans to be in AK so I guess it will get scheduled for early July.

to -----\Sent by EPA Wireless E-Mail Services.

Mike Flynn

----- Original Message -----

**From:** Mike Flynn

**Sent:** 05/09/2011 06:48 PM EDT

**To:** Anna Duncan

**Subject:** Re: Options Selection Meeting Request

Well, I didn't realize we were this far along - I need an update from RPD.

to -----\Sent by EPA Wireless E-Mail Services.

Anna Duncan

----- Original Message -----

**From:** Anna Duncan

**Sent:** 05/09/2011 01:05 PM EDT

**To:** Mike Flynn

**Subject:** Fw: Options Selection Meeting Request

Mike, you are you OK with RPD getting an option selection mtg scheduled for Uranium Mill Tailings regulations (Subpart W) updates? Cindy wants OD level OK before proceeding with mtg scheduling.

Anna Duncan

Chief of Staff

Office of Radiation and Indoor Air

U.S.EPA

Phone : 202-343-9316

----- Forwarded by Anna Duncan/DC/USEPA/US on 05/09/2011 01:02 PM -----

From: Raymond Lee/DC/USEPA/US

To: Anna Duncan/DC/USEPA/US@EPA

Cc: Virginia Stradford/DC/USEPA/US@EPA, Cindy Huang/DC/USEPA/US@EPA, Reid

Rosnick/DC/USEPA/US@EPA

Date: 05/06/2011 01:04 PM

Subject: Fw: Options Selection Meeting Request

Hi Anna,

We were instructed by Cindy Huang in Gina's office to run this Options Selection meeting request by you. Let us know if you have anything to add to it or if we're ok with proceeding.

Thanks!

Ray

Ray Lee | Center for Radiation Information and Outreach (CRIO) | US EPA | Phone 202.343.9463 | Fax 202.343.2305 | lee.raymond@epa.  
----- Forwarded by Raymond Lee/DC/USEPA/US on 05/06/2011 01:03 PM -----

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To: Amit Srivastava/DC/USEPA/US@EPA, Julia Miller/DC/USEPA/US@EPA, Cindy Huang/DC/USEPA/US@EPA  
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Thanks!

Ray

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To: Raymond Lee/DC/USEPA/US@EPA  
Cc: Tom Peake/DC/USEPA/US@EPA  
Date: 05/05/2011 08:32 AM  
Subject: Options Selection Meeting Request

---

Ray,

Here it is, please let me know if you have any questions. Thanks for your help.

Reid

[attachment "Assistant Administrator Options Selection - NESHAPS Uranium Mill Tailings.docx" deleted by Anna Duncan/DC/USEPA/US]

-----  
Reid J. Rosnick  
Radiation Protection Division (6608J)  
U.S. Environmental Protection Agency  
1200 Pennsylvania Ave., NW  
Washington, DC 20460  
202.343.9563  
rosnick.reid@epa.gov

EPA-1074

"Phelleps, Moya"  
<MPhelleps@nma.org>  
05/11/2011 11:28 AM

To Reid Rosnick  
cc Andrea Cherepy  
bcc  
Subject RE: Uranium Recovery Workshop 2011 -- Speaker Information

Reid and Andrea:

My apologies...I have everything I need from both of you. Andrea, for some reason you ended up in my spam filter. Have made the adjustment and apologize.

Moya

**From:** Phelleps, Moya  
**Sent:** Wednesday, May 11, 2011 11:23 AM  
**To:** Rosnick.Reid@epamail.epa.gov  
**Cc:** Cherepy.Andrea@epamail.epa.gov  
**Subject:** RE: Uranium Recovery Workshop 2011 -- Speaker Information

Reid:

We have allocated 40 minutes for the presentation so that should be fine for you and Andrea.

Andrea, attached is a speaker form for you to complete and return to me as soon as possible.

Please let me know if you have any questions.

Thanks.

Moya

Moya Phelleps  
Senior Vice President, Member Services  
National Mining Association  
101 Constitution Avenue, N.W.  
Washington, DC 20001  
Phone: 202-463-2639

**From:** Rosnick.Reid@epamail.epa.gov [mailto:Rosnick.Reid@epamail.epa.gov]  
**Sent:** Monday, May 09, 2011 9:46 AM  
**To:** Phelleps, Moya  
**Cc:** Cherepy.Andrea@epamail.epa.gov  
**Subject:** Re: Uranium Recovery Workshop 2011 -- Speaker Information

Moya,

Attached are the speaker form and bio information you requested. Please be aware that I will be giving the presentation on the Subpart W update, and my colleague Andrea Cherepy will be presenting the review of the UMTRCA-Based regulations. We will each do approximately 15 minutes for each topic, and then will allow 10 minutes for questions. I spoke with Katie Sweeney last week to confirm this, and she said it would not be a problem. We will do our best to get the presentations to you by the 20th. Please contact me if you have any questions, or desire further information. Thank you.

Reid

---

Reid J. Rosnick  
Radiation Protection Division (6608J)  
U.S. Environmental Protection Agency  
1200 Pennsylvania Ave., NW  
Washington, DC 20460  
202.343.9563  
[rosnick.reid@epa.gov](mailto:rosnick.reid@epa.gov)

From: "Phelleps,Moya" <[MPhelleps@nma.org](mailto:MPhelleps@nma.org)>  
To: Reid Rosnick/DC/USEPA/US@EPA  
Date: 04/21/2011 03:58 PM  
Subject: Uranium Recovery Workshop 2011 -- Speaker Information

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Reid:

Thank you very much for agreeing to participate in Uranium Recovery Workshop 2011, sponsored by the National Mining Association and the Nuclear Regulatory Commission. The workshop is May 25-26 at the Grand Hyatt Denver, Denver, Colo. This e-mail will provide you with information concerning your presentation and registration.

**Your presentation, "EPA Update: Subpart W Activities, Planned Review of EPA UMTRCA-Based Regulations" is on Thursday, March 26 from 11:25 a.m. – 12:05 p.m.** The formal remarks should be approximately 30 minutes with 10 minutes for question and answer.

Attached is a form that requests your audiovisual needs and permission to post your presentation on the URW page located on the NMA web site. NMA also would appreciate receiving biographical information that can be for an introduction. **The deadline for the speaker form and the biographical information is Monday, May 9.**

If you are giving a PowerPoint presentation, NMA would appreciate receiving a copy of the presentation by **Friday, May 20** so it may be pre-loaded on the laptop ready for your use.

If you have not registered, registration may be done on-line at <http://www.uraniumrecoveryworkshop2011.myevent.com/>. To reserve a room, please call the Grand Hyatt Denver at (303) 295-1234 or (800) 233-1234 and refer to the "National Mining Association" block of rooms. The hotel block is available until **Tuesday, May 3** at the NMA room rate of \$141 per night subject to room availability.

Please return all of the requested materials to my attention at [mpelleps@nma.org](mailto:mpelleps@nma.org) or fax (202) 463-2648. Should you have any questions or need further information, please contact me at (202) 463-2639.

Thank you very much.

Moya

Moya Phelleps

Senior Vice President, Member Services

National Mining Association

101 Constitution Avenue, N.W.

Washington, DC 20001

Phone: 202-463-2639

[attachment "Rosnick Speaker Form.doc" deleted by Reid Rosnick/DC/USEPA/US]

EPA-3485

**Gina McCarthy/DC/USEPA/US**

Sent by: Cynthia Browne

05/11/2011 02:53 PM

To Avi Garbow, Cynthia Giles-AA, Janet McCabe, Jonathan Edwards, Joseph Goffman, Lisa Garcia, Mathy Stanislaus, Michael Goo, Mike Flynn, Paul Anastas, Reid Rosnick, Rob Brenner, Tom Peake

cc Addie Johnson, Al Armendariz, Alan Perrin, Amit Srivastava, Andrea Cherepy, Carlos Evans, Charlie Garlow, Cindy Huang, Dennis McLerran, Don Zinger, Janet Means-Thomas, Julia Miller, Karl Brooks, Lena Ferris, maggorian.matthew, Nelida Torres, Robert Fegley, Steve Tuber, Stuart Walker, Susan Stahle, Tim Benner, Tom Eagles

bcc

Subject Options Selection for NESHAP Amendments for Operating Uranium Mill Tailings (Subpart W) SAN: 5281, RIN:2060-AP26, Tier 2

### **Meeting**

Date 06/30/2011

Time 01:00:00 PM to 01:45:00 PM

Chair Gina McCarthy

Invitees

Required Anna Duncan; Avi Garbow; Cynthia Giles-AA; Edward Messina; Janet McCabe; Jim Jones; Jonathan Edwards; Joseph Goffman; Lisa Garcia; Mathy Stanislaus; Michael Goo; Mike Flynn; Paul Anastas; Reid Rosnick; Rob Brenner; Tom Peake

Optional Addie Johnson; Al Armendariz; Alan Perrin; Amit Srivastava; Andrea Cherepy; Bruce Schillo; Carlos Evans; Charlie Garlow; Cindy Huang; Dennis McLerran; Don Zinger; Janet Means-Thomas; Julia Miller; Karl Brooks; Lena Ferris; maggorian.matthew; Nelida Torres; OP ADP Tracking; Robert Fegley; Steve Tuber; Stuart Walker; Susan Stahle; Tim Benner; Tom Eagles; Venu Ghanta

FYI

Location ARN-OAR-Room 5415  
conference:1-866-299-3188  
access:202-564-7437







**SCHEDULE PROPOSAL**

TODAY'S DATE: 5/4/2011



**Requesting Office:** OAR/ORIA



**Event/Meeting:** Options Selection for NESHAP Amendments for Operating Uranium Mill Tailings (Subpart W) SAN: 5281, RIN: 2060-AP26, Tier 2



**Purpose /Background:** NESHAP Subpart W protects human health and the environment by setting radon emission standards and work practices for operating uranium mill tailings impoundments. The Clean Air Act Amendments of 1990 (§112(q)(1)) require EPA to review and revise the NESHAP requirements every ten years. We have entered into a Consent Agreement with two Colorado environmental groups that commit us to develop a proposed and final standard because the Agency missed the ten year deadline. In the process of reviewing the status of uranium milling facilities, it became clear that a new type of process had taken over as the major type of uranium recovery. That type is in-situ leach (ISL) uranium recovery, as well as a third type of milling, heap leach. These types of facilities were not contemplated in the original Subpart W standard. The facilities would fall under our regulation by utilizing impoundments that store tailings. These facilities also have NRC (or Agreement State) operating licenses and may have UIC permits from EPA or authorized states.





The purpose of the meeting is Options Selection. As per Section 112(d)(5) of the CAA Amendments the workgroup will propose selecting GACT standards for three categories of uranium recovery facilities, conventional mills (with 2 sub-categories, pre-1985 and post-1985), in-situ leach impoundments and heap leach piles.



Workgroup members: Andrea Cherepy (ORIA), Susan Stahle (OGC), Lena Ferris (OP), Tim Benner (ORD), Charlie Garlow (OECA), Stuart Walker (OSRTI), Steve Hoffman (OSWER), Marilyn Ginsburg (OW), George Brozowski (R6), Bob Dye (R7), Charles Hooper (R7), Angelique Diaz (R8), Ken Distler (R8), Davis Zhen (R10)



**Key considerations in the review of the Subpart W NESHAPs are:**



- Updating the existing standards to conform to CAAA requirements at §112(d)



- Addition of two major types of uranium milling units.

- Issues related to the regulation of heap leach piles

- Determining if facilities should extend air monitoring requirements



**Date:** Last week in June (6/27/11 – 6/30/11)



**Time (Duration):** Request a 45-minute meeting to provide an overview of: Present options for GACT categories. Present options for regulation of heap leach piles, and present options for extending monitoring requirements under Subpart W.





**Location:** Bullet room, with conference call option.

**Participants (Required):**

<u>Office/Organization</u>	<u>Name</u>
OAR	Gina McCarthy
OAR	Janet McCabe
OAR	Rob Brenner
ORIA	Mike Flynn
ORIA	Jonathan Edwards
ORIA	Reid Rosnick (Workgroup chair)
ORIA	Tom Peake
OGC	Avi Garbow
ORD	Paul Anastas
OECA	Cynthia Giles
OP	Michael Goo
OA	Lisa Garcia
OSRTI	Mathy Stanislaus

Optional:

ORIA	Andrea Cherepy (Workgroup member)
ORIA	Alan Perrin
OAR	Don Zinger
OAR-OPAR	Tom Eagles
OGC	Susan Stahle (Workgroup member)
ORD	Tim Benner (Workgroup member)
OSRTI	Stuart Walker (Workgroup member)
OECA	Charlie Garlow (Workgroup member)
OP	Lena Ferris (Workgroup member)
OSWER	Steve Hoffman (Workgroup member)
ORD	Bob Fegley
R6	Al Armendariz
R7	Karl Brooks
R8	Stephen Tuber
R10	Dennis McLerrin
<u>OW</u>	<u>Marilyn Ginsburg (Workgroup Member)</u>

Staff Contact: Cindy Huang (202.564.7404)  
Ray Lee (202.343.9463)

Technical Contact: Reid Rosnick (202.343.9563)  
Tom Peake (202.343.9765)

\_\_\_\_\_ **ACCEPT**

\_\_\_\_\_ **REGRET**

\_\_\_\_\_ **PENDING**

EPA-5820

**Jonathan  
Edwards/DC/USEPA/US**  
05/12/2011 11:08 AM

To Mike Flynn, Anna Duncan  
cc Alan Perrin  
bcc  
Subject Fw: Options Selection for NESHAP Amendments for  
Operating Uranium Mill Tailings (Subpart W) SAN: 5281,  
RIN:2060-AP26, Tier 2

Mike and Anna--- we noticed that Jim Jones wasn't on the invite--- we are suggesting that Jim be added, in the event that Gina can't cover and the meeting gets deferred to Jim. You want to raise with Cindy/Jim during your next visit to front office? --Jon

----- Forwarded by Jonathan Edwards/DC/USEPA/US on 05/12/2011 11:04 AM -----

### **Options Selection for NESHAP Amendments for Operating Uranium Mill Tailings (Subpart W) SAN: 5281, RIN:2060-AP26, Tier 2**

**Thu 06/30/2011 12:15 PM - 1:00  
PM**

Attendance is for Jonathan Edwards

Chair: **Gina McCarthy/DC/USEPA/US**

Sent By: **Cynthia Browne/DC/USEPA/US**

Location: ARN-OAR-Room 5415 Rooms: ARN-OAR-Room-5415/DC-ARN-OAR@EPA  
conference:1-866-299-3188  
access:202-564-7437

Required:

Avi Garbow/DC/USEPA/US@EPA, Cynthia Giles-AA/DC/USEPA/US@EPA, Janet McCabe/DC/USEPA/US@EPA, Jonathan Edwards/DC/USEPA/US@EPA, Joseph Goffman/DC/USEPA/US@EPA, Lisa Garcia/DC/USEPA/US@EPA, Mathy Stanislaus/DC/USEPA/US@EPA, Michael Goo/DC/USEPA/US@EPA, Mike Flynn/DC/USEPA/US@EPA, Paul Anastas/DC/USEPA/US@EPA, Reid Rosnick/DC/USEPA/US@EPA, Rob Brenner/DC/USEPA/US@EPA, Tom Peake/DC/USEPA/US@EPA

Optional:

Addie Johnson/DC/USEPA/US@EPA, Al Armendariz/R6/USEPA/US@EPA, Alan Perrin/DC/USEPA/US@EPA, Amit Srivastava/DC/USEPA/US@EPA, Andrea Cherepy/DC/USEPA/US@EPA, Carlos Evans/DC/USEPA/US@EPA, Charlie Garlow/DC/USEPA/US@EPA, Cindy Huang/DC/USEPA/US@EPA, Dennis McLerran/R10/USEPA/US@EPA, Don Zinger/DC/USEPA/US@EPA, Janet Means-Thomas/DC/USEPA/US@EPA, Julia Miller/DC/USEPA/US@EPA, Karl Brooks/R7/USEPA/US@EPA, Lena Ferris/DC/USEPA/US@EPA, maggorian.matthew@epa.gov, Nelida Torres/DC/USEPA/US@EPA, Robert Fegley/DC/USEPA/US@EPA, Steve Tuber/R8/USEPA/US@EPA, Stuart Walker/DC/USEPA/US@EPA, Susan Stahle/DC/USEPA/US@EPA, Tim Benner/DC/USEPA/US@EPA, Tom Eagles/DC/USEPA/US@EPA

Description

5/4/2011

**Requesting Office:** OAR/ORIA

**Event/Meeting:** Options Selection for NESHAP Amendments for Operating Uranium Mill Tailings (Subpart W) SAN: 5281, RIN: 2060-AP26, Tier 2

**Purpose /Background:** NESHAP Subpart W protects human health and the environment by setting radon emission standards and work practices for operating uranium mill tailings impoundments. The Clean Air Act Amendments of 1990 (§112(q)(1)) require EPA to review and revise the NESHAP requirements every ten years. We have entered into a Consent Agreement with two Colorado environmental groups that commit us to develop a proposed and final standard because the Agency missed the ten year deadline. In the process of reviewing the status of uranium milling facilities, it became clear that a new type of process had taken over as the major type of uranium recovery. That type is in-situ leach (ISL) uranium recovery, as well as a third type of milling, heap leach. These types of facilities were not contemplated in the original Subpart W standard. The facilities would fall under our regulation by utilizing impoundments that store tailings. These facilities also have NRC (or Agreement State) operating licenses and may have UIC permits from EPA or authorized states.

The purpose of the meeting is Options Selection. As per Section 112(d)(5) of the CAA Amendments the workgroup will propose selecting GACT standards for three categories of uranium recovery facilities, conventional mills (with 2 sub-categories, pre-1985 and post-1985), in-situ leach impoundments and heap leach piles.

Workgroup members: Andrea Cherepy (ORIA), Susan Stahle (OGC), Lena Ferris (OP), Tim Benner (ORD), Charlie Garlow (OECA), Stuart Walker (OSRTI), Steve Hoffman (OSWER), Marilyn Ginsburg (OW), George Brozowski (R6), Bob Dye (R7), Charles Hooper (R7), Angelique Diaz (R8), Ken Distler (R8), Davis Zhen (R10)

**Key considerations in the review of the Subpart W NESHAPs are:**

- Updating the existing standards to conform to CAAA requirements at §112(d)
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**Date:** Last week in June (6/27/11 – 6/30/11)

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**Participants (Required):**

Office/Organization

Name

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OAR	Janet McCabe
OAR	Rob Brenner
ORIA	Mike Flynn
ORIA	Jonathan Edwards
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ORIA	Tom Peake
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Optional:

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R10	Dennis McLerrin
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Staff Contact: Cindy Huang (202.564.7404)  
Ray Lee (202.343.9463)

Technical Contact: Reid Rosnick (202.343.9563)  
Tom Peake (202.343.9765)

\_\_\_\_\_ **ACCEPT**

\_\_\_\_\_ **REGRET**

\_\_\_\_\_ **PENDING**

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**Personal Notes**

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EPA-5951

Anna Duncan/DC/USEPA/US

05/12/2011 01:10 PM

To Jonathan Edwards

cc Mike Flynn, Alan Perrin

bcc

Subject Re: Fw: Options Selection for NESHAP Amendments for Operating Uranium Mill Tailings (Subpart W) SAN: 5281, RIN:2060-AP26, Tier 2

Thanks, Jon, for noting this. I will ask Cindy to cc Jim now on this invite and we will mention it to him on Wednesday when we have our first general with him.

Could you send me the briefing package that Mike that was referring to (something you used recently, maybe with Gina? ) that would be a good intro for Jim Jones about this regulatory action? Thanks

Anna Duncan  
Chief of Staff  
Office of Radiation and Indoor Air  
U.S.EPA  
Phone : 202-343-9316

Jonathan Edwards

Mike and Anna--- we noticed that Ji...

05/12/2011 11:08:13 AM

From: Jonathan Edwards/DC/USEPA/US  
To: Mike Flynn/DC/USEPA/US@EPA, Anna Duncan/DC/USEPA/US@EPA  
Cc: Alan Perrin/DC/USEPA/US@EPA  
Date: 05/12/2011 11:08 AM  
Subject: Fw: Options Selection for NESHAP Amendments for Operating Uranium Mill Tailings (Subpart W) SAN: 5281, RIN:2060-AP26, Tier 2

Mike and Anna--- we noticed that Jim Jones wasn't on the invite--- we are suggesting that Jim be added, in the event that Gina can't cover and the meeting gets deferred to Jim. You want to raise with Cindy/Jim during your next visit to front office? --Jon

----- Forwarded by Jonathan Edwards/DC/USEPA/US on 05/12/2011 11:04 AM -----

## Options Selection for NESHAP Amendments for Operating Uranium Mill Tailings (Subpart W) SAN: 5281, RIN:2060-AP26, Tier 2

Thu 06/30/2011 12:15 PM - 1:00 PM

Attendance is for Jonathan Edwards

Chair: **Gina McCarthy/DC/USEPA/US**

Sent By: **Cynthia Browne/DC/USEPA/US**

Location: ARN-OAR-Room 5415 Rooms: ARN-OAR-Room-5415/DC-ARN-OAR@EPA  
conference:1-866-299-3188  
access:202-564-7437

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Rosnick/DC/USEPA/US@EPA, Rob Brenner/DC/USEPA/US@EPA, Tom Peake/DC/USEPA/US@EPA

Optional:

Addie Johnson/DC/USEPA/US@EPA, Al Armendariz/R6/USEPA/US@EPA, Alan Perrin/DC/USEPA/US@EPA, Amit Srivastava/DC/USEPA/US@EPA, Andrea Cherepy/DC/USEPA/US@EPA, Carlos Evans/DC/USEPA/US@EPA, Charlie Garlow/DC/USEPA/US@EPA, Cindy Huang/DC/USEPA/US@EPA, Dennis McLerran/R10/USEPA/US@EPA, Don Zinger/DC/USEPA/US@EPA, Janet Means-Thomas/DC/USEPA/US@EPA, Julia Miller/DC/USEPA/US@EPA, Karl Brooks/R7/USEPA/US@EPA, Lena Ferris/DC/USEPA/US@EPA, maggorian.matthew@epa.gov, Nelida Torres/DC/USEPA/US@EPA, Robert Fegley/DC/USEPA/US@EPA, Steve Tuber/R8/USEPA/US@EPA, Stuart Walker/DC/USEPA/US@EPA, Susan Stahle/DC/USEPA/US@EPA, Tim Benner/DC/USEPA/US@EPA, Tom Eagles/DC/USEPA/US@EPA

## Description

2

### **SCHEDULE PROPOSAL**

5/4/2011

TODAY'S DATE:

**Requesting Office:** OAR/ORIA

**Event/Meeting:** Options Selection for NESHAP Amendments for Operating Uranium Mill Tailings (Subpart W) SAN: 5281, RIN: 2060-AP26, Tier 2

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OAR	Rob Brenner
ORIA	Mike Flynn
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ORD	Paul Anastas
OECA	Cynthia Giles
OP	Michael Goo
OA	Lisa Garcia
OSRTI	Mathy Stanislaus

Optional:

ORIA	Andrea Cherepy (Workgroup member)
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OECA	Charlie Garlow (Workgroup member)



OP	Lena Ferris (Workgroup member)
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R8	Stephen Tuber
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<u>OW</u>	<u>Marilyn Ginsburg (Workgroup Member)</u>

Staff Contact: Cindy Huang (202.564.7404)  
Ray Lee (202.343.9463)

Technical Contact: Reid Rosnick (202.343.9563)  
Tom Peake (202.343.9765)

\_\_\_\_ **ACCEPT**

\_\_\_\_ **REGRET**

\_\_\_\_ **PENDING**

---

**Personal Notes**

---

EPA-6364

**Marilyn  
Ginsberg/DC/USEPA/US**  
05/12/2011 01:37 PM

To Ann Codrington  
cc  
bcc

Subject Subpart W briefing invitation for Mr. Shapiro -- to invite or not to invite, that is the question

Hi Ann,

The OAR workgroup on Subpart W (a radon emission standard for operating uranium mill tailings) was formed to satisfy a provision in the Clean Air Act stating that EPA shall review, and if appropriate, revise, the National Emissions Standard for Hazardous Air Pollutants (NESHAP) that were in effect prior to November 15, 1990. I am an informal participant on that workgroup; there is no other OW member. The purpose of my participation is to identify any OW issues that may arise. Considering the purpose of the workgroup, such issues would be highly unlikely, and, thus far, I have identified none.

In preparation for the NESHAP Subpart W Options Selection briefing, which will be scheduled for sometime in late June, OAR will be sending out invitations to the AAs and RAs of the workgroup participants. OAR would like to know which AAs/RAs to invite. In my humble opinion, there is no reason for Mr. Shapiro (or a designee) to attend, because we have no OW-related issues. Could you please tell me whether or not OAR should send an invitation to our AA? I will then inform the workgroup chair.

Thanks, MG

EPA-5920

**Ann**  
**Codrington/DC/USEPA/US**  
05/12/2011 02:09 PM

To "Roy Simon", "Marilyn Ginsberg"  
cc  
bcc

Subject Fw: Subpart W briefing invitation for Mr. Shapiro -- to invite or not to invite, that is the question

Stephanie may know.

-----  
Sent by EPA Wireless E-Mail Services  
Marilyn Ginsberg

----- Original Message -----

**From:** Marilyn Ginsberg  
**Sent:** 05/12/2011 01:37 PM EDT  
**To:** Ann Codrington

**Subject:** Subpart W briefing invitation for Mr. Shapiro -- to invite or not to invite, that is the question

Hi Ann,

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Thanks, MG

EPA-5952

**Jonathan  
Edwards/DC/USEPA/US**  
05/12/2011 03:26 PM

To Anna Duncan  
cc Mike Flynn, Alan Perrin, Rafaela Ferguson  
bcc

Subject Re: Fw: Options Selection for NESHAP Amendments for  
Operating Uranium Mill Tailings (Subpart W) SAN: 5281,  
RIN:2060-AP26, Tier 2

Hi Anna--- the briefing package I mentioned was broader than just this regulatory action, it covered all Tier 1 actions and some other items....Rafie is currently working on pulling the latest version together....Jon

Anna Duncan Thanks, Jon, for noting this. I will ask C... 05/12/2011 01:09:51 PM

From: Anna Duncan/DC/USEPA/US  
To: Jonathan Edwards/DC/USEPA/US@EPA  
Cc: Mike Flynn/DC/USEPA/US@EPA, Alan Perrin/DC/USEPA/US@EPA  
Date: 05/12/2011 01:09 PM  
Subject: Re: Fw: Options Selection for NESHAP Amendments for Operating Uranium Mill Tailings (Subpart W) SAN: 5281, RIN:2060-AP26, Tier 2

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Anna Duncan  
Chief of Staff  
Office of Radiation and Indoor Air  
U.S.EPA  
Phone : 202-343-9316

Jonathan Edwards Mike and Anna--- we noticed that Ji... 05/12/2011 11:08:13 AM

From: Jonathan Edwards/DC/USEPA/US  
To: Mike Flynn/DC/USEPA/US@EPA, Anna Duncan/DC/USEPA/US@EPA  
Cc: Alan Perrin/DC/USEPA/US@EPA  
Date: 05/12/2011 11:08 AM  
Subject: Fw: Options Selection for NESHAP Amendments for Operating Uranium Mill Tailings (Subpart W) SAN: 5281, RIN:2060-AP26, Tier 2

Mike and Anna--- we noticed that Jim Jones wasn't on the invite--- we are suggesting that Jim be added, in the event that Gina can't cover and the meeting gets deferred to Jim. You want to raise with Cindy/Jim during your next visit to front office? --Jon

----- Forwarded by Jonathan Edwards/DC/USEPA/US on 05/12/2011 11:04 AM -----

## **Options Selection for NESHAP Amendments for Operating Uranium Mill Tailings (Subpart W) SAN: 5281, RIN:2060-AP26, Tier 2**

**Thu 06/30/2011 12:15 PM - 1:00 PM**

Attendance is for Jonathan Edwards

Chair: **Gina McCarthy/DC/USEPA/US**

Sent By: **Cynthia Browne/DC/USEPA/US**  
Location: ARN-OAR-Room 5415 Rooms: ARN-OAR-Room-5415/DC-ARN-OAR@EPA  
conference:1-866-299-3188  
access:202-564-7437

Required:	Avi Garbow/DC/USEPA/US@EPA, Cynthia Giles-AA/DC/USEPA/US@EPA, Janet McCabe/DC/USEPA/US@EPA, Jonathan Edwards/DC/USEPA/US@EPA, Joseph Goffman/DC/USEPA/US@EPA, Lisa Garcia/DC/USEPA/US@EPA, Mathy Stanislaus/DC/USEPA/US@EPA, Michael Goo/DC/USEPA/US@EPA, Mike Flynn/DC/USEPA/US@EPA, Paul Anastas/DC/USEPA/US@EPA, Reid Rosnick/DC/USEPA/US@EPA, Rob Brenner/DC/USEPA/US@EPA, Tom Peake/DC/USEPA/US@EPA
Optional:	Addie Johnson/DC/USEPA/US@EPA, Al Armendariz/R6/USEPA/US@EPA, Alan Perrin/DC/USEPA/US@EPA, Amit Srivastava/DC/USEPA/US@EPA, Andrea Cherepy/DC/USEPA/US@EPA, Carlos Evans/DC/USEPA/US@EPA, Charlie Garlow/DC/USEPA/US@EPA, Cindy Huang/DC/USEPA/US@EPA, Dennis McLerran/R10/USEPA/US@EPA, Don Zinger/DC/USEPA/US@EPA, Janet Means-Thomas/DC/USEPA/US@EPA, Julia Miller/DC/USEPA/US@EPA, Karl Brooks/R7/USEPA/US@EPA, Lena Ferris/DC/USEPA/US@EPA, maggorian.matthew@epa.gov, Nelida Torres/DC/USEPA/US@EPA, Robert Fegley/DC/USEPA/US@EPA, Steve Tuber/R8/USEPA/US@EPA, Stuart Walker/DC/USEPA/US@EPA, Susan Stahle/DC/USEPA/US@EPA, Tim Benner/DC/USEPA/US@EPA, Tom Eagles/DC/USEPA/US@EPA

Description

**SCHEDULE PROPOSAL**

5/4/2011

TODAY'S DATE:

**Requesting Office:** OAR/ORIA

**Event/Meeting:** Options Selection for NESHAP Amendments for Operating Uranium Mill Tailings (Subpart W) SAN: 5281, RIN: 2060-AP26, Tier 2

**Purpose /Background:** NESHAP Subpart W protects human health and the environment by setting radon emission standards and work practices for operating uranium mill tailings impoundments. The Clean Air Act Amendments of 1990 (§112(q)(1) require EPA to review and revise the NESHAP requirements every ten years. We have entered into a Consent Agreement with two Colorado environmental groups that commit us to develop a proposed and final standard because the Agency missed the ten year deadline. In the process of reviewing the status of uranium milling facilities, it became clear that a new type of process had taken over as the major type of uranium recovery. That type is in-situ leach (ISL) uranium recovery, as well as a third type of milling, heap leach. These types of facilities were not contemplated in the original Subpart W standard. The facilities would fall under our regulation by utilizing impoundments that store tailings. These facilities also have NRC (or Agreement State)

operating licenses and may have UIC permits from EPA or authorized states.

The purpose of the meeting is Options Selection. As per Section 112(d)(5) of the CAA Amendments the workgroup will propose selecting GACT standards for three categories of uranium recovery facilities, conventional mills (with 2 sub-categories, pre-1985 and post-1985), in-situ leach impoundments and heap leach piles.

Workgroup members: Andrea Cherepy (ORIA), Susan Stahle (OGC), Lena Ferris (OP), Tim Benner (ORD), Charlie Garlow (OECA), Stuart Walker (OSRTI), Steve Hoffman (OSWER), Marilyn Ginsburg (OW), George Brozowski (R6), Bob Dye (R7), Charles Hooper (R7), Angelique Diaz (R8), Ken Distler (R8), Davis Zhen (R10)

**Key considerations in the review of the Subpart W NESHAPs are:**

- Updating the existing standards to conform to CAAA requirements at §112(d)
- Addition of two major types of uranium milling units.
- Issues related to the regulation of heap leach piles
- Determining if facilities should extend air monitoring requirements

**Date:** Last week in June (6/27/11 – 6/30/11)

**Time (Duration):** Request a 45-minute meeting to provide an overview of: Present options for GACT categories. Present options for regulation of heap leach piles, and present options for extending monitoring requirements under Subpart W.

**Location:** Bullet room, with conference call option.

**Participants (Required):**

<u>Office/Organization</u>	<u>Name</u>
OAR	Gina McCarthy
OAR	Janet McCabe
OAR	Rob Brenner
ORIA	Mike Flynn
ORIA	Jonathan Edwards
ORIA	Reid Rosnick (Workgroup chair)
ORIA	Tom Peake
OGC	Avi Garbow
ORD	Paul Anastas
OECA	Cynthia Giles
OP	Michael Goo
OA	Lisa Garcia
OSRTI	Mathy Stanislaus

Optional:  
ORIA Andrea Cherepy (Workgroup member)  
ORIA Alan Perrin  
OAR Don Zinger  
OAR-OPAR Tom Eagles  
OGC Susan Stahle (Workgroup member)  
ORD Tim Benner (Workgroup member)  
OSRTI Stuart Walker (Workgroup member)  
OECA Charlie Garlow (Workgroup member)  
OP Lena Ferris (Workgroup member)  
OSWER Steve Hoffman (Workgroup member)  
ORD Bob Fegley  
R6 Al Armendariz  
R7 Karl Brooks  
R8 Stephen Tuber  
R10 Dennis McLerrin  
OW Marilyn Ginsburg (Workgroup Member)

Staff Contact: Cindy Huang (202.564.7404)  
Ray Lee (202.343.9463)

Technical Contact: Reid Rosnick (202.343.9563)  
Tom Peake (202.343.9765)

\_\_\_\_\_ **ACCEPT**

\_\_\_\_\_ **REGRET**

\_\_\_\_\_ **PENDING**

---

Personal Notes

---

EPA-6365

**Marilyn  
Ginsberg/DC/USEPA/US**  
05/12/2011 06:42 PM

To Ann Codrington  
cc  
bcc

Subject Re: Fw: Subpart W briefing invitation for Mr. Shapiro -- to invite or not to invite, that is the question

Thanks, I'll forward. -- MG

Ann Codrington

Stephanie may know. -----

05/12/2011 02:09:38 PM

---

From: Ann Codrington/DC/USEPA/US  
To: "Roy Simon" <simon.roy@epa.gov>, "Marilyn Ginsberg" <ginsberg.marilyn@epa.gov>  
Date: 05/12/2011 02:09 PM  
Subject: Fw: Subpart W briefing invitation for Mr. Shapiro -- to invite or not to invite, that is the question

---

Stephanie may know.

-----  
Sent by EPA Wireless E-Mail Services  
Marilyn Ginsberg

----- Original Message -----

**From:** Marilyn Ginsberg  
**Sent:** 05/12/2011 01:37 PM EDT  
**To:** Ann Codrington  
**Subject:** Subpart W briefing invitation for Mr. Shapiro -- to invite or not to invite, that is the question  
Hi Ann,

The OAR workgroup on Subpart W (a radon emission standard for operating uranium mill tailings) was formed to satisfy a provision in the Clean Air Act stating that EPA shall review, and if appropriate, revise, the National Emissions Standard for Hazardous Air Pollutants (NESHAP) that were in effect prior to November 15, 1990. I am an informal participant on that workgroup; there is no other OW member. The purpose of my participation is to identify any OW issues that may arise. Considering the purpose of the workgroup, such issues would be highly unlikely, and, thus far, I have identified none.

In preparation for the NESHAP Subpart W Options Selection briefing, which will be scheduled for sometime in late June, OAR will be sending out invitations to the AAs and RAs of the workgroup participants. OAR would like to know which AAs/RAs to invite. In my humble opinion, there is no reason for Mr. Shapiro (or a designee) to attend, because we have no OW-related issues. Could you please tell me whether or not OAR should send an invitation to our AA? I will then inform the workgroup chair.

Thanks, MG



EPA-5963

**Marilyn  
Ginsberg/DC/USEPA/US**  
05/12/2011 06:43 PM

To Stephanie Flaharty  
cc  
bcc Marilyn Ginsberg  
Subject Fw: Subpart W briefing invitation for Mr. Shapiro -- to invite or not to invite, that is the question

Hi,  
Do you know the answer (or whom I should contact)? Thanks, MG

----- Forwarded by Marilyn Ginsberg/DC/USEPA/US on 05/12/2011 06:42 PM -----

From: Ann Codrington/DC/USEPA/US  
To: "Roy Simon" <simon.roy@epa.gov>, "Marilyn Ginsberg" <ginsberg.marilyn@epa.gov>  
Date: 05/12/2011 02:09 PM  
Subject: Fw: Subpart W briefing invitation for Mr. Shapiro -- to invite or not to invite, that is the question

---

Stephanie may know.

-----  
Sent by EPA Wireless E-Mail Services  
Marilyn Ginsberg

----- Original Message -----

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Thanks, MG

EPA-6363

**Marilyn  
Ginsberg/DC/USEPA/US**  
05/12/2011 06:43 PM

To Stephanie Flaharty  
cc  
bcc Marilyn Ginsberg  
Subject Fw: Subpart W briefing invitation for Mr. Shapiro -- to invite or not to invite, that is the question

Hi,  
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----- Forwarded by Marilyn Ginsberg/DC/USEPA/US on 05/12/2011 06:42 PM -----

From: Ann Codrington/DC/USEPA/US  
To: "Roy Simon" <simon.roy@epa.gov>, "Marilyn Ginsberg" <ginsberg.marilyn@epa.gov>  
Date: 05/12/2011 02:09 PM  
Subject: Fw: Subpart W briefing invitation for Mr. Shapiro -- to invite or not to invite, that is the question

---

Stephanie may know.

-----  
Sent by EPA Wireless E-Mail Services  
Marilyn Ginsberg

----- Original Message -----

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**Sent:** 05/12/2011 01:37 PM EDT  
**To:** Ann Codrington  
**Subject:** Subpart W briefing invitation for Mr. Shapiro -- to invite or not to invite, that is the question

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Thanks, MG

EPA-6067

Roy Simon/DC/USEPA/US

To Marilyn Ginsberg

05/16/2011 11:51 AM

cc

bcc

Subject Fw: Subpart W briefing invitation for Mr. Shapiro -- to invite or not to invite, that is the question

Marilyn, you should tell the OAR Workgroup Chair that they should "NOT" send the AA for Water an invitation to be on the workgroup. I talked to Stephanie about this.

----- Forwarded by Roy Simon/DC/USEPA/US on 05/16/2011 11:50 AM -----

From: Ann Codrington/DC/USEPA/US  
To: "Roy Simon" <simon.roy@epa.gov>, "Marilyn Ginsberg" <ginsberg.marilyn@epa.gov>  
Date: 05/12/2011 02:09 PM  
Subject: Fw: Subpart W briefing invitation for Mr. Shapiro -- to invite or not to invite, that is the question

---

Stephanie may know.

-----  
Sent by EPA Wireless E-Mail Services  
Marilyn Ginsberg

----- Original Message -----

**From:** Marilyn Ginsberg  
**Sent:** 05/12/2011 01:37 PM EDT  
**To:** Ann Codrington  
**Subject:** Subpart W briefing invitation for Mr. Shapiro -- to invite or not to invite, that is the question

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Thanks, MG

EPA-6362

**Marilyn  
Ginsberg/DC/USEPA/US**  
05/16/2011 01:44 PM

To Roy Simon  
cc  
bcc

Subject Re: Fw: Subpart W briefing invitation for Mr. Shapiro -- to invite or not to invite, that is the question

Thanks for letting me know.

Roy Simon Marilyn, you should tell the OAR Work... 05/16/2011 11:51:31 AM

From: Roy Simon/DC/USEPA/US  
To: Marilyn Ginsberg/DC/USEPA/US@EPA  
Date: 05/16/2011 11:51 AM  
Subject: Fw: Subpart W briefing invitation for Mr. Shapiro -- to invite or not to invite, that is the question

Marilyn, you should tell the OAR Workgroup Chair that they should "NOT" send the AA for Water an invitation to be on the workgroup. I talked to Stephanie about this.

----- Forwarded by Roy Simon/DC/USEPA/US on 05/16/2011 11:50 AM -----

From: Ann Codrington/DC/USEPA/US  
To: "Roy Simon" <simon.roy@epa.gov>, "Marilyn Ginsberg" <ginsberg.marilyn@epa.gov>  
Date: 05/12/2011 02:09 PM  
Subject: Fw: Subpart W briefing invitation for Mr. Shapiro -- to invite or not to invite, that is the question

Stephanie may know.

-----  
Sent by EPA Wireless E-Mail Services  
Marilyn Ginsberg

----- Original Message -----

**From:** Marilyn Ginsberg  
**Sent:** 05/12/2011 01:37 PM EDT  
**To:** Ann Codrington  
**Subject:** Subpart W briefing invitation for Mr. Shapiro -- to invite or not to invite, that is the question

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Thanks, MG

EPA-6180

**Marilyn  
Ginsberg/DC/USEPA/US**  
05/16/2011 01:49 PM

To Reid Rosnick  
cc  
bcc GINSBERG.MARILYN  
Subject Subpart W Options briefing invitation for AAs and RAs

Hi Reid,

I can't get over the circuitous route this decision took. The decision is that neither Mr. Shapiro (the AA for Water) nor a designee should be invited, because there are no water-related issues.

Thanks, Marilyn

EPA-1962

**Reid Rosnick/DC/USEPA/US**

05/18/2011 10:01 AM

To David Pawel

cc

bcc

Subject Blue Book and Radon

Hi David,

I need to ask you a question about the Blue book information and whether it may change a risk based radon flux number for NESHAP Subpart W. Please let me know when you have 15 minutes or so. Thanks

Reid

---

Reid J. Rosnick  
Radiation Protection Division (6608J)  
U.S. Environmental Protection Agency  
1200 Pennsylvania Ave., NW  
Washington, DC 20460  
202.343.9563  
rosnick.reid@epa.gov

EPA-2285

Reid Rosnick/DC/USEPA/US

05/19/2011 06:50 AM

To Marilyn Ginsberg

cc

bcc

Subject Re: Subpart W Options briefing invitation for AAs and RAs

Thanks, Marilyn,

I appreciate your efforts.

Reid

---

Reid J. Rosnick  
Radiation Protection Division (6608J)  
U.S. Environmental Protection Agency  
1200 Pennsylvania Ave., NW  
Washington, DC 20460  
202.343.9563  
rosnick.reid@epa.gov

Marilyn Ginsberg

Hi Reid,

I can't get over the circuit...

05/16/2011 01:49:25 PM

From: Marilyn Ginsberg/DC/USEPA/US  
To: Reid Rosnick/DC/USEPA/US@EPA  
Date: 05/16/2011 01:49 PM  
Subject: Subpart W Options briefing invitation for AAs and RAs

Hi Reid,

I can't get over the circuitous route this decision took. The decision is that neither Mr. Shapiro (the AA for Water) nor a designee should be invited, because there are no water-related issues.

Thanks, Marilyn

EPA-1076

"Phelleps,Moya"  
<MPhelleps@nma.org>  
05/20/2011 03:51 PM

To Andrea Cherepy  
cc Reid Rosnick, Tom Peake  
bcc  
Subject RE: Presentation

Andrea:

Thank you very much. If you need anything, please do not hesitate to contact me.

Moya

Moya Phelleps  
Senior Vice President, Member Services  
National Mining Association  
101 Constitution Avenue, N.W.  
Washington, DC 20001  
Phone: 202-463-2639

-----Original Message-----

From: Cherepy.Andrea@epamail.epa.gov [mailto:Cherepy.Andrea@epamail.epa.gov]  
Sent: Friday, May 20, 2011 3:44 PM  
To: Phelleps,Moya  
Cc: Rosnick.Reid@epamail.epa.gov; Peake.Tom@epamail.epa.gov  
Subject: RE: Presentation

Moya,

My presentation is attached below. Please let me know if you need anything else.

(See attached file: Cherepy\_NMA Uranium Recovery 2011.pptx)

Thanks,  
Andrea

Andrea Cherepy  
Physical Scientist  
Radiation Protection Division  
U.S. Environmental Protection Agency  
(202) 343-9317

From: Reid Rosnick/DC/USEPA/US  
To: "Phelleps,Moya" <MPhelleps@nma.org>  
Cc: Andrea Cherepy/DC/USEPA/US@EPA  
Date: 05/20/2011 09:33 AM  
Subject: RE: Presentation

Moya,

Yes, it's forthcoming.



---

Reid J. Rosnick  
Radiation Protection Division (6608J)  
U.S. Environmental Protection Agency  
1200 Pennsylvania Ave., NW  
Washington, DC 20460  
202.343.9563  
rosnick.reid@epa.gov

From: "Phelleps,Moya" <MPhelleps@nma.org>  
To: Reid Rosnick/DC/USEPA/US@EPA  
Cc: Andrea Cherepy/DC/USEPA/US@EPA  
Date: 05/20/2011 09:32 AM  
Subject: RE: Presentation

Reid:  
Thank you for your presentation. Will Andrea also be providing a presentation?  
Moya

Moya Phelleps  
Senior Vice President, Member Services  
National Mining Association  
101 Constitution Avenue, N.W.  
Washington, DC 20001  
Phone: 202-463-2639

From: Rosnick.Reid@epamail.epa.gov [mailto:Rosnick.Reid@epamail.epa.gov]  
Sent: Friday, May 20, 2011 9:27 AM  
To: Phelleps,Moya  
Cc: Cherepy.Andrea@epamail.epa.gov  
Subject: Presentation

Good Morning,

Attached is my presentation for next week. Please let me know if you have any questions or comments. Thanks

---

Reid J. Rosnick  
Radiation Protection Division (6608J)  
U.S. Environmental Protection Agency  
1200 Pennsylvania Ave., NW  
Washington, DC 20460  
202.343.9563  
rosnick.reid@epa.gov



EPA-5546

Mike Flynn/DC/USEPA/US

05/25/2011 09:07 PM

To Jonathan Edwards

cc Alan Perrin

bcc

Subject Re: Rad Regs/Subpart W Briefing

Jon,

I took a quick look at the briefing and while I think it is well put together, I have quite a few questions on the Subpart W options. My inclination is to do this briefing in two parts - the first part (tomorrow) is an overview of all regs, and the second (soon) on sub W. let's talk in the morning.

Mike Flynn, Director  
Office of Radiation and Indoor Air (MC-6601-J)  
U.S. Environmental Protection Agency  
Phone: (202) 343-9320  
Fax: (202) 343-2395

-----Jonathan Edwards/DC/USEPA/US wrote: -----

To: Mike Flynn/DC/USEPA/US@EPA  
From: Jonathan Edwards/DC/USEPA/US  
Date: 05/25/2011 05:16PM  
Cc: Alan Perrin/DC/USEPA/US@EPA  
Subject: Re: Rad Regs/Subpart W Briefing

Mike--- Reid is on travel so Dan S. will be the lead briefer for this. I stopped by this afternoon (but you're out on training of course) to see if you were comfortable with the options discussion on Subpart W. We can try to talk in the morning if necessary... ---Jon

Rafaela Ferguson---05/25/2011 04:52:49 PM---Mike and Anna, Attached is the briefing: Radiation Regulations -- Focus on NESHAP Subpart W for tomo

From: Rafaela Ferguson/DC/USEPA/US  
To: Mike Flynn/DC/USEPA/US@EPA, Anna Duncan/DC/USEPA/US@EPA  
Cc: Jonathan Edwards/DC/USEPA/US@EPA, Alan Perrin/DC/USEPA/US@EPA, Tom Peake/DC/USEPA/US@EPA, Daniel Schultheisz/DC/USEPA/US@EPA, Reid Rosnick/DC/USEPA/US@EPA  
Date: 05/25/2011 04:52 PM  
Subject: Rad Regs/Subpart W Briefing

---

Mike and Anna,

Attached is the briefing: Radiation Regulations -- Focus on NESHAP Subpart W for tomorrow afternoon's meeting with Jim Jones.

Rafie

*(See attached file: Rad Regs Focus on Sub W for DAA Jones.pptx)*

Rafaela Ferguson  
Special Assistant/Regional Coordinator  
Radiation Protection Division (6608J)  
Office of Radiation and Indoor Air  
U.S. Environmental Protection Agency  
1200 Pennsylvania Avenue, NW  
Washington, DC 20460  
Voice: 202-343-9362  
Fax: 202-343-2304  
Email: [ferguson.rafaela@epa.gov](mailto:ferguson.rafaela@epa.gov)

[attachment "Rad Regs Focus on Sub W for DAA Jones.pptx" removed by Mike Flynn/DC/USEPA/US]

EPA-1056

"Wood, Thomas R"  
<thomas.wood@shawgrp.com  
>

05/31/2011 09:53 AM

To Reid Rosnick  
cc Andrea Cherepy  
bcc

Subject Uranium Recovery Workshop

Reid –

I enjoyed your talk last week – is there a chance you can forward a copy of the slides you and Andrea presented?

**T. R. Wood, Program Manager**  
**Shaw Environmental & Infrastructure Group**

7604 Technology Way, Suite 300

Denver, CO 80237

720-554-8282 direct

303-888-9456 cell

[thomas.wood@shawgrp.com](mailto:thomas.wood@shawgrp.com)

Shaw™ a World of Solutions™

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

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<http://www.shawgrp.com>

EPA-1437

Tom Peake/DC/USEPA/US

06/02/2011 11:27 AM

To Emily Atkinson

cc Reid Rosnick, Daniel Schultheisz, Mike Boyd, Jonathan Edwards, Lindsey Bender

bcc

Subject Fw: New Twist on the Upcoming Briefing for Jim Jones (not yet scheduled, but soon)--scheduling a few briefings with OD and DAA

Emily,

Would you schedule a few briefings for us?

1) Subpart W options selection background for **Mike Flynn** (45 minutes to 1 hour) before the next Jim Jones briefing

Attendees: Reid is the most critical staff person to have there. Other attendees: Jon, Alan, Dan, Andrea and myself. Anna Duncan would be optional.

2) Briefing for **Jim Jones** (45 minutes to 1 hour) before the end of June (June 30 is the options selection meeting so the Jim Jones briefing should be at least several days (preferably more) before June 30);

Topics:

Subpart W options selection; this is a continuation of the briefing we had last week (see below)  
Although its for Subpart W, we need to add the X-ray federal Guidance (see below)

Reid and Mike Boyd are the most critical staff to have there. Other attendees: Jon, Alan, Dan, Andrea, Jerry and myself. Anna would be optional.

3) Granite Countertop briefing for **Mike Flynn** ; 30 - 45 minutes.

Attendees: Jon, Alan, Lindsey (most critical staff person), Glenna, Angela and myself. Anna, Bill Long (IED), Phil Jalbert (IED) and Jack Barnette (Reg 5) would be optional.

I will be out of the office between June 14-20, but don't let my schedule be a road block on getting the Subpart W briefing arranged.

Thanks!

Tom Peake  
Director  
Center for Waste Management and Regulations  
US EPA (6608J)  
1200 Pennsylvania Ave, NW  
Washington, DC 20460  
phone: 202-343-9765

Physical Location and for deliveries:

Room 529  
1310 L St, NW  
Washington, DC 20005

----- Forwarded by Tom Peake/DC/USEPA/US on 06/02/2011 11:12 AM -----

From: Jonathan Edwards/DC/USEPA/US  
To: Mike Boyd/DC/USEPA/US@EPA, Alan Perrin/DC/USEPA/US@EPA, Reid Rosnick/DC/USEPA/US@EPA, Tom Peake/DC/USEPA/US@EPA  
Date: 06/02/2011 11:09 AM

Subject: New Twist on the Upcoming Briefing for Jim Jones (not yet scheduled, but soon)

---

I learned from Mike Flynn and Anna this morning that during our next briefing with Jim Jones, in addition to the Subpart W details/options discussion, Jim would like a portion of the briefing to cover Federal Guidance--Medical X-rays. ---Jon

EPA-1591

Reid Rosnick/DC/USEPA/US

06/02/2011 11:43 AM

To Tom Peake, Emily Atkinson

cc

bcc

Subject Re: Fw: New Twist on the Upcoming Briefing for Jim Jones  
(not yet scheduled, but soon)--scheduling a few briefings with  
OD and DAA

Emily,

June 16 is very bad for me, I'll be out that day. And, thanks for inputting my time!

Reid

---

Reid J. Rosnick  
Radiation Protection Division (6608J)  
U.S. Environmental Protection Agency  
1200 Pennsylvania Ave., NW  
Washington, DC 20460  
202.343.9563  
rosnick.reid@epa.gov

-----Tom Peake/DC/USEPA/US wrote: -----

To: Emily Atkinson/DC/USEPA/US@EPA

From: Tom Peake/DC/USEPA/US

Date: 06/02/2011 11:27AM

Cc: Reid Rosnick/DC/USEPA/US@EPA, Daniel Schultheisz/DC/USEPA/US@EPA, Mike  
Boyd/DC/USEPA/US@EPA, Jonathan Edwards/DC/USEPA/US@EPA, Lindsey  
Bender/DC/USEPA/US@EPA

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Subpart W options selection; this is a continuation of the briefing we had last week (see  
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Thanks!

Tom Peake  
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To: Mike Boyd/DC/USEPA/US@EPA, Alan Perrin/DC/USEPA/US@EPA, Reid Rosnick/DC/USEPA/US@EPA, Tom Peake/DC/USEPA/US@EPA  
Date: 06/02/2011 11:09 AM  
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EPA-1438

Reid Rosnick/DC/USEPA/US

06/02/2011 11:46 AM

To Tom Peake

cc

bcc

Subject Re: Fw: New Twist on the Upcoming Briefing for Jim Jones  
(not yet scheduled, but soon)--scheduling a few briefings with  
OD and DAA

Tom,

I'm out June 16, I just found out my son's court date is that day.

---

-----  
Reid J. Rosnick  
Radiation Protection Division (6608J)  
U.S. Environmental Protection Agency  
1200 Pennsylvania Ave., NW  
Washington, DC 20460  
202.343.9563  
rosnick.reid@epa.gov

-----Tom Peake/DC/USEPA/US wrote: -----

To: Emily Atkinson/DC/USEPA/US@EPA  
From: Tom Peake/DC/USEPA/US  
Date: 06/02/2011 11:27AM  
Cc: Reid Rosnick/DC/USEPA/US@EPA, Daniel Schultheisz/DC/USEPA/US@EPA, Mike  
Boyd/DC/USEPA/US@EPA, Jonathan Edwards/DC/USEPA/US@EPA, Lindsey  
Bender/DC/USEPA/US@EPA  
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EPA-2004

Tom Peake/DC/USEPA/US

06/02/2011 11:55 AM

To Reid Rosnick

cc

bcc

Subject Re: Fw: New Twist on the Upcoming Briefing for Jim Jones  
(not yet scheduled, but soon)--scheduling a few briefings with  
OD and DAA

OK. I hope the court has mercy....

On another but related vein, I hope it was a good graduation. Better today than yesterday for the weather.

Tom Peake  
Director  
Center for Waste Management and Regulations  
US EPA (6608J)  
1200 Pennsylvania Ave, NW  
Washington, DC 20460  
phone: 202-343-9765

Physical Location and for deliveries:  
Room 529  
1310 L St, NW  
Washington, DC 20005

Reid Rosnick

Tom,

06/02/2011 11:46:20 AM

From: Reid Rosnick/DC/USEPA/US  
To: Tom Peake/DC/USEPA/US@EPA  
Date: 06/02/2011 11:46 AM  
Subject: Re: Fw: New Twist on the Upcoming Briefing for Jim Jones (not yet scheduled, but soon)--scheduling a few briefings with OD and DAA

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202.343.9563  
rosnick.reid@epa.gov

-----Tom Peake/DC/USEPA/US wrote: -----

To: Emily Atkinson/DC/USEPA/US@EPA  
From: Tom Peake/DC/USEPA/US  
Date: 06/02/2011 11:27AM  
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Date: 06/02/2011 11:09 AM  
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Guidance--Medical X-rays. ---Jon

EPA-1432

Reid Rosnick/DC/USEPA/US

06/03/2011 08:07 AM

To "Wood, Thomas R"

cc Andrea Cherepy

bcc

Subject Re: Uranium Recovery Workshop

Hi Tom,

Thanks. I've attached a link to the NMA site. All presentations are linked there.

[http://www.nma.org/tmp/060111\\_urw.asp](http://www.nma.org/tmp/060111_urw.asp)

Reid

---

Reid J. Rosnick  
Radiation Protection Division (6608J)  
U.S. Environmental Protection Agency  
1200 Pennsylvania Ave., NW  
Washington, DC 20460  
202.343.9563  
[rosnick.reid@epa.gov](mailto:rosnick.reid@epa.gov)

"Wood, Thomas R"

[Reid - I enjoyed your talk last week...](#)

05/31/2011 09:53:55 AM

From: "Wood, Thomas R" <[thomas.wood@shawgrp.com](mailto:thomas.wood@shawgrp.com)>  
To: Reid Rosnick/DC/USEPA/US@EPA  
Cc: Andrea Cherepy/DC/USEPA/US@EPA  
Date: 05/31/2011 09:53 AM  
Subject: Uranium Recovery Workshop

Reid –

I enjoyed your talk last week – is there a chance you can forward a copy of the slides you and Andrea presented?

**T. R. Wood, Program Manager**  
**Shaw Environmental & Infrastructure Group**  
7604 Technology Way, Suite 300  
Denver, CO 80237  
720-554-8282 direct  
303-888-9456 cell  
[thomas.wood@shawgrp.com](mailto:thomas.wood@shawgrp.com)

Shaw™ a World of Solutions™  
[www.shawgrp.com](http://www.shawgrp.com)

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immediately if you or your employer do not consent to Internet email for messages of this kind. Opinions, conclusions and other information in this message that do not relate to the official business of The Shaw Group Inc. or its subsidiaries shall be understood as neither given nor endorsed by it. \_\_\_\_\_ The Shaw Group Inc.  
<http://www.shawgrp.com>



EPA-1652

Reid Rosnick/DC/USEPA/US

06/03/2011 10:29 AM

To Angelique Diaz, Robert Duraski

cc

bcc

Subject Re: Fw: Radon ISL Summary - WORKING DRAFT

Hi Guys,

If you could get it to me NLT June 16 I'd appreciate it. Thanks.

Reid

---

Reid J. Rosnick  
Radiation Protection Division (6608J)  
U.S. Environmental Protection Agency  
1200 Pennsylvania Ave., NW  
Washington, DC 20460  
202.343.9563  
rosnick.reid@epa.gov

Angelique Diaz

Reid, see the e-mails below. What are...

05/27/2011 11:14:59 AM

---

From: Angelique Diaz/R8/USEPA/US  
To: Reid Rosnick/DC/USEPA/US@EPA  
Date: 05/27/2011 11:14 AM  
Subject: Fw: Radon ISL Summary - WORKING DRAFT

Reid, see the e-mails below. What are you thinking for timing? I may not include any other rads but focus on Rn only. That makes sense for the sake of the Subpart W workgroup, wouldn't you agree?

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

----- Forwarded by Angelique Diaz/R8/USEPA/US on 05/27/2011 09:13 AM -----

---

From: Angelique Diaz/R8/USEPA/US  
To: Robert Duraski/R8/USEPA/US@EPA  
Date: 05/27/2011 09:13 AM  
Subject: Re: Fw: Radon ISL Summary - WORKING DRAFT

I'm not sure. We are having an Options Selection meeting for management on June 30th and this paper will inform our "options" so I'm guessing sometime in the next 2-3 weeks. How long do you need? I'll ask Reid about timing. He's off today so we won't hear back from him until next week.

What's the new stuff?

-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

Robert Duraski | I do have some new stuff I think we sho... | 05/27/2011 09:09:31 AM

From: Robert Duraski/R8/USEPA/US  
To: Angelique Diaz/R8/USEPA/US@EPA  
Date: 05/27/2011 09:09 AM  
Subject: Re: Fw: Radon ISL Summary - WORKING DRAFT

I do have some new stuff I think we should add, but it will take me a while to write it up. How long do we have?

Angelique Diaz | Bob, I am revisiting this document and t... | 05/27/2011 07:36:54 AM

From: Angelique Diaz/R8/USEPA/US  
To: Robert Duraski/R8/USEPA/US@EPA  
Date: 05/27/2011 07:36 AM  
Subject: Fw: Radon ISL Summary - WORKING DRAFT

Bob, I am revisiting this document and trying to get it "finalized" for Reid. Do you have any comments, edits, etc.? NRC has asked for our results of the radon-222 ISL study so I think the final document may be shared with them.

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

----- Forwarded by Angelique Diaz/R8/USEPA/US on 05/27/2011 07:35 AM -----

From: Angelique Diaz/R8/USEPA/US  
To: Reid Rosnick/DC/USEPA/US@EPA  
Cc: Robert Duraski/R8/USEPA/US@EPA, Deborah Lebow-Aal/R8/USEPA/US@EPA  
Date: 07/03/2010 11:00 AM  
Subject: Radon ISL Summary - WORKING DRAFT

Reid, I still haven't had the time I'd like to work on this document, but here is the **working draft**. The radon flux values from evaporation ponds should be fairly well summarized but there is still work to be done on the Pb-210, WL, and operation during sampling sections. Let me know if you have any questions. You should have the referenced documents, if not let me know. The sample calculation (Attachment 1) is

forthcoming.

[attachment "ISL Rn Data - Project Summary, June 2010.doc" deleted by Robert Duraski/R8/USEPA/US]

I hope you enjoyed the HPS meeting.

-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

EPA-3482

**Sara Laumann/R8/USEPA/US** To  
06/03/2011 01:29 PM cc  
bcc

Subject Subpart W rulemaking, discuss changes requested by  
Region 8 Air Program

**Meeting**

Date 06/06/2011  
Time 05:00:00 PM to 05:30:00 PM  
Chair Sara Laumann  
Invitees  
Required Angelique Diaz; Deborah Lebow-Aal  
Optional  
FYI  
Location Deb's office

EPA-3484

**Deborah  
Lebow-Aal/R8/USEPA/US**  
06/03/2011 03:57 PM

To Sara Laumann  
cc  
bcc

Subject Accepted: Subpart W rulemaking, discuss changes requested  
by Region 8 Air Program

EPA-3487

**Mike Flynn/DC/USEPA/US**  
Sent by: Virginia Stradford

06/06/2011 02:59 PM

To Alan Perrin, Andrea Cherepy, Daniel Schultheisz, Jonathan  
Edwards, Reid Rosnick, Tom Peake  
cc Anna Duncan

bcc

Subject Subpart W Options Selection Briefing w/RPD (Call-in  
Number: 1-866-299-3188; conference code: 202-343-9356#)

**Meeting**

Date 06/22/2011

Time 02:30:00 PM to 03:30:00 PM

Chair Mike Flynn

Invitees

Required Alan Perrin; Andrea Cherepy; Daniel Schultheisz; Jonathan Edwards; Mike  
Boyd; Reid Rosnick; Tom Peake

Optional Anna Duncan

FYI

Location

EPA-3574

**Mike Flynn/DC/USEPA/US**  
Sent by: Virginia Stradford

06/06/2011 03:01 PM

To Alan Perrin, Andrea Cherepy, Daniel Schultheisz, Jonathan  
Edwards, Reid Rosnick, Tom Peake

cc Anna Duncan

bcc

Subject Information Update - Subject has changed: Subpart W  
Options Selection Briefing w/RPD (Call-in Number:  
1-866-299-3188; conference code: 202-343-9356#)

EPA-4162

**Jim Jones/DC/USEPA/US**

Sent by: Addie Johnson

06/06/2011 04:35 PM

To Alan Perrin, Andrea Cherepy, Daniel Schultheisz, Jerome Puskin, Jonathan Edwards, Mike Boyd, Mike Flynn, Reid Rosnick, Tom Peake

cc Anna Duncan

bcc

Subject Subpart W Federal Guidane Medical X-ray Briefing

**Meeting**

Date 06/24/2011

Time 11:15:00 AM to 12:00:00 PM

Chair Jim Jones

Invitees

Required Alan Perrin; Andrea Cherepy; Daniel Schultheisz; Jerome Puskin; Jonathan Edwards; Mike Boyd; Mike Flynn; Reid Rosnick; Tom Peake

Optional Anna Duncan

FYI

Location



EPA-3488

**Mike Flynn/DC/USEPA/US**  
Sent by: Virginia Stradford

06/07/2011 08:59 AM

To Alan Perrin, Andrea Cherepy, Daniel Schultheisz, Jonathan  
Edwards, Reid Rosnick, Tom Peake  
cc Anna Duncan

bcc

Subject Rescheduled: Subpart W Options Selection Briefing w/RPD  
(Call-in Number: 1-866-299-3188; conference code:  
202-343-9356#) (Jun 10 02:00 PM EDT in 1310L Room  
402/DC-1310L-OAR@EPA)

EPA-2588

Reid Rosnick/DC/USEPA/US

To Valentine Anoma

06/07/2011 10:01 AM

cc

bcc

Subject Re: Options Selection Briefing

Hi Val,

As far as I know we are having the meeting. I have not commented on the 192 questions, I've been consumed with the options selection briefing in a couple of weeks.

Reid

---

Reid J. Rosnick  
Radiation Protection Division (6608J)  
U.S. Environmental Protection Agency  
1200 Pennsylvania Ave., NW  
Washington, DC 20460  
202.343.9563  
rosnick.reid@epa.gov

Valentine Anoma

Reid,

I hope you are feeling bett...

06/07/2011 09:23:03 AM

From: Valentine Anoma/DC/USEPA/US  
To: Reid Rosnick/DC/USEPA/US@EPA  
Date: 06/07/2011 09:23 AM  
Subject: Re: Options Selection Briefing

Reid,

I hope you are feeling better. Do we have an 11:00 Uranium meeting? Did you have any chance to comment on SCA questions on 192 that I sent to you? Andrea is compiling something for us.

Val

-----  
Sent by EPA Wireless E-Mail Services

Reid Rosnick

----- Original Message -----

**From:** Reid Rosnick

**Sent:** 06/07/2011 07:55 AM EDT

**To:** Albion Carlson; Andrea Cherepy; Angelique Diaz; Bridgid Curry; CharlesA Hooper; Charlie Garlow; Davis Zhen; George Brozowski; Kenneth Distler; Marilyn Ginsberg; Robert Duraski; Robert Dye; Stephen Hoffman; Stuart Walker; Susan Stahle; Tim Benner; Tom Peake; Valentine Anoma

**Subject:** Options Selection Briefing

[attachment "Options for Proposed Sub W.pptx" deleted by Valentine Anoma/DC/USEPA/US]

All,

Attached is the options selection briefing I have put together in order for you to brief your upper management for the June 30 meeting. Barring any changes, comments or additions it will be similar to the briefing that will be presented on the 30th. If you do have any changes or additions please submit them to

me by no later than COB on June 9. I apologize for the quick turnaround, but in order for everyone to have a revised briefing in time to use it, it is necessary to place a higher priority on this review. As always, thank you for your participation in the workgroup.

Reid

---

Reid J. Rosnick  
Radiation Protection Division (6608J)  
U.S. Environmental Protection Agency  
1200 Pennsylvania Ave., NW  
Washington, DC 20460  
202.343.9563  
[rosnick.reid@epa.gov](mailto:rosnick.reid@epa.gov)

EPA-3551

**Mike Flynn/DC/USEPA/US**  
Sent by: Virginia Stradford

06/07/2011 10:04 AM

To Alan Perrin, Andrea Cherepy, Daniel Schultheisz, Jonathan  
Edwards, Reid Rosnick, Tom Peake  
cc Anna Duncan

bcc

Subject Rescheduled: Subpart W Options Selection Briefing w/RPD  
(Call-in Number: 1-866-299-3188; conference code:  
202-343-9356#) (Jun 22 11:00 AM EDT in 1310L Room  
402/DC-1310L-OAR@EPA)

EPA-3544

**Mike Flynn/DC/USEPA/US**  
Sent by: Virginia Stradford

06/07/2011 10:39 AM

To Alan Perrin, Andrea Cherepy, Daniel Schultheisz, Jonathan  
Edwards, Mike Boyd, Reid Rosnick, Tom Peake  
cc Anna Duncan

bcc

Subject Rescheduled: Subpart W Options Selection Briefing w/RPD  
(Call-in Number: 1-866-299-3188; conference code:  
202-343-9356#) (Jun 22 02:30 PM EDT in 1310L Room  
402/DC-1310L-OAR@EPA)

EPA-3537

**Jonathan  
Edwards/DC/USEPA/US**  
Sent by: Emily Atkinson

06/07/2011 10:46 AM

To Alan Perrin, Andrea Cherepy, Daniel Schultheisz, Mike Boyd,  
Reid Rosnick, Tom Peake

cc

bcc

Subject RPD PreBrief: Subpart W Options Selection

**Meeting**

Date 06/17/2011

Time 10:00:00 AM to 11:00:00 AM

Chair Jonathan Edwards

Invitees

Required Alan Perrin; Andrea Cherepy; Daniel Schultheisz; Mike Boyd; Reid Rosnick;  
Tom Peake

Optional

FYI

Location

EPA-2639

Reid Rosnick/DC/USEPA/US

To Valentine Anoma

06/10/2011 06:52 AM

cc

bcc

Subject Re: Options Selection Briefing

Hi Val,

Thanks. I'm in the process of making changes to the briefing based on comments, and I have added some background information, but the briefing is getting very long. I think what I'll do is just verbally give the definition of byproduct material as its found in the definitions section ofd the existing Subpart W rule:

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

Reid

-----  
-----  
Reid J. Rosnick  
Radiation Protection Division (6608J)  
U.S. Environmental Protection Agency  
1200 Pennsylvania Ave., NW  
Washington, DC 20460  
202.343.9563  
rosnick.reid@epa.gov

-----Valentine Anoma/DC/USEPA/US wrote: -----

To: Reid Rosnick/DC/USEPA/US@EPA  
From: Valentine Anoma/DC/USEPA/US  
Date: 06/09/2011 05:15PM  
Subject: Re: Options Selection Briefing

Reid,

The Options Selection Briefing is excellent. Is there any way you could include under the 'Technical Issues' section of the briefing a brief statement that would explain the stage at which materials is considered/classified 'by-product materials'?

Val A

Reid Rosnick---06/07/2011 07:55:28 AM---All, Attached is the options

selection briefing I have put together in order for you to brief your u

From: Reid Rosnick/DC/USEPA/US

To: Albion Carlson/R8/USEPA/US@EPA, Andrea Cherepy/DC/USEPA/US@EPA, Angelique Diaz/R8/USEPA/US@EPA, Bridgid Curry/DC/USEPA/US@EPA, CharlesA Hooper/R7/USEPA/US@EPA, Charlie Garlow/DC/USEPA/US@EPA, Davis Zhen/R10/USEPA/US@EPA, George Brozowski/R6/USEPA/US@EPA, Kenneth Distler/R8/USEPA/US@EPA, Marilyn Ginsberg/DC/USEPA/US@EPA, Robert Duraski/R8/USEPA/US@EPA, Robert Dye/R7/USEPA/US@EPA, Stephen Hoffman/DC/USEPA/US@EPA, Stuart Walker/DC/USEPA/US@EPA, Susan Stahle/DC/USEPA/US@EPA, Tim Benner/DC/USEPA/US@EPA, Tom Peake/DC/USEPA/US@EPA, Valentine Anoma/DC/USEPA/US@EPA

Date: 06/07/2011 07:55 AM

Subject: Options Selection Briefing

---

*(See attached file: Options for Proposed Sub W.pptx)*

All,

Attached is the options selection briefing I have put together in order for you to brief your upper management for the June 30 meeting. Barring any changes, comments or additions it will be similar to the briefing that will be presented on the 30th. If you do have any changes or additions please submit them to me by no later than COB on June 9. I apologize for the quick turnaround, but in order for everyone to have a revised briefing in time to use it, it is necessary to place a higher priority on this review. As always, thank you for your participation in the workgroup.

Reid

-----  
-----  
Reid J. Rosnick  
Radiation Protection Division (6608J)  
U.S. Environmental Protection Agency  
1200 Pennsylvania Ave., NW  
Washington, DC 20460  
202.343.9563  
rosnick.reid@epa.gov

[attachment "Options for Proposed Sub W.pptx" removed by Reid Rosnick/DC/USEPA/US]



EPA-2235

Angelique Diaz/R8/USEPA/US

06/13/2011 02:47 PM

To Susan Stahle

cc Deborah Lebow-Aal, Reid Rosnick, Robert Duraski

bcc

Subject Re: Fw: Subpart W: Discussion 40 CFR 192.32(a) Requirements

Hi, Sue. During tomorrow's call we want to go through the requirements that apply right now and discuss which should apply after the Subpart W revision.

We do want to discuss how EPA should determine compliance with 192.32(a) now and after Subpart W is revised. We should be able to discuss both of these questions while we go through the spreadsheet I sent out.

Speak to you tomorrow.

-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

Susan Stahle

Hi - Just as a point of clarification - are...

06/13/2011 11:01:43 AM

From: Susan Stahle/DC/USEPA/US  
To: Angelique Diaz/R8/USEPA/US@EPA  
Cc: Reid Rosnick/DC/USEPA/US@EPA, Deborah Lebow-Aal/R8/USEPA/US@EPA, Robert Duraski/R8/USEPA/US@EPA  
Date: 06/13/2011 11:01 AM  
Subject: Fw: Subpart W: Discussion 40 CFR 192.32(a) Requirements

Hi -

Just as a point of clarification - are you asking which requirements apply right now? Or are you asking which requirements should continue to apply after the subpart W revisions?

The short answer to the first question is that the way the regulation is currently written, all of the requirements in 192.32(a) currently apply to a subpart W regulated facility through 61.252(c). What you may be asking is a different question - how does EPA determine whether a subpart W facility is in fact in compliance, under 61.252(c), with these 192.32(a) requirements?

A way to start a discussion on the second question is to look at slide 19 (from the subpart W briefing slides) where Reid laid out his thoughts on that question. Your spreadsheet will also be very helpful for discussing this question.

I just wanted to clarify which question we'll be discussing so we all know and can use our time accordingly.

Thanks,

Susan Stahle  
Air and Radiation Law Office (Rm 7502B)  
Office of General Counsel  
U.S. Environmental Protection Agency  
1200 Pennsylvania Avenue, NW (ARN: MC 2344A)  
Washington, D.C. 20460  
ph: (202) 564-1272  
fax: (202) 564-5603  
stahle.susan@epa.gov  
----- Forwarded by Susan Stahle/DC/USEPA/US on 06/13/2011 12:53 PM -----

## Subpart W: Discussion 40 CFR 192.32(a) Requirements

**Tue 06/14/2011 11:00 AM - 12:00 PM**

Attendance is for Susan Stahle

Chair: **Angelique Diaz/R8/USEPA/US**

Rooms: 5112\_Onyx/R08\_Distributed\_Rooms@EPA

Required:	Deborah Lebow-Aal/R8/USEPA/US@EPA, Reid Rosnick/DC/USEPA/US@EPA, Robert Duraski/R8/USEPA/US@EPA, Susan Stahle/DC/USEPA/US@EPA
Time zones:	This entry was created in a different time zone. The time in that time zone is: Tue 06/14/2011 9:00 AM MDT10:00 AM MDT

### Description

[attachment "Subpart W and 192 reference - R8, HQ Discussion.xlsx" deleted by Angelique Diaz/R8/USEPA/US]

Let's go through the attached spreadsheet and discuss which 192.32(a) requirements apply for Subpart W. It is important that we discuss this soon because it will affect the Options Selection Briefing and the rule review.

Call in: 866-299-3188  
Code: 303-312-6344#

Sure it is important that you attend so let me know if this time doesn't work and what time does.

### Personal Notes



EPA-5261

**Robert Dye/R7/USEPA/US**

06/14/2011 02:10 PM

To Lisa Haugen

cc Michael Jay, CharlesA Hooper, MarkA Smith, Leslye Werner  
bcc

Subject Briefing time wth Becky Requested

In preparation for the NESHAPS options selection meeting below, we would like to have an hour of Becky's time to pre-brief her before the call. We would like to have the meeting the week of June 20 with the minimum attendees being Mike Jay and myself. Thanks for your help.

\_\_\_\_\_  
Bob Dye  
Radiation and Indoor Air  
EPA Region 7  
901 N. 5th Street  
Kansas City, KS 66101  
(913) 551-7605  
fax (913)551-7844  
dye.robert@epa.gov

----- Forwarded by Robert Dye/R7/USEPA/US on 06/14/2011 01:06 PM -----

From: Reid Rosnick/DC/USEPA/US  
To: Robert Dye/R7/USEPA/US@EPA, George Brozowski/R6/USEPA/US@EPA, Davis Zhen/R10/USEPA/US@EPA  
Date: 05/23/2011 01:09 PM  
Subject: Fw: Options Selection for NESHAP Amendments for Operating Uranium Mill Tailings (Subpart W)  
SAN: 5281, RIN:2060-AP26, Tier 2

-----  
Reid J. Rosnick  
Radiation Protection Division (6608J)  
U.S. Environmental Protection Agency  
1200 Pennsylvania Ave., NW  
Washington, DC 20460  
202.343.9563  
rosnick.reid@epa.gov

----- Forwarded by Reid Rosnick/DC/USEPA/US on 05/23/2011 02:09 PM -----

### **Options Selection for NESHAP Amendments for Operating Uranium Mill Tailings (Subpart W) SAN: 5281, RIN:2060-AP26, Tier 2**

**Thu 06/30/2011 12:15 PM - 1:00 PM**

Attendance is for Reid Rosnick

Chair: **Gina McCarthy/DC/USEPA/US**

Sent By: **Cynthia Browne/DC/USEPA/US**

Location: ARN-OAR-Room 5415 Rooms: ARN-OAR-Room-5415/DC-ARN-OAR@EPA  
conference:1-866-299-3188  
access:202-564-7437

This entry has an alarm. The alarm will go off before the entry starts.

Required:	<p>Avi Garbow/DC/USEPA/US@EPA, Cynthia Giles-AA/DC/USEPA/US@EPA, Janet McCabe/DC/USEPA/US@EPA, Jonathan Edwards/DC/USEPA/US@EPA, Joseph Goffman/DC/USEPA/US@EPA, Lisa Garcia/DC/USEPA/US@EPA, Mathy Stanislaus/DC/USEPA/US@EPA, Michael Goo/DC/USEPA/US@EPA, Mike Flynn/DC/USEPA/US@EPA, Paul Anastas/DC/USEPA/US@EPA, Reid Rosnick/DC/USEPA/US@EPA, Rob Brenner/DC/USEPA/US@EPA, Tom Peake/DC/USEPA/US@EPA</p>
Optional:	<p>Addie Johnson/DC/USEPA/US@EPA, Al Armendariz/R6/USEPA/US@EPA, Alan Perrin/DC/USEPA/US@EPA, Amit Srivastava/DC/USEPA/US@EPA, Andrea Cherepy/DC/USEPA/US@EPA, Carlos Evans/DC/USEPA/US@EPA, Charlie Garlow/DC/USEPA/US@EPA, Cindy Huang/DC/USEPA/US@EPA, Dennis McLerran/R10/USEPA/US@EPA, Don Zinger/DC/USEPA/US@EPA, Janet Means-Thomas/DC/USEPA/US@EPA, Julia Miller/DC/USEPA/US@EPA, Karl Brooks/R7/USEPA/US@EPA, Lena Ferris/DC/USEPA/US@EPA, maggorian.matthew@epa.gov, Nelida Torres/DC/USEPA/US@EPA, Robert Fegley/DC/USEPA/US@EPA, Steve Tuber/R8/USEPA/US@EPA, Stuart Walker/DC/USEPA/US@EPA, Susan Stahle/DC/USEPA/US@EPA, Tim Benner/DC/USEPA/US@EPA, Tom Eagles/DC/USEPA/US@EPA</p>

**Description**

**SCHEDULE PROPOSAL**

5/4/2011

TODAY'S DATE:

**Requesting Office:** OAR/ORIA

**Event/Meeting:** Options Selection for NESHAP Amendments for Operating Uranium Mill Tailings (Subpart W) SAN: 5281, RIN: 2060-AP26, Tier 2

**Purpose /Background:** NESHAP Subpart W protects human health and the environment by setting radon emission standards and work practices for operating uranium mill tailings impoundments. The Clean Air Act Amendments of 1990 (§112(q)(1)) require EPA to review and revise the NESHAP requirements every ten years. We have entered into a Consent Agreement with two Colorado environmental groups that commit us to develop a proposed and final standard because the Agency missed the ten year deadline. In the process of reviewing the status of uranium milling facilities, it became clear that a new type of process had taken over as the major type of uranium recovery. That type is in-situ leach (ISL) uranium recovery, as well as a third type of milling, heap leach. These types of facilities were not contemplated in the original Subpart W standard. The facilities would fall under our regulation by utilizing impoundments that store tailings. These facilities also have NRC (or Agreement State) operating licenses and may have UIC permits from EPA or authorized states.

The purpose of the meeting is Options Selection. As per Section 112(d)(5) of the CAA Amendments the workgroup will propose selecting GACT standards for three

categories of uranium recovery facilities, conventional mills (with 2 sub-categories, pre-1985 and post-1985), in-situ leach impoundments and heap leach piles.

Workgroup members: Andrea Cherepy (ORIA), Susan Stahle (OGC), Lena Ferris (OP), Tim Benner (ORD), Charlie Garlow (OECA), Stuart Walker (OSRTI), Steve Hoffman (OSWER), Marilyn Ginsburg (OW), George Brozowski (R6), Bob Dye (R7), Charles Hooper (R7), Angelique Diaz (R8), Ken Distler (R8), Davis Zhen (R10)

**Key considerations in the review of the Subpart W NESHAPs are:**

- Updating the existing standards to conform to CAAA requirements at §112(d)
- Addition of two major types of uranium milling units.
- Issues related to the regulation of heap leach piles
- Determining if facilities should extend air monitoring requirements

**Date:** Last week in June (6/27/11 – 6/30/11)

**Time (Duration):** Request a 45-minute meeting to provide an overview of: Present options for GACT categories. Present options for regulation of heap leach piles, and present options for extending monitoring requirements under Subpart W.

**Location:** Bullet room, with conference call option.

**Participants (Required):**

<u>Office/Organization</u>	<u>Name</u>
OAR	Gina McCarthy
OAR	Janet McCabe
OAR	Rob Brenner
ORIA	Mike Flynn
ORIA	Jonathan Edwards
ORIA	Reid Rosnick (Workgroup chair)
ORIA	Tom Peake
OGC	Avi Garbow
ORD	Paul Anastas
OECA	Cynthia Giles
OP	Michael Goo
OA	Lisa Garcia
OSRTI	Mathy Stanislaus

**Optional:**

ORIA	Andrea Cherepy (Workgroup member)
ORIA	Alan Perrin
OAR	Don Zinger

OAR-OPAR Tom Eagles  
OGC Susan Stahle (Workgroup member)  
ORD Tim Benner (Workgroup member)  
OSRTI Stuart Walker (Workgroup member)  
OECA Charlie Garlow (Workgroup member)  
OP Lena Ferris (Workgroup member)  
OSWER Steve Hoffman (Workgroup member)  
ORD Bob Fegley  
R6 Al Armendariz  
R7 Karl Brooks  
R8 Stephen Tuber  
R10 Dennis McLerrin  
OW Marilyn Ginsburg (Workgroup Member)

Staff Contact: Cindy Huang (202.564.7404)  
Ray Lee (202.343.9463)

Technical Contact: Reid Rosnick (202.343.9563)  
Tom Peake (202.343.9765)

\_\_\_\_ **ACCEPT**

\_\_\_\_ **REGRET**

\_\_\_\_ **PENDING**

---

Personal Notes

---

EPA-4822

**Wendy Blake/DC/USEPA/US**

06/14/2011 03:08 PM

To Susan Stahle

cc

bcc

Subject Accepted: Pre-brief regarding Rad NESHAP subpart W  
Options Selection Briefing (June 30 with AAs (Tier 2 rule))



EPA-4818

**Elliott Zenick/DC/USEPA/US**

06/14/2011 05:30 PM

To Susan Stahle

cc

bcc

Subject Accepted:Pre-brief regarding Rad NESHAP subpart W  
Options Selection Briefing (June 30 with AAs (Tier 2 rule))

EPA-4819

**Brian Doster/DC/USEPA/US**

06/15/2011 11:54 AM

To Susan Stahle

cc

bcc

Subject Tentative: Pre-brief regarding Rad NESHAP subpart W  
Options Selection Briefing (June 30 with AAs (Tier 2 rule))

EPA-4834

**Susan Stahle/DC/USEPA/US**

06/20/2011 10:28 AM

To

cc

bcc

Subject Follow-up conversation on subpart W 112(q)(1)  
review/revision

**Meeting**

Date 06/23/2011

Time 11:00:00 AM to 11:30:00 AM

Chair Susan Stahle

Invitees

Required Wendy Blake

Optional

FYI

Location wendy's office

EPA-4840

**Wendy Blake/DC/USEPA/US**

06/20/2011 10:35 AM

To Susan Stahle

cc

bcc

Subject Accepted: Follow-up conversation on subpart W 112(q)(1)  
review/revision

EPA-4496

**Jim Jones/DC/USEPA/US**  
Sent by: Addie Johnson

06/22/2011 04:36 PM

To Alan Perrin, Andrea Cherepy, Daniel Schultheisz, Jerome  
Puskin, Jonathan Edwards, Mike Boyd, Mike Flynn, Reid  
Rosnick, Tom Peake

cc Anna Duncan

bcc

Subject Rescheduled: Subpart W Federal Guidane Medical X-ray  
Briefing (Jun 24 11:15 AM EDT in  
ARN-OAR-Room-5415/DC-ARN-OAR@EPA)

EPA-3486

**Gina McCarthy/DC/USEPA/US**

Sent by: Cindy Huang

06/23/2011 03:34 PM

To Anna Duncan, Avi Garbow, Edward Messina, Janis Hastings, Jonathan Edwards, Joseph Goffman, Lisa Garcia, Michael Goo, Mike Flynn, Phillip Brooks, Rebecca Weber, Reid Rosnick, Rob Brenner, Stan Durkee, Tom Peake

cc Addie Johnson, Al Armendariz, Alan Perrin, Amit Srivastava, Andrea Cherepy, Bruce Schillo, Carlos Evans, Charlie Garlow, Cindy Huang, Dennis McLerran, Don Zinger, Janet Means-Thomas, Julia Miller, Lena Ferris, maggorian.matthew, Nelida Torres, OP ADP Tracking, Steve Tuber, Stuart Walker, Susan Stahle, Tim Benner, Tom Eagles, Venu Ghanta

bcc

Subject Rescheduled: Options Selection for NESHAP Amendments for Operating Uranium Mill Tailings (Subpart W) SAN: 5281, RIN:2060-AP26, Tier 2 (Jun 30 01:00 PM EDT in ARN-OAR-Room-5415/DC-ARN-OAR@EPA)







**SCHEDULE PROPOSAL**

TODAY'S DATE: 5/4/2011



**Requesting Office:** OAR/ORIA



**Event/Meeting:** Options Selection for NESHAP Amendments for Operating Uranium Mill Tailings (Subpart W) SAN: 5281, RIN: 2060-AP26, Tier 2



**Purpose /Background:** NESHAP Subpart W protects human health and the environment by setting radon emission standards and work practices for operating uranium mill tailings impoundments. The Clean Air Act Amendments of 1990 (§112(q)(1)) require EPA to review and revise the NESHAP requirements every ten years. We have entered into a Consent Agreement with two Colorado environmental groups that commit us to develop a proposed and final standard because the Agency missed the ten year deadline. In the process of reviewing the status of uranium milling facilities, it became clear that a new type of process had taken over as the major type of uranium recovery. That type is in-situ leach (ISL) uranium recovery, as well as a third type of milling, heap leach. These types of facilities were not contemplated in the original Subpart W standard. The facilities would fall under our regulation by utilizing impoundments that store tailings. These facilities also have NRC (or Agreement State) operating licenses and may have UIC permits from EPA or authorized states.





The purpose of the meeting is Options Selection. As per Section 112(d)(5) of the CAA Amendments the workgroup will propose selecting GACT standards for three categories of uranium recovery facilities, conventional mills (with 2 sub-categories, pre-1985 and post-1985), in-situ leach impoundments and heap leach piles.



Workgroup members: Andrea Cherepy (ORIA), Susan Stahle (OGC), Lena Ferris (OP), Tim Benner (ORD), Charlie Garlow (OECA), Stuart Walker (OSRTI), Steve Hoffman (OSWER), Marilyn Ginsburg (OW), George Brozowski (R6), Bob Dye (R7), Charles Hooper (R7), Angelique Diaz (R8), Ken Distler (R8), Davis Zhen (R10)



**Key considerations in the review of the Subpart W NESHAPs are:**



- Updating the existing standards to conform to CAAA requirements at §112(d)

- Addition of two major types of uranium milling units.



- Issues related to the regulation of heap leach piles

- Determining if facilities should extend air monitoring requirements



**Date:** Last week in June (6/27/11 – 6/30/11)



**Time (Duration):** Request a 45-minute meeting to provide an overview of: Present options for GACT categories. Present options for regulation of heap leach piles, and present options for extending monitoring requirements under Subpart W.



**Location:** Bullet room, with conference call option.

**Participants (Required):**

<u>Office/Organization</u>	<u>Name</u>
OAR	Gina McCarthy
OAR	Janet McCabe
OAR	Rob Brenner
ORIA	Mike Flynn
ORIA	Jonathan Edwards
ORIA	Reid Rosnick (Workgroup chair)
ORIA	Tom Peake
OGC	Avi Garbow
ORD	Paul Anastas
OECA	Cynthia Giles
OP	Michael Goo
OA	Lisa Garcia
OSRTI	Mathy Stanislaus

Optional:

ORIA	Andrea Cherepy (Workgroup member)
ORIA	Alan Perrin
OAR	Don Zinger
OAR-OPAR	Tom Eagles
OGC	Susan Stahle (Workgroup member)
ORD	Tim Benner (Workgroup member)
OSRTI	Stuart Walker (Workgroup member)
OECA	Charlie Garlow (Workgroup member)
OP	Lena Ferris (Workgroup member)
OSWER	Steve Hoffman (Workgroup member)
ORD	Bob Fegley
R6	Al Armendariz
R7	Karl Brooks
R8	Stephen Tuber
R10	Dennis McLerrin
<u>OW</u>	<u>Marilyn Ginsburg (Workgroup Member)</u>

Staff Contact: Cindy Huang (202.564.7404)  
Ray Lee (202.343.9463)

Technical Contact: Reid Rosnick (202.343.9563)  
Tom Peake (202.343.9765)

\_\_\_\_\_ **ACCEPT**

\_\_\_\_\_ **REGRET**

\_\_\_\_\_ **PENDING**



EPA-1310

**Stuart  
Miles-McLean/DC/USEPA/US**  
06/23/2011 05:18 PM

To Wanda Farrar  
cc Lesley Schaaff, Tom Eagles, Conrad Chin, Barry Elman, Ann Johnson, Reid Rosnick, Lena Ferris, Bruce Schillo, Andrea Cherepy  
bcc  
Subject Change in OP WG Reps for SAN 5417, SAN 5281, and SAN 5319

Hi Wanda,  
OP has changed its primary WG Rep assignment for the following actions. RAPIDS was updated today. I've also copied your Workgroup Chairs on this message.  
Thanks, Stuart

**OAR, Tier 2, SAN 5417, Risk and Technology Review for Ferroalloys Production**  
**OP PRAD Representative: ~~Ann Johnson~~ Barry Elman, Primary**

**OAR, Tier 2, SAN 5281, NESHAP Subpart W: Standards for Radon Emissions From Operating Uranium Mill Tailings: Review**  
**OP PRAD Representative: ~~Lena Ferris~~ Barry Elman, Primary**  
OP NCEE Representative: Heather Klemick  
OP NCEE Representative: Ann Wolverton

**OAR, Tier 2, SAN 5319, Revision of 40 CFR Part 192--Health and Environmental Protection Standards for Uranium and Thorium Mill Tailings and Uranium In Situ Leaching Processing Facilities**  
**OP PRAD Representative: ~~Lena Ferris~~ Barry Elman, Primary**  
OP NCEE Representative: Ann Wolverton

^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^

Stuart Miles-McLean  
OPEI Regulatory Steering Committee Representative, Alternate  
AO/OPEI/ORPM/Policy and Regulatory Analysis Division  
Phone: 202-564-6581  
FAX: 202-564-7322

=====

EPA-2660

**Stuart  
Miles-McLean/DC/USEPA/US**  
06/23/2011 05:25 PM

To Wanda Farrar  
cc Lesley Schaaff, Tom Eagles, Conrad Chin, Barry Elman, Ann Johnson, Reid Rosnick, Lena Ferris, Bruce Schillo, Andrea Cherepy  
bcc

Subject Corrected Version: Change in OP WG Reps for SAN 5417, SAN 5281, and SAN 5319

Oops! I took a short cut and forgot to delete the NCEE Reps from another message. There are no NCEE Reps on these three rules.  
Sorry for any confusion.  
--Stuart

^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^

Stuart Miles-McLean  
OP Regulatory Steering Committee Representative, Alternate  
AO/OP/ORPM/Policy and Regulatory Analysis Division  
Phone: 202-564-6581  
FAX: 202-564-7322  
=====

Hi Wanda,  
OP has changed its primary WG Rep assignment for the following actions. RAPIDS was updated today. I've also copied your Workgroup Chairs on this message.  
Thanks, Stuart

**OPR, Tier 2, SAN 5417, Risk and Technology Review for Ferroalloys Production**  
**OP PRAD Representative: ~~Ann Johnson~~ Barry Elman, Primary**

**OPR, Tier 2, SAN 5281, NESHAP Subpart W: Standards for Radon Emissions From Operating Uranium Mill Tailings: Review**  
**OP PRAD Representative: ~~Lena Ferris~~ Barry Elman, Primary**  
**OP NCEE Representative: ~~Heather Klemick~~**  
**OP NCEE Representative: ~~Ann Wolverton~~**

**OPR, Tier 2, SAN 5319, Revision of 40 CFR Part 192--Health and Environmental Protection Standards for Uranium and Thorium Mill Tailings and Uranium In Situ Leaching Processing Facilities**  
**OP PRAD Representative: ~~Lena Ferris~~ Barry Elman, Primary**  
**OP NCEE Representative: ~~Ann Wolverton~~**

^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^

Stuart Miles-McLean  
OPEI Regulatory Steering Committee Representative, Alternate  
AO/OPEI/ORPM/Policy and Regulatory Analysis Division  
Phone: 202-564-6581  
FAX: 202-564-7322  
=====

EPA-1872

**Robert Dye/R7/USEPA/US**

06/24/2011 01:50 PM

To Reid Rosnick

cc

bcc

Subject Re: Subpart W Options Selection Status -question

Yesterday I briefed my ADD on the options in preparation for the decision call. Later in the day I saw her and she indicated that she thought the time and date of the decision meeting had changed. I haven't seen anything but wanted to check, is it still the 30th or has it changed. thanks.

---

Bob Dye  
Radiation and Indoor Air  
EPA Region 7  
901 N. 5th Street  
Kansas City, KS 66101  
(913) 551-7605  
fax (913)551-7844  
dye.robert@epa.gov

EPA-1873

Reid Rosnick/DC/USEPA/US

To Robert Dye

06/24/2011 01:56 PM

cc

bcc

Subject Re: Subpart W Options Selection Status -question

It's still the 30th, but a minor time change was sent out. It's now 1:00 PM EDT

---

Reid J. Rosnick  
Radiation Protection Division (6608J)  
U.S. Environmental Protection Agency  
1200 Pennsylvania Ave., NW  
Washington, DC 20460  
202.343.9563  
rosnick.reid@epa.gov

Robert Dye

Yesterday I briefed my ADD on the opti...

06/24/2011 01:50:11 PM

From: Robert Dye/R7/USEPA/US  
To: Reid Rosnick/DC/USEPA/US@EPA  
Date: 06/24/2011 01:50 PM  
Subject: Re: Subpart W Options Selection Status -question

---

Yesterday I briefed my ADD on the options in preparation for the decision call. Later in the day I saw her and she indicated that she thought the time and date of the decision meeting had changed. I haven't seen anything but wanted to check, is it still the 30th or has it changed. thanks.

---

Bob Dye  
Radiation and Indoor Air  
EPA Region 7  
901 N. 5th Street  
Kansas City, KS 66101  
(913) 551-7605  
fax (913)551-7844  
dye.robert@epa.gov

EPA-949

"Harry Pettengill"  
<hjp46@comcast.net>  
06/28/2011 11:32 AM

To: Valentine Anoma, abez2n  
cc: Reid Rosnick, djohngoldin  
bcc:  
Subject: RE: Meeting

Val,

I responded last week and indicated the press of business ( work on 2-03 and Task #1 of 2-04), the NESHAP BID/EIA rewrite, vacation schedules and availability of team members would suggest the week of July 11<sup>th</sup> would be more workable. I also posed an additional question to you on how to handle the issue of ore bodies not being regarded as " uranium byproduct" materials. If you didn't get this query let me know and I'll resend it. I also discussed this with Abe last week and I assume he'll try to set something up for the week of the 11<sup>th</sup>. I'm sorry if you didn't get the earlier e-mail but please let us know the days on the week of July 11<sup>th</sup> that are best for you and other staff you mentioned as being involved.

Thanks again

Harry

**From:** Anoma.Valentine@epamail.epa.gov [mailto:Anoma.Valentine@epamail.epa.gov]  
**Sent:** Tuesday, June 28, 2011 10:59 AM  
**To:** abez2n@verizon.net; Harry Pettengill  
**Subject:** Fw: Meeting

Any updates on a meeting time?

----- Forwarded by Valentine Anoma/DC/USEPA/US on 06/28/2011 10:58 AM -----

From: Valentine Anoma/DC/USEPA/US  
To: Harry Pettengill <hjp46@comcast.net>, Abe Zeitoun <reservation-KS989-10360609@conferencemgr.com>  
Date: 06/21/2011 12:33 PM  
Subject: Meeting

---

Abe,

As a follow-up to our last conversation, could you set up a conference call for Tuesday or Wednesday next week to discuss the schedule of first deliverables (outline) and how the outline will look like. I will like to get a couple of my colleagues involved.

Thanks

Val Anoma, Senior Economist  
ORIA (WAM)

EPA-4801

**Wendy Blake/DC/USEPA/US**

06/29/2011 02:13 PM

To Susan Stahle

cc

bcc

Subject follow-up on Subpart W

**Meeting**

Date 06/29/2011

Time 05:00:00 PM to 05:30:00 PM

Chair Wendy Blake

Invitees

Required Susan Stahle

Optional

FYI

Location

EPA-5299

**Wendy Blake/DC/USEPA/US**

06/29/2011 02:13 PM

To

cc

bcc

Subject follow-up on Subpart W

**Meeting**

Date 06/29/2011

Time 05:00:00 PM to 05:30:00 PM

Chair Wendy Blake

Invitees

Required Susan Stahle

Optional

FYI

Location

EPA-5303

**Susan Stahle/DC/USEPA/US**

06/29/2011 02:40 PM

To Wendy Blake

cc

bcc

Subject Accepted: follow-up on Subpart W



EPA-2422

**Lisa Price/R6/USEPA/US**

06/30/2011 02:02 PM

To Reid Rosnick

cc

bcc

Subject GOOD JOB! Was on the phone for the subpart W discussion. Who was the woman with the New England-type accent talking in the end?

Lisa Marie Price  
Grants Mining District Coordinator  
EPA Region 6  
214-665-6744  
price.lisa@epa.gov

EPA-2426

Reid Rosnick/DC/USEPA/US

To Lisa Price

06/30/2011 02:49 PM

cc

bcc

Subject Re: GOOD JOB! Was on the phone for the subpart W discussion. Who was the woman with the New England-type accent talking in the end?

Thanks, Lisa,

That was Gina McCarthy, our AA. Have a great holiday!

---

Reid J. Rosnick  
Radiation Protection Division (6608J)  
U.S. Environmental Protection Agency  
1200 Pennsylvania Ave., NW  
Washington, DC 20460  
202.343.9563  
rosnick.reid@epa.gov

Lisa Price

[Lisa Marie Price Grants Mining District...](#)

06/30/2011 02:02:31 PM

From: Lisa Price/R6/USEPA/US  
To: Reid Rosnick/DC/USEPA/US@EPA  
Date: 06/30/2011 02:02 PM  
Subject: GOOD JOB! Was on the phone for the subpart W discussion. Who was the woman with the New England-type accent talking in the end?

---

Lisa Marie Price  
Grants Mining District Coordinator  
EPA Region 6  
214-665-6744  
price.lisa@epa.gov

EPA-1832

**Kenneth  
Distler/R8/USEPA/US**

04/07/2011 04:34 PM

To Reid Rosnick, Angelique Diaz

cc

bcc

Subject presentation



EPA 4 7 11.pdf  
Ken Distler  
Air Program  
USEPA/Region 8  
1595 Wynkoop Street  
Denver, CO 80202-1129  
303-312-6043  
303-312-6064 fax  
distler.kenneth@epa.gov

# SHEEP MOUNTAIN URANIUM PROJECT CROOKS GAP, WYOMING



**TITAN**  
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**US EPA Project Meeting  
April 7, 2011**

**TSX.V - TUE**

**FRANKFURT - T4X**

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# Introductions

**Greg Adams – VP Development**

**Doug Beahm – BRS Engineering**

**Toby Wright – Wright Env. Services**

## **AGENDA**

### **Introductions**

- Greg Adams/Titan Uranium, VP Development
- Deborah Lebow-Aal/EPA Region 8 Air Program

### **Introduction to Titan Uranium USA**

#### **Project Overview:**

- Doug Beahm/BRS Engineering
- Toby Wright/Wright Env. Services

#### **Issues for Discussion**

- Status of 40 CFR 192 GW standards update
- Status of Active Heaps & Inactive Heaps
- Status of Process Ponds & Waste Storage Tanks



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# PROJECT OVERVIEW

- Location
- Project Scope
  - Mining
  - Milling



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# Sheep Mountain Project Location



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## PROJECT OVERVIEW

- Site Location

- Fremont , Wyoming
- Existing Uranium Mine Permit 381C

- Historical Operation

- Western Nuclear Crooks Gap Project
  - Mined 1956 – 1988, processed at Split Rock Mill
- US Energy
  - 1988 Sheep Mountain Underground
  - Partial reclamation since 1988, no new operation



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## Titan Sheep Mountain Project:

- Mine
  - Underground and Open Pit Mining
  - Current Mine Permit (381C)
    - Updating POO, Reclamation Plan & Bond
- Uranium Recovery
  - Heap Leach with Central Processing Plant
  - Within existing WDEQ Mine Permit (381C)

## Project Scope:

- Mine

- 15 Year Mine Lifecycle, may be extended

- Congo Pit Area

- Mine waste trucked to South and West waste piles
- All mine waste to be returned to pit or used in reclamation

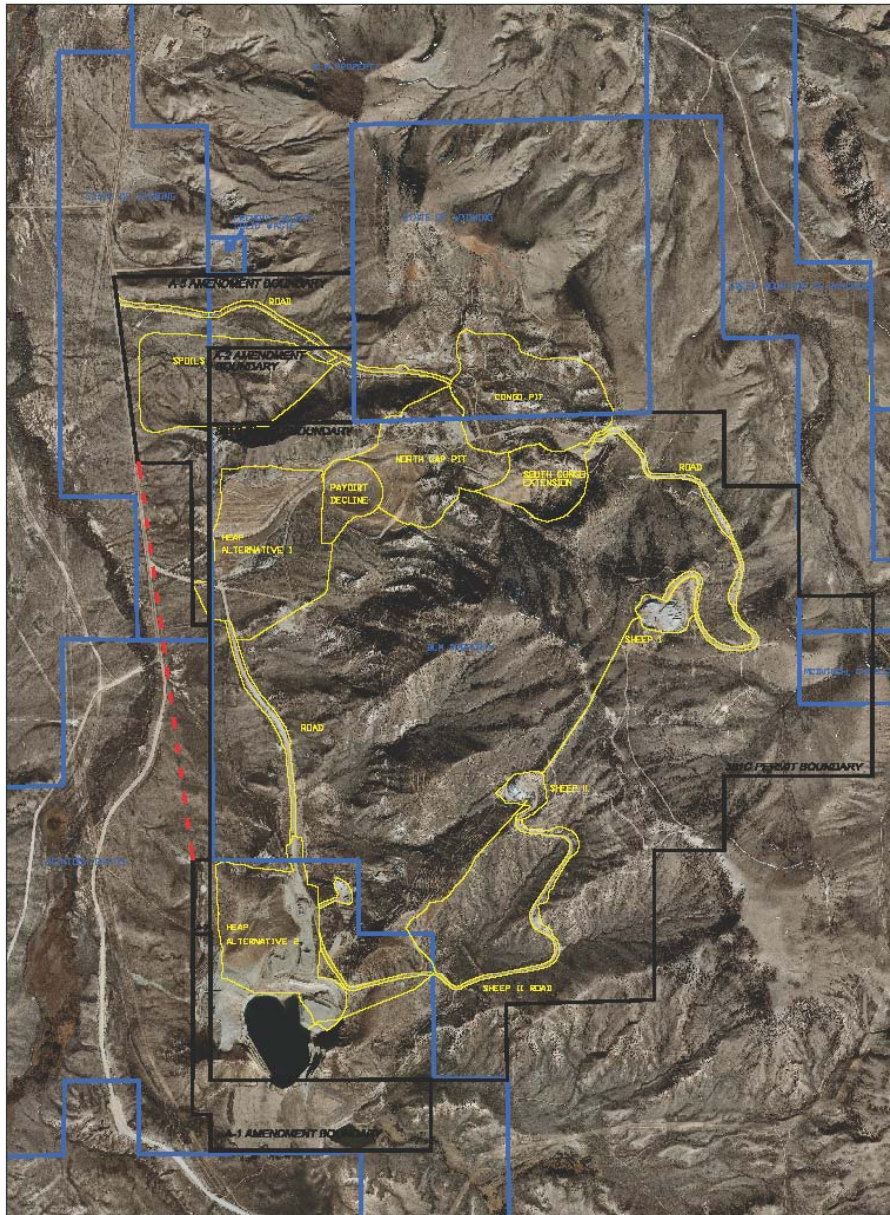
- Sheep Mountain Underground

- To extent possible all wastes reclaimed in old mine workings
- Ore transported to the heap from underground via conveyors

## Project Scope:

### •Mill

- 15 year operational lifecycle, may be extended
- Heap Leach Pads
  - Double lined pads with leak detection, clay underliner
  - Five 16 acre cells planned (approx. 80 acre footprint)
  - Up to 50 ft lifts being evaluated
  - Sulfuric acid lixiviant
- Double lined process ponds with leak detection, clay underliner
  - Barren/Pregnant
  - Liquid waste in evaporation ponds
- Central Processing Plant
  - Solvent Extraction with IX Polishing
  - Vacuum Driers
  - Final Product is drummed yellow cake



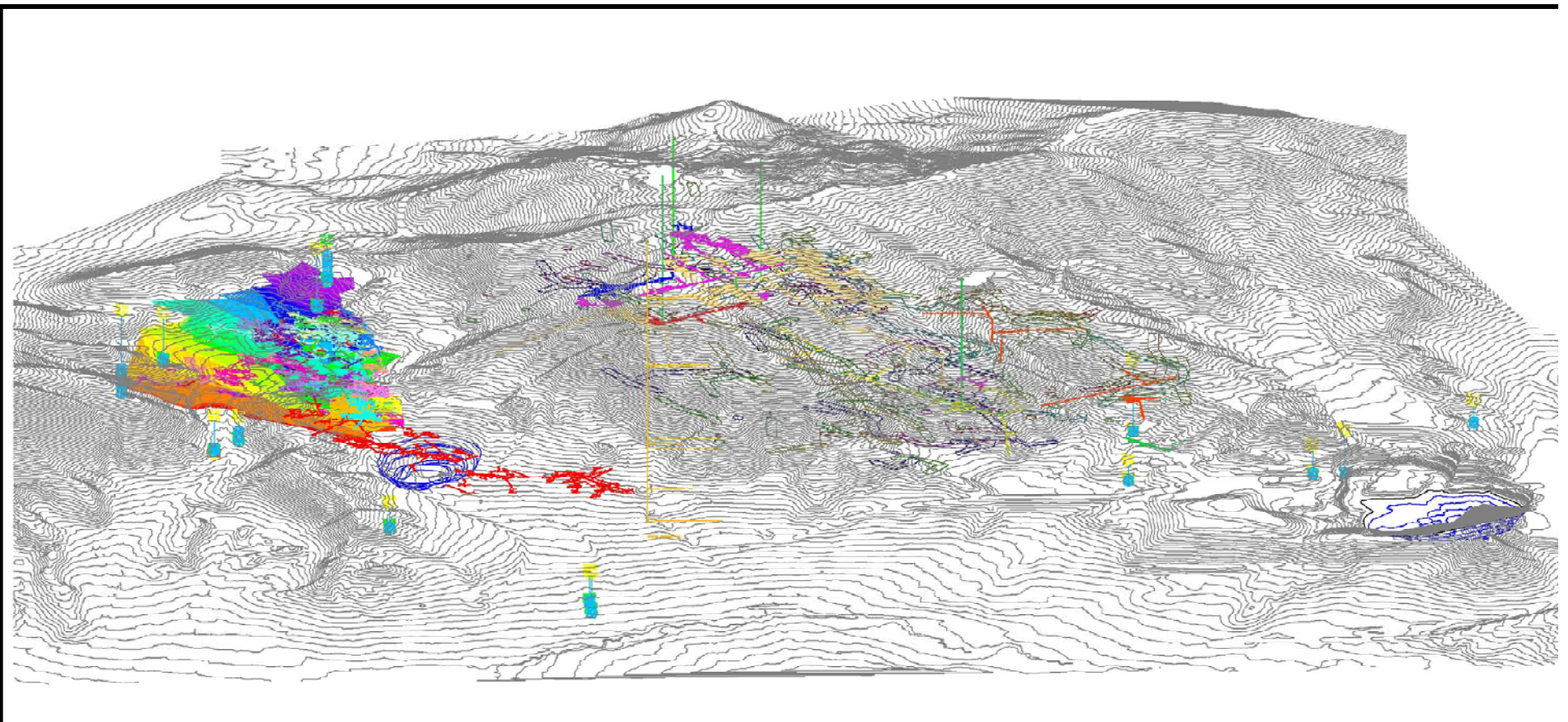
- **Existing Mine Permit 381C**
  - 3,625 acres total area
- **Proposed Disturbance (667 acres)**
  - Mine: 457 acres (258 Disturbed)
    - Congo/North Gap Pits
    - Sheep Mtn. Underground
    - Waste Rock/Topsoil Storage
    - Buildings & Infrastructure
    - All proposed mine disturbance on previously disturbed land
  - Licensed Area: 210 acres (161 Disturbed)
    - Heap Leach Pads
    - Process/Waste Ponds
    - Central Processing Plant

SUMMARY OF DISTURBANCE		INSERT NAME	DATE BY	REVISION DATE	DATE BY	REVISION DATE	DATE BY
NO.:	1-0000	INSERT NAME					
DATE:	9/1/2010	INSERT NAME					
BY:	SC/0010	INSERT NAME					
FIGURE 1							



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# 3D View Mining and Monitor Wells





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# Status of Baseline Studies



## Pre-Operational Baseline Studies Status

- Cultural Resources
- Wildlife
- Vegetation & Soils
- Surface Water
- Groundwater
- Radiological Characterization



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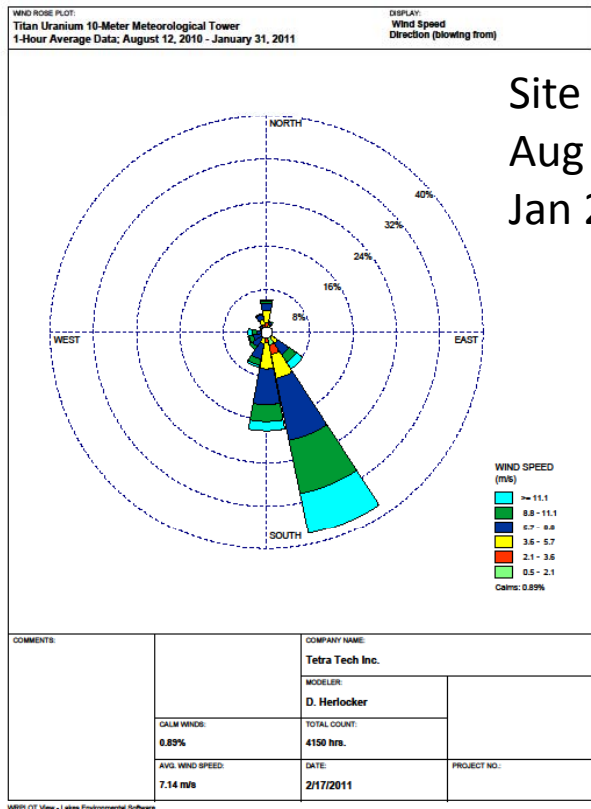
Topic Area	Status	Actions Pending
Cultural Resources	<ul style="list-style-type: none"> <li>Reviewed existing surveys</li> <li>Consulted with BLM on scope of additional surveys</li> <li>Completed additional surveys</li> <li>Submitted findings to BLM</li> </ul>	<ul style="list-style-type: none"> <li>BLM Review</li> <li>SHPO Review</li> <li>Incorporate results into ER</li> </ul>
Wild Life	<ul style="list-style-type: none"> <li>Raptor surveys complete</li> <li>Songbird surveys complete</li> <li>Waterfowl surveys complete</li> <li>Small mammal surveys complete</li> </ul>	<ul style="list-style-type: none"> <li>Incorporate results into ER</li> </ul>
Vegetation	<ul style="list-style-type: none"> <li>Vegetation surveys complete</li> <li>No T&amp;E Species present</li> <li>One BLM sensitive species found               <ul style="list-style-type: none"> <li>Limber Pine</li> <li>No impacted by proposed disturbance</li> </ul> </li> <li>Completed 3 rounds of veg. sampling as per Reg Guide 4.14</li> </ul>	<ul style="list-style-type: none"> <li>Incorporate results into ER</li> </ul>
Soils & Sediment	<ul style="list-style-type: none"> <li>Collected soil samples as per Reg. Guide 4.14 (surface &amp; subsurface)</li> <li>Collected sediment samples as per Reg. Guide 4.14 @ SW sampling locations</li> </ul>	<ul style="list-style-type: none"> <li>Incorporate results into ER</li> </ul>
Surface Water	<ul style="list-style-type: none"> <li>Quarterly SW flow measurements</li> <li>Monthly flowing SW quality sampling</li> <li>Quarterly Pit Lake quality sampling</li> </ul>	<ul style="list-style-type: none"> <li>Data analysis</li> <li>Incorporate results into ER</li> </ul>
Groundwater	<ul style="list-style-type: none"> <li>Quarterly Sampling</li> <li>Reg. Guide 4.14 and WDEQ parameters</li> </ul>	<ul style="list-style-type: none"> <li>Data analysis</li> <li>Incorporate results into ER</li> </ul>
Meteorological	<ul style="list-style-type: none"> <li>Continuous data since July 2010</li> <li>2 m &amp; 10 m instrumentation</li> <li>Instrumentation meets most Reg. Guide 3.36 requirements</li> </ul>	<ul style="list-style-type: none"> <li>MILDOSE Modeling</li> <li>Update with 4 quarters of data</li> </ul>
Air Quality	<ul style="list-style-type: none"> <li>Quarterly sampling from 5 locations since July 2010</li> <li>All parameters and reporting limits as per Reg. Guide 4.14</li> </ul>	<ul style="list-style-type: none"> <li>Data analysis</li> <li>Incorporate results into ER</li> </ul>
Socio\Env. Justice	<ul style="list-style-type: none"> <li>Ongoing</li> </ul>	<ul style="list-style-type: none"> <li>Complete analysis</li> <li>Incorporate results into ER</li> </ul>

Nearest Resident

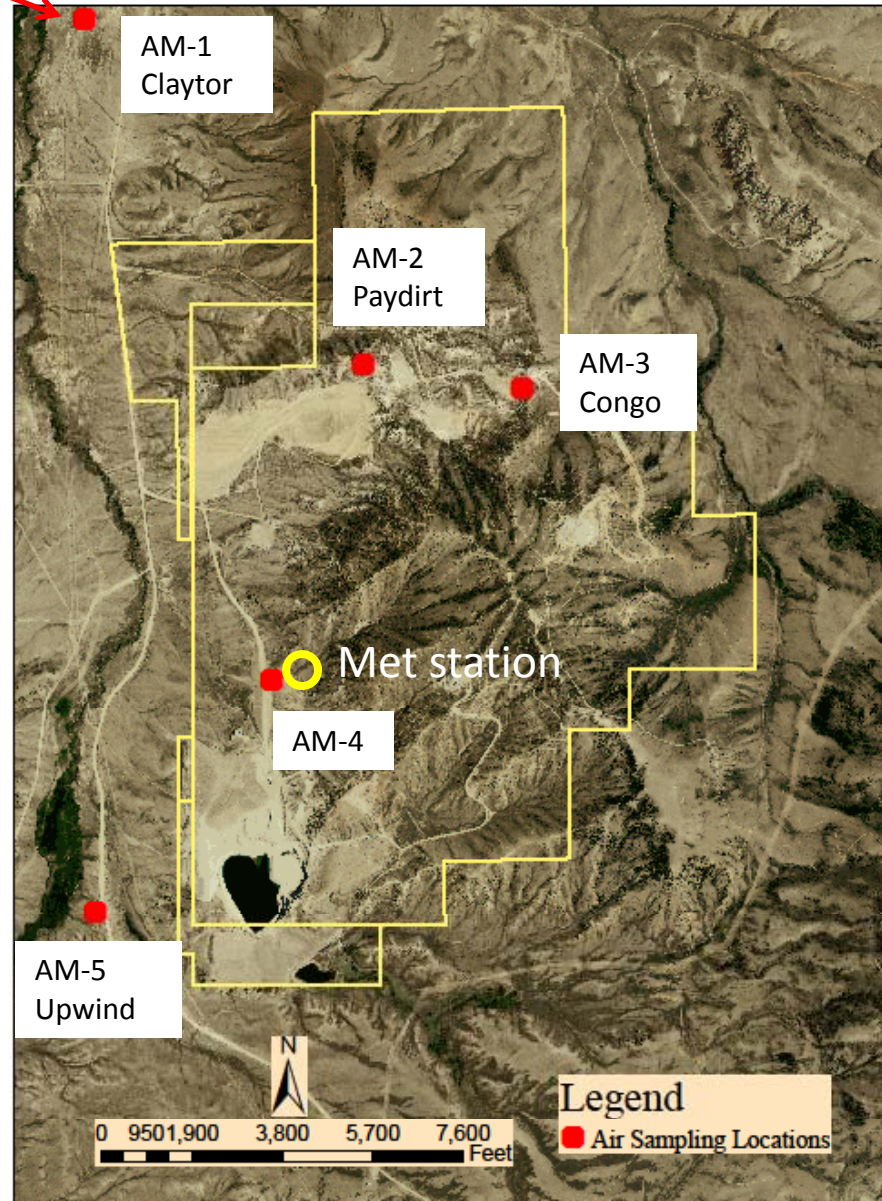


**Air sampler locations:**

Additional monitoring locations once radiation control boundary location is finalized



Site wind rose  
Aug 2010 through  
Jan 2011



## Groundwater Hydrogeology

- Historical Conceptual model
  - Battle Spring Fm. host upper most aquifer
    - Fine to coarse grained sandstone with discontinuous siltstone and claystone lenses
    - Unconfined aquifer
  - Recharge from north
  - Regional discharge to south
- New Studies Ongoing
  - Sampling existing wells in place since 1988
  - Replacing historical wells abandoned in 2001
  - Evaluating aquifer properties



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# Status of NRC/BLM/State Permit Applications & NEPA

## Coordinating Permitting & Licensing

- NRC & BLM will develop separate EIS Documents
- Titan is planning on parallel WDEQ, BLM & NRC submittals
  - Q3 2011
  - WDEQ-LQD/BLM
    - Plan of Ops, Rec. Plan & Bond Est., Env. Report
  - NRC
    - Application with Technical Report & Env. Report
- Coordinating communications w/ NRC, BLM and WDEQ

# NRC Licensing & NEPA

- Scope of NRC EIS Encompasses:
  - Milling: Heap Leach & Central Processing Plant
  - Mining is a ***Connected Action***
  - BLM would be a Cooperating Agency

Separate or combined NEPA processes require coordination and communication

- Planning Application to NRC Submittal in Q3, 2011

# BLM Permitting & NEPA

- Scope of BLM EIS Encompasses:
  - Mine: open pit and underground, mine dewatering, operations, reclamation
  - Milling: Heap Leach & Central Processing Plant
    - Includes long-term disposal of 11e.(2) byproduct material, land transfer
    - BLM has indicated that they will reference rather than duplicate NEPA analyses for impacts addressed in the NRC NEPA process as much as possible
    - NRC would be Cooperating Agency
- Planning WDEQ\BLM Submittal in Q3, 2011

**Separate or combined NEPA processes require coordination and communication**



## BLM Permitting & NEPA

- BLM anticipates publication in Q2 or Q3 2011
- Titan has submitted to BLM a draft cost recovery MOU for 3<sup>rd</sup> Party NEPA Contractor
- RFP for procurement of 3<sup>rd</sup> Party NEPA Contractor in process
  - Anticipate NEPA Contractor for bLM selection in Q2 2011



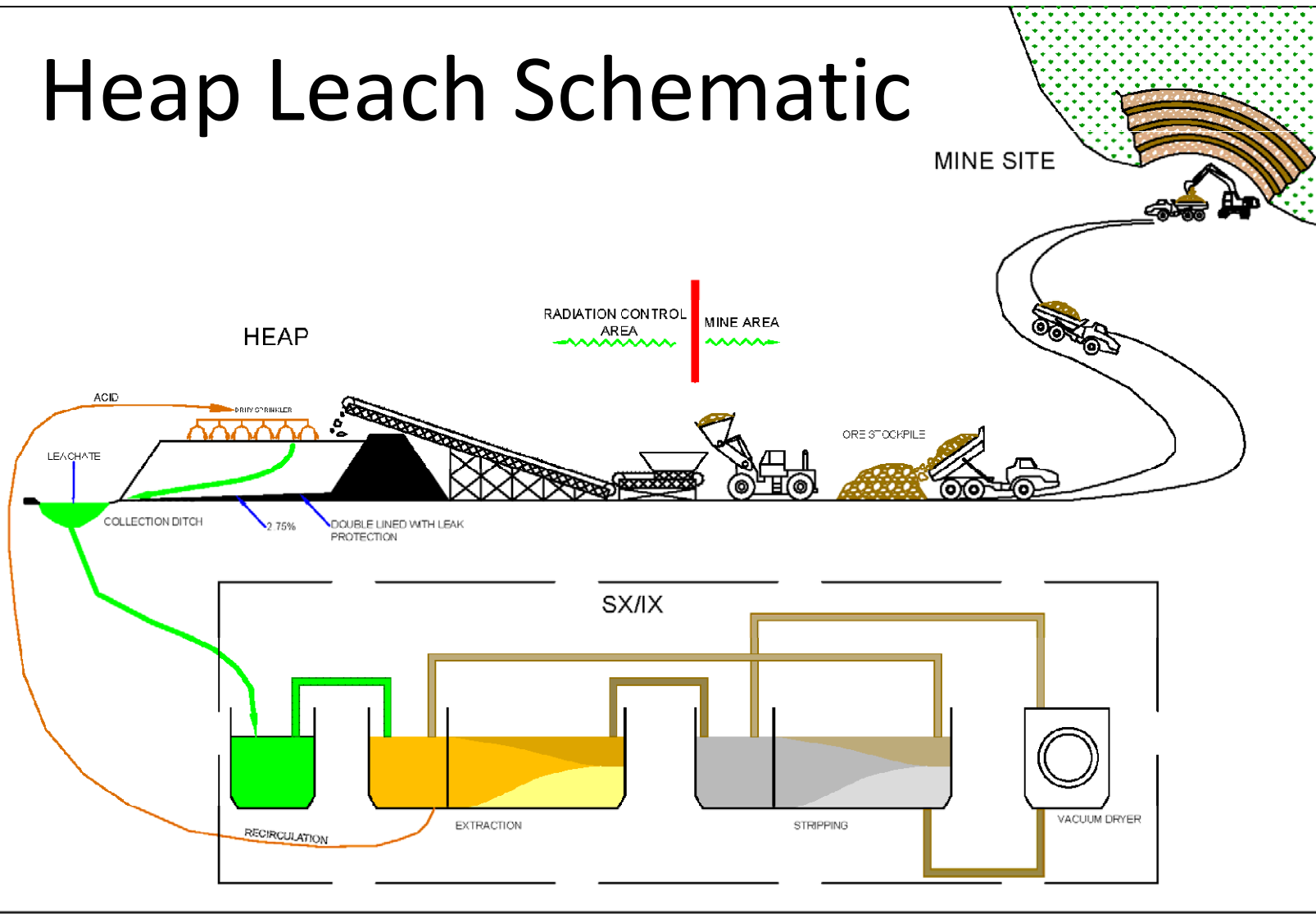
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# Heap Leach Process



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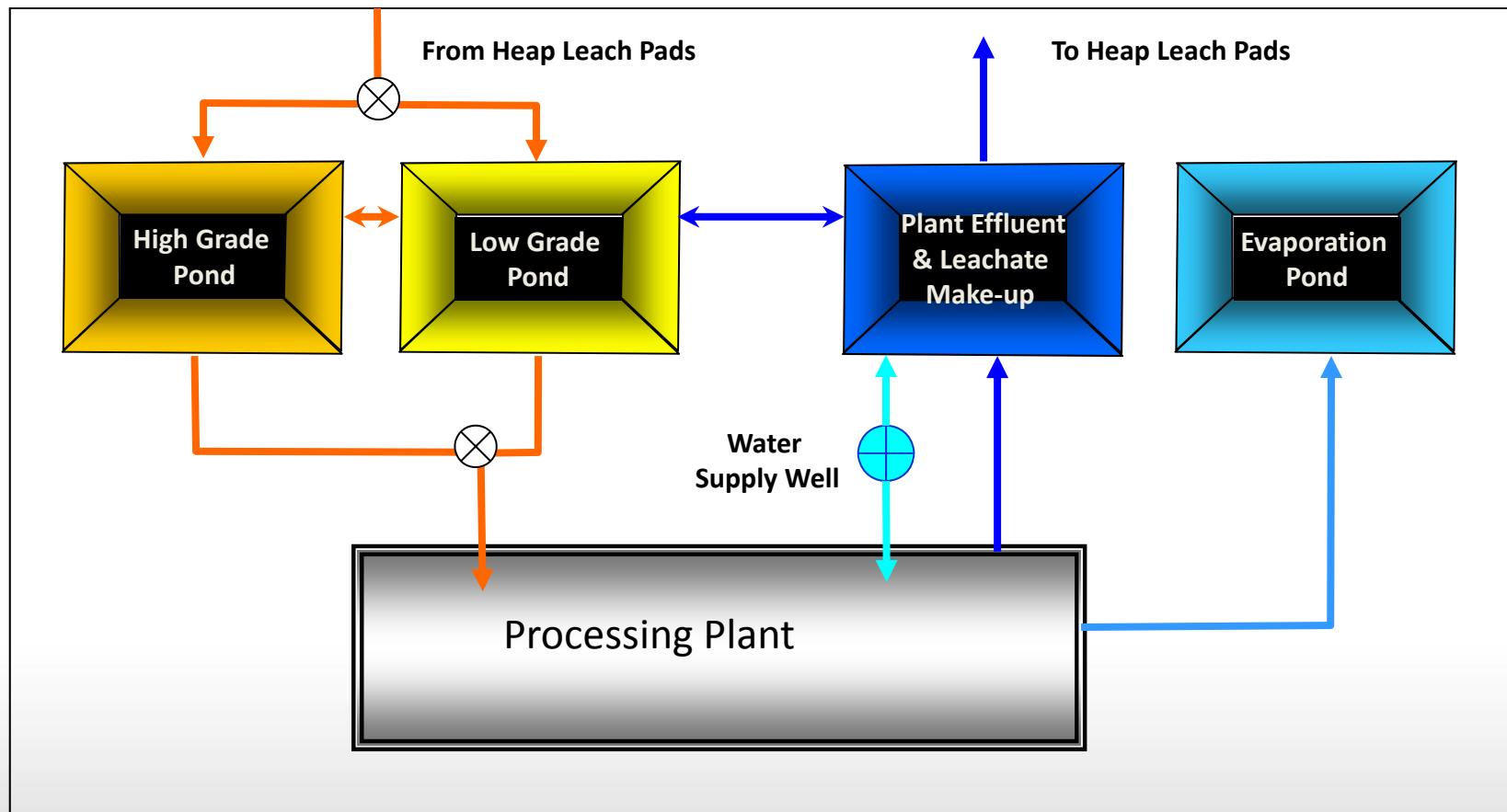
# Heap Leach Schematic





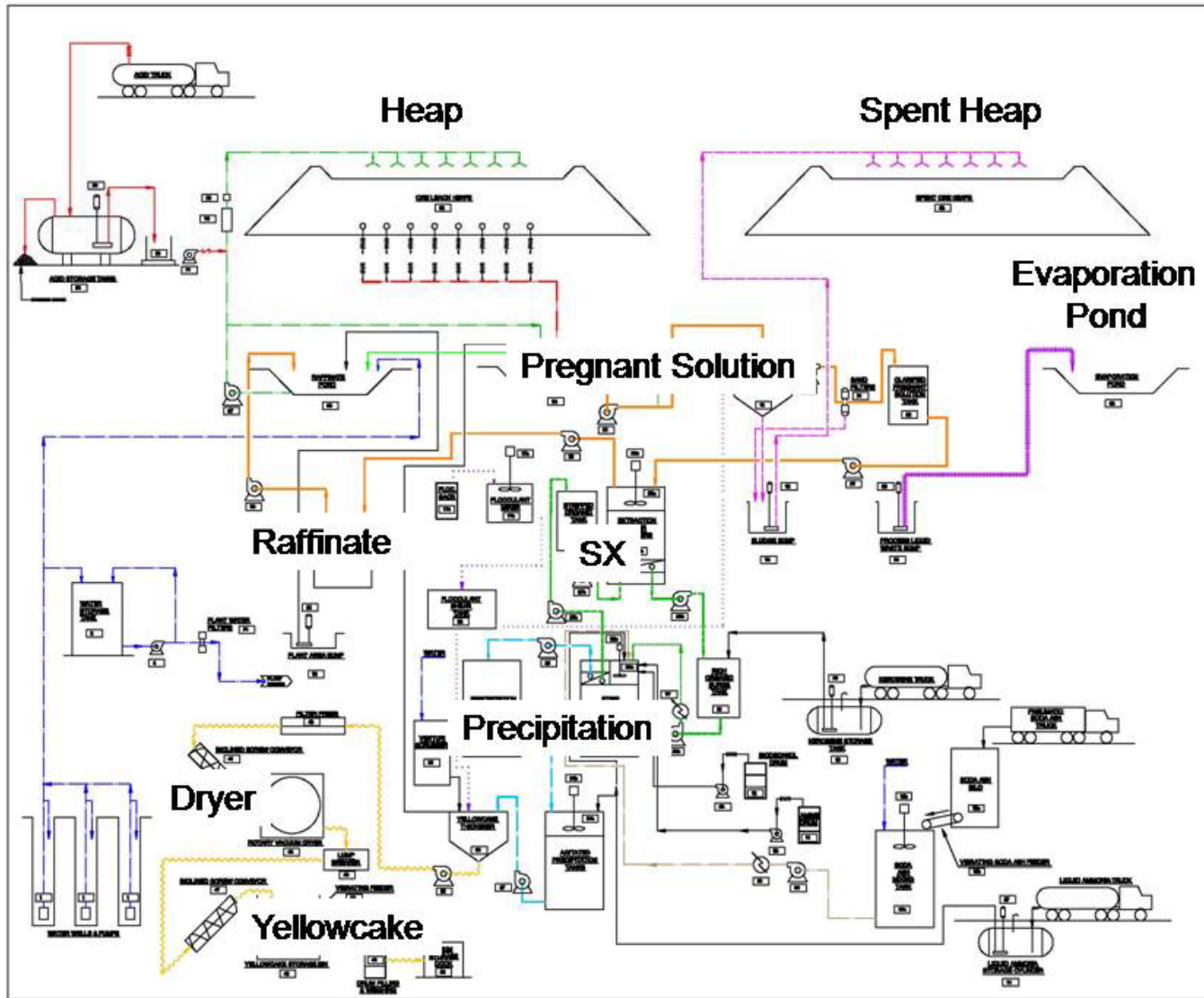
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# Conceptual Recovery System Layout





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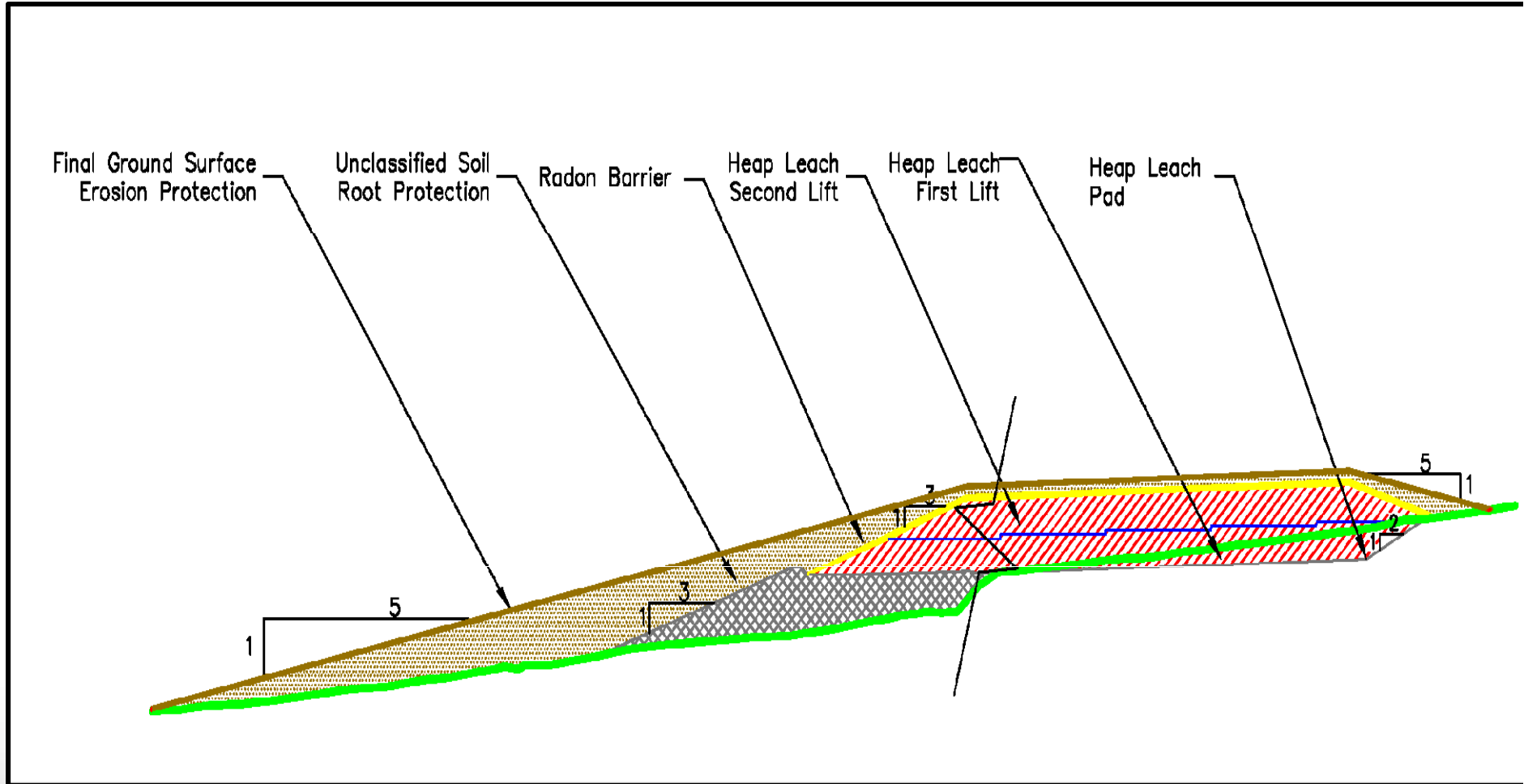


## Key Points

- Active heap leach pad is part of the “mill” and the active leaching is milling
- Process Ponds are parts of the mill and will not contain any waste streams
- Milling begins with the stacking of the ore on the pad
- Milling ends when uranium recovery is complete



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Constituent	Initial Grade	Tails	Recovery	Leachate
	mg/Kg	mg/Kg		mg/L or pCi/L
Aluminum	2,920	2,810	4%	203
Arsenic	3.0	1.8	40%	1.1
Barium	10.0	10.4	-4%	0.1
Boron	4.0	3.6	10%	0.9
Cadmium	0.2	0.2	30%	0.3
Calcium	499.0	275.0	45%	445
Chromium	3.5	3.0	14%	1.1
Copper	6.0	3.4	43%	3.9
Iron	5,010	3,910	22%	498
Lead	15.0	10.9	27%	2.8
Magnesium	533	420	21%	250
Manganese	31.4	19.1	39%	10.5
Molybdenum	2.7	2.0	26%	0.0
Nickel	1.1	0.2	82%	0.8
Potassium	857	783	9%	58.0
Selenium	6.2	5.4	13%	0.0
Uranium	894	21	98%	1,047
Vanadium	4.8	3.6	25%	3
Zinc	11.3	8.6	24%	5
226Radium	237	233	2%	6,700
230Thorium	570	37	94%	587,290
210Lead	169	114	33%	29,400



# Heap/ISR Comparison

## •ISR

- Processing brings Formation Ground Water with elevated Radon into CPP.
- Flow rates 3,500 – 7,000 gpm

## •HEAP LEACH

- 98% of radium remains in the heap
- Short lixiviant residence time in heap
- Average Flow Rate @ Sheep 350 gpm
- Low radon levels expected in leachate sent to plant

# Heap/Conventional Comparison

## •CONVENTIONAL MILLING PHYSICALLY ALTERS ORE

- Processing brings **ore** and associated **radium** into Mill
- Grinding reduces grain size
- Milling process separates sands and slimes
- Slimes concentrate **radium**, retain moisture, have low strength
- Resulting in lengthy process (decades) to stabilize and reclaim

## •HEAP LEACH DOES NOT PHYSICALLY ALTER ORE

- 98% of radium remains in the Heap
- Heap remains comingled
  - No grinding; no sand slime separation; no concentration of radium
- Built on a liner with a positive drain
- Reclamation can proceed efficiently



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# Mill Details

Heap & Pond Liner Details

Heap Cap and Cover

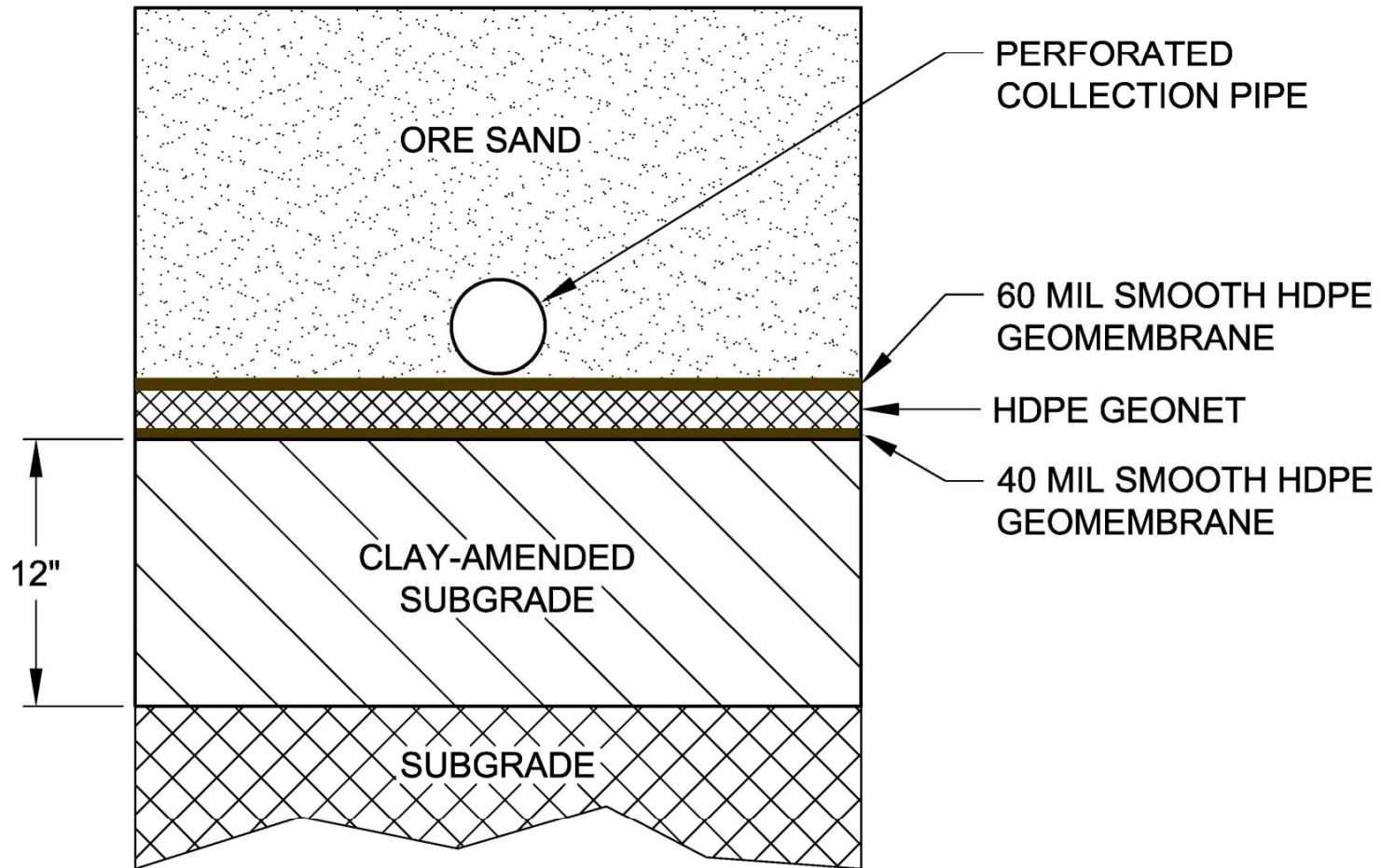
# Heap Leach Facility

## Heap Leach Pad

- Double lined, leak detection, clay amended sub grade
- Loading up to 2,600 tons/day, roughly 1,800 cy/day
- 25 ft lifts, maximum height 50 ft
- 200 ft wide by 1,600 ft long lifts installed via continuous stacker
- Stacking and leaching of lifts is phased to minimize amount of uncovered spent heap (tailings)
- Lixiviant is 1 normal  $H_2SO_4$ 
  - applied at 0.005 gpm/sq ft
- Approx. 1.6 acres under primary leach at any one time
  - 360 gpm of leachate in process



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## *Mobile Grasshopper / Radial Stacking*



Courtesy: Terra Nova Technologies, Inc.  
Santee, CA  
[www.tnt.inc.com](http://www.tnt.inc.com)

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# Ore Stacker

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## Heap Leach Facility (con't)

Active milling cycle includes:

- Stacking
- Primary leach
- “Resting” heap to enhance recovery
- Secondary leach
- Rinse
- Draindown

Once active leaching and uranium recovery is complete, heap becomes *inactive* tailings





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## Heap Leach Facility (con't)

- Up to 45 acres of heap open at any one time
  - < 40 acres would be spent heap (tailings)
- A single heap leach pad (one continuous liner) may at any one time contain:
  - Open and unloaded pad
  - Un-leached ore
  - Ore under active leaching (milling)
  - Ore being “rested” between leach cycles (milling)
  - Ore being rinsed for final value recovery and heap detoxification (milling)
  - Spent ore (tailings) waiting to be covered
  - Spent ore (tailings) being covered
  - Covered spent ore (tailings)



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# Conceptual Heap Sequencing

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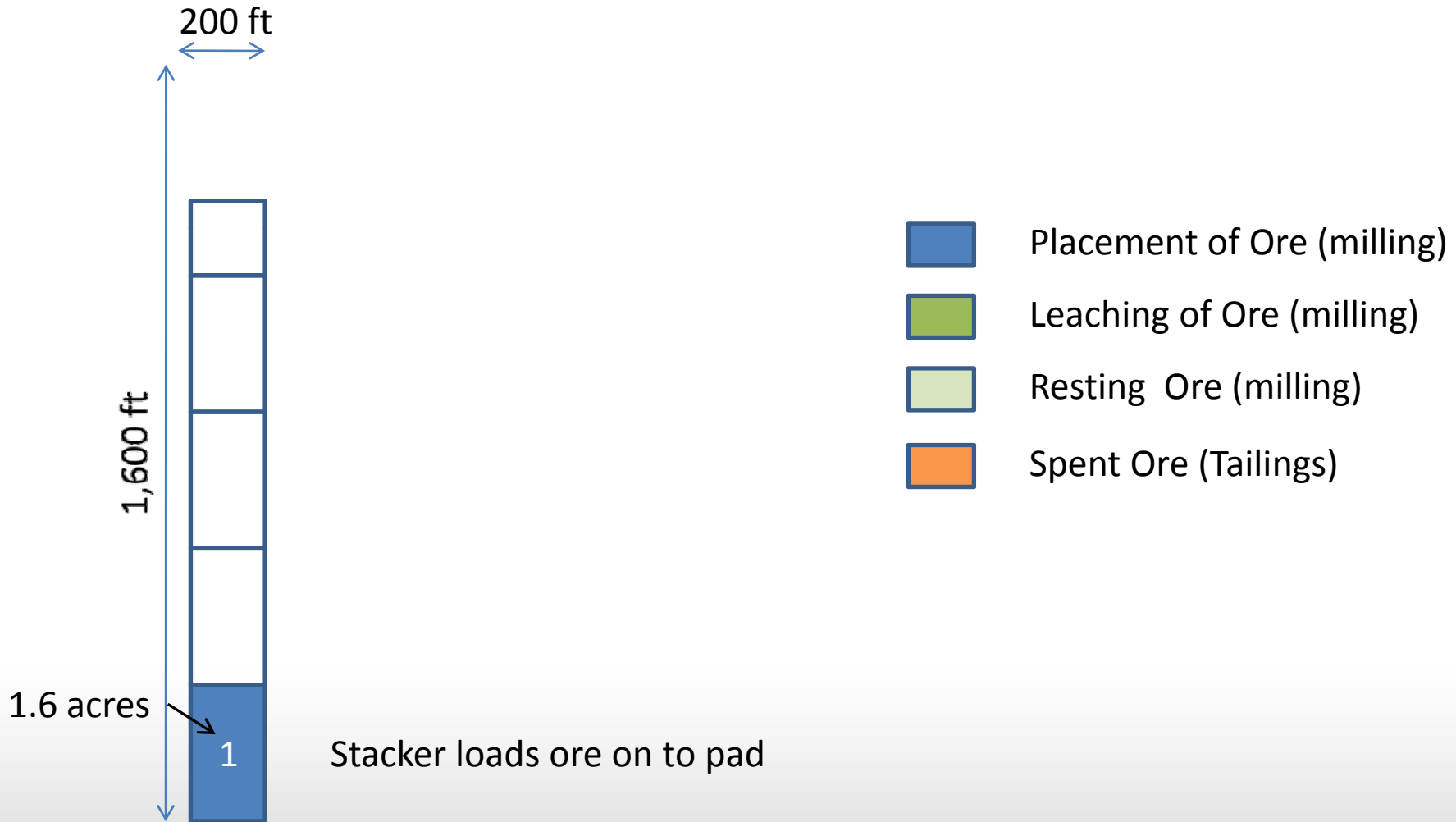
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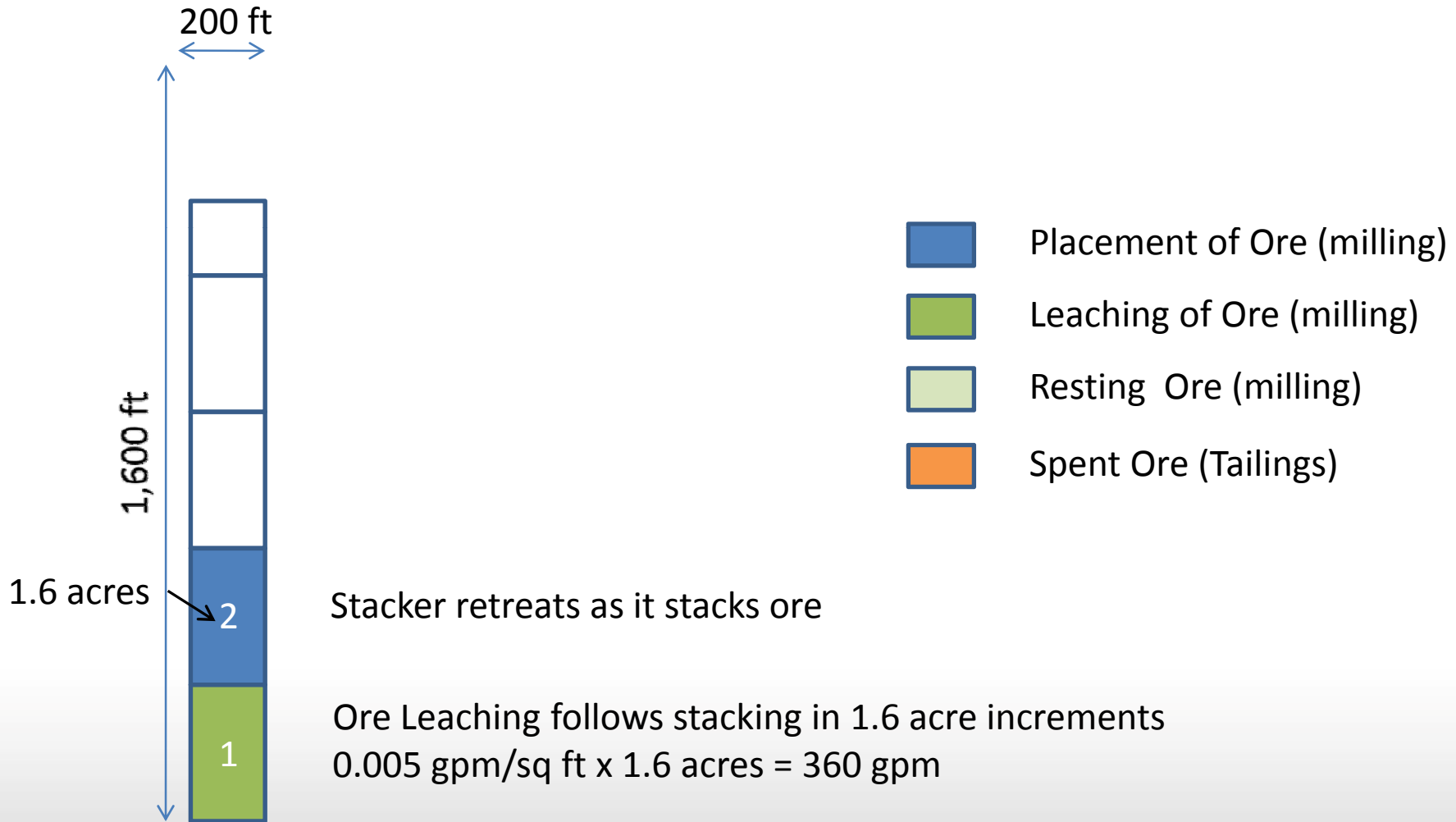
# Stacking and Leaching Sequence





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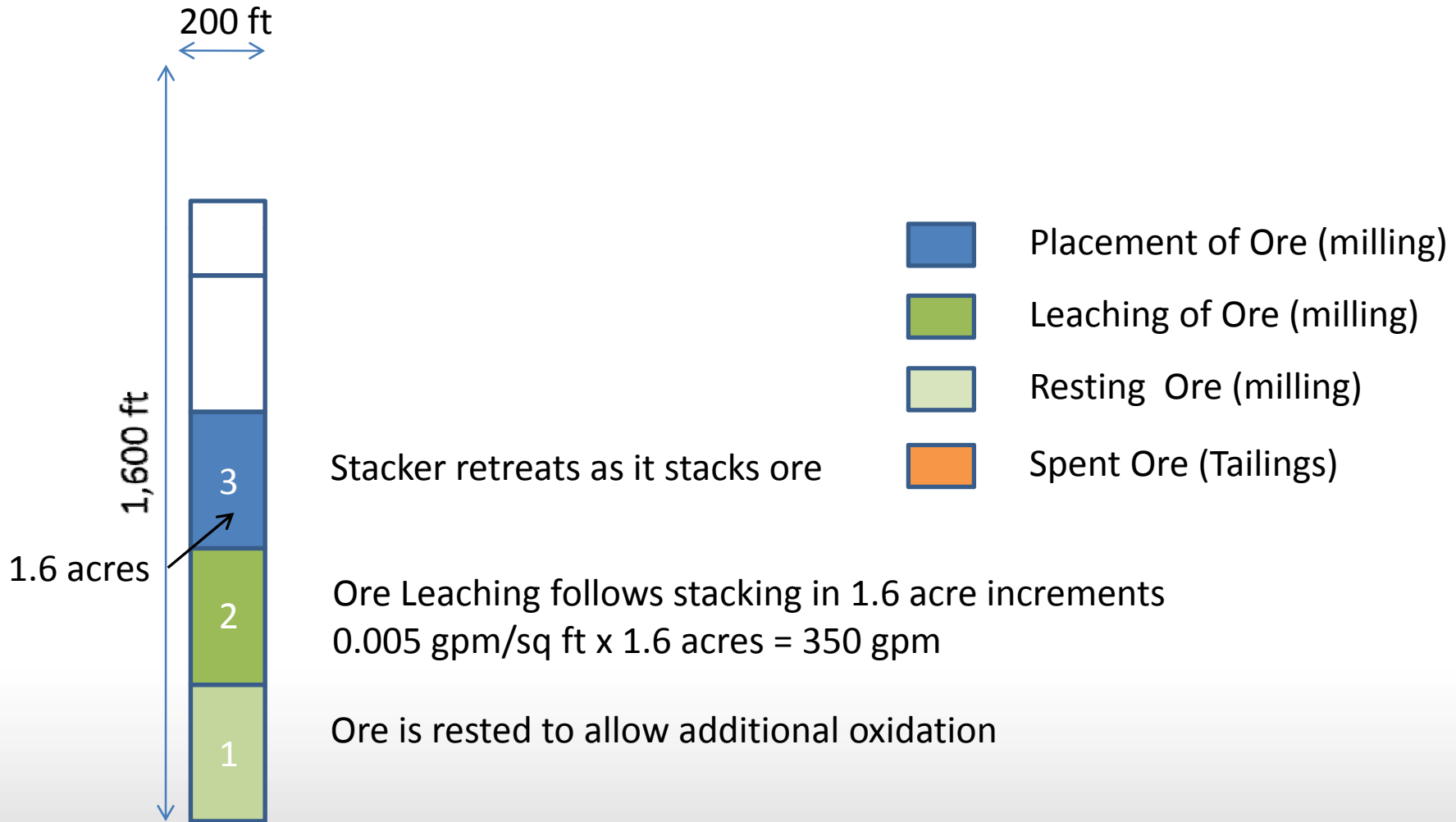
# Stacking and Leaching Sequence





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# Stacking and Leaching Sequence





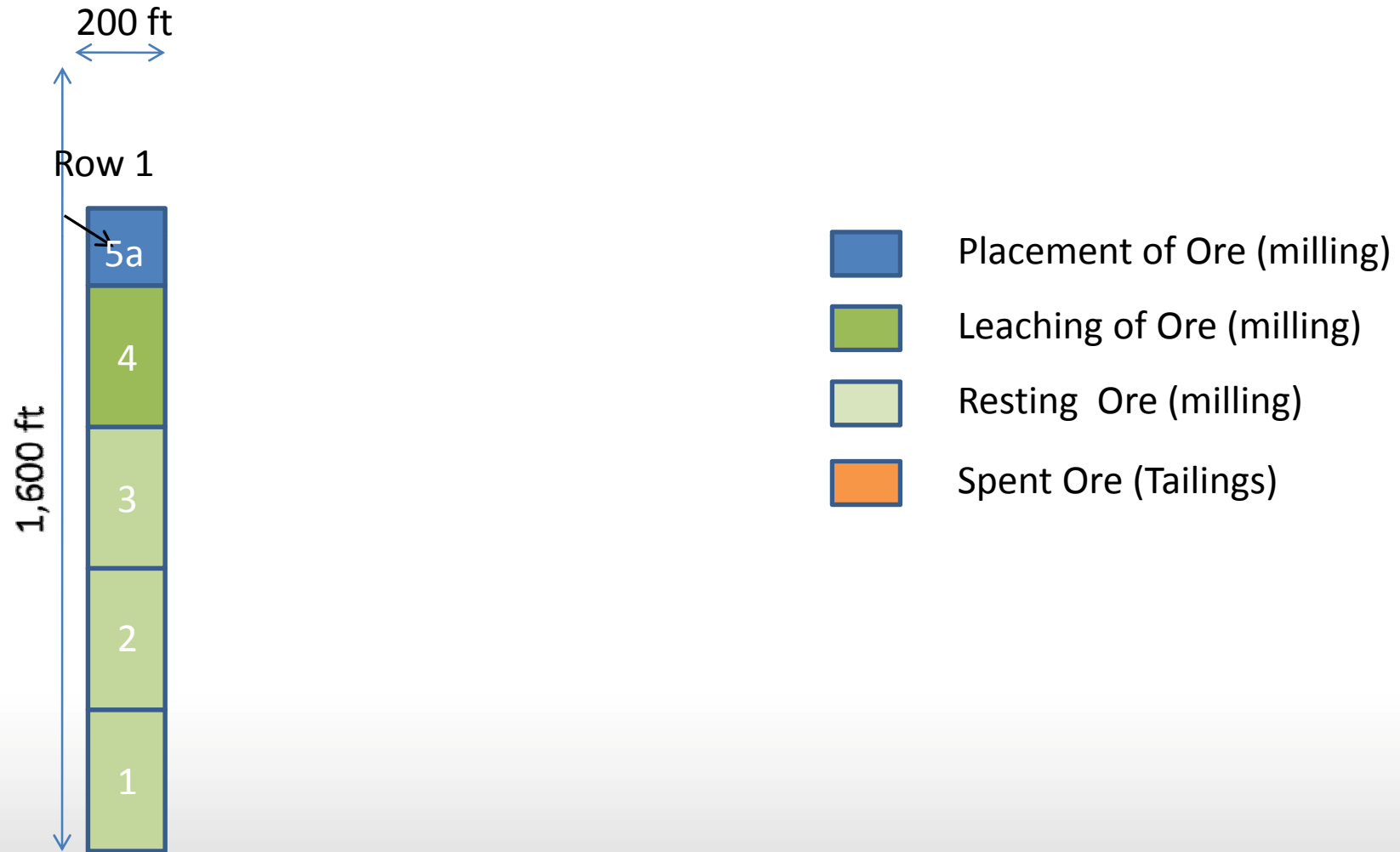
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# Stacking and Leaching Sequence





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# Stacking and Leaching Sequence

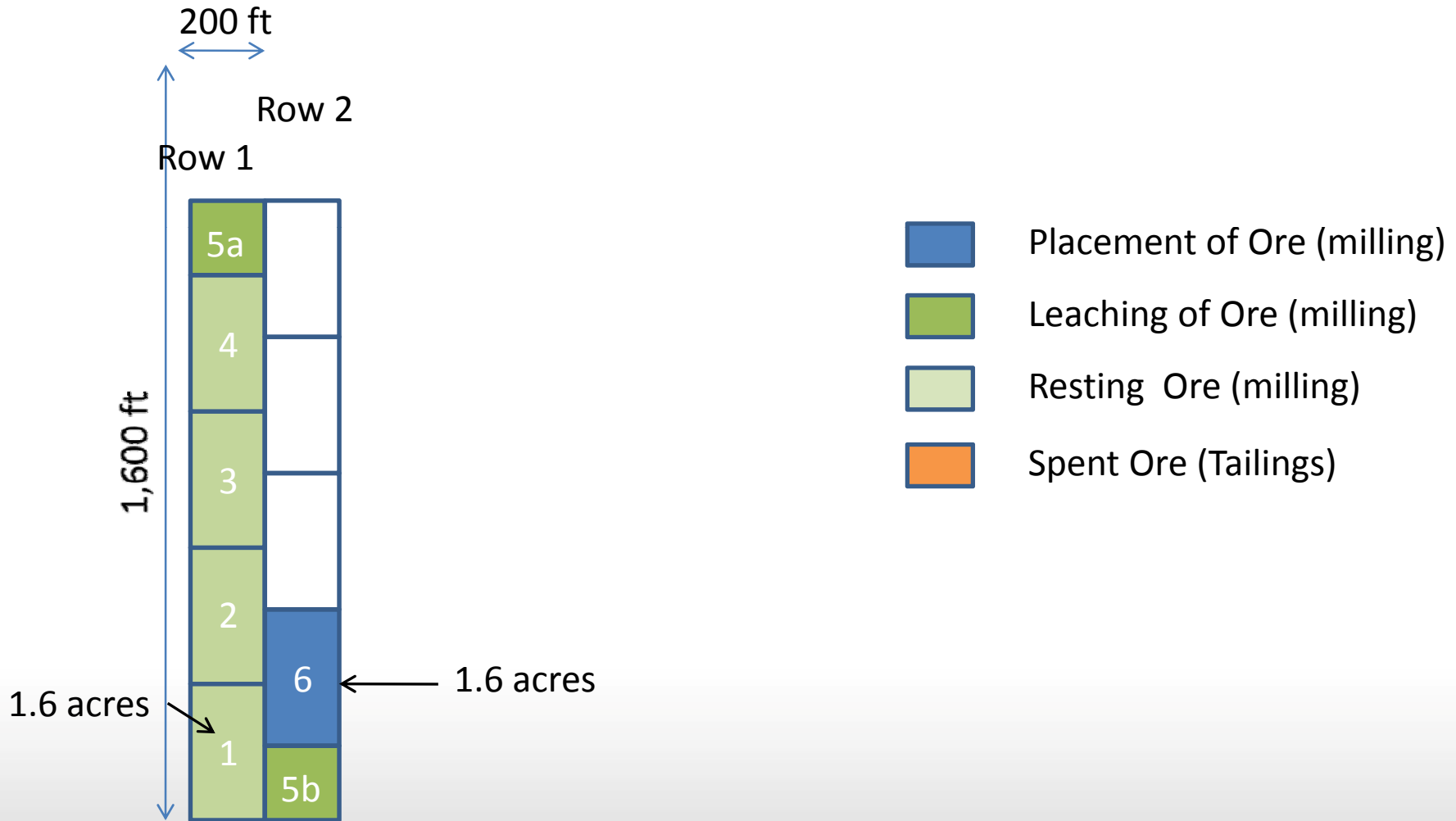






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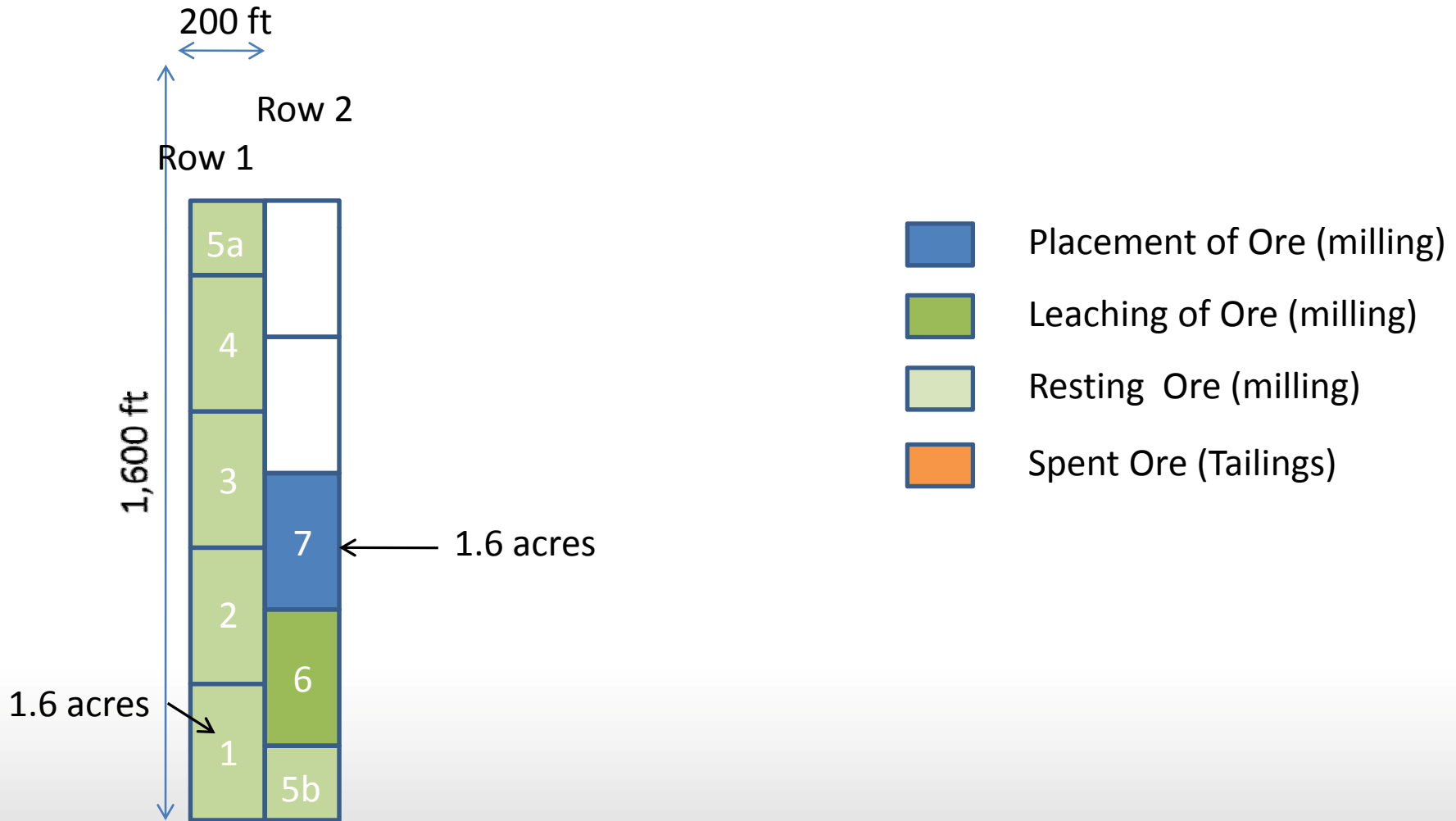
# Stacking and Leaching Sequence





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# Stacking and Leaching Sequence





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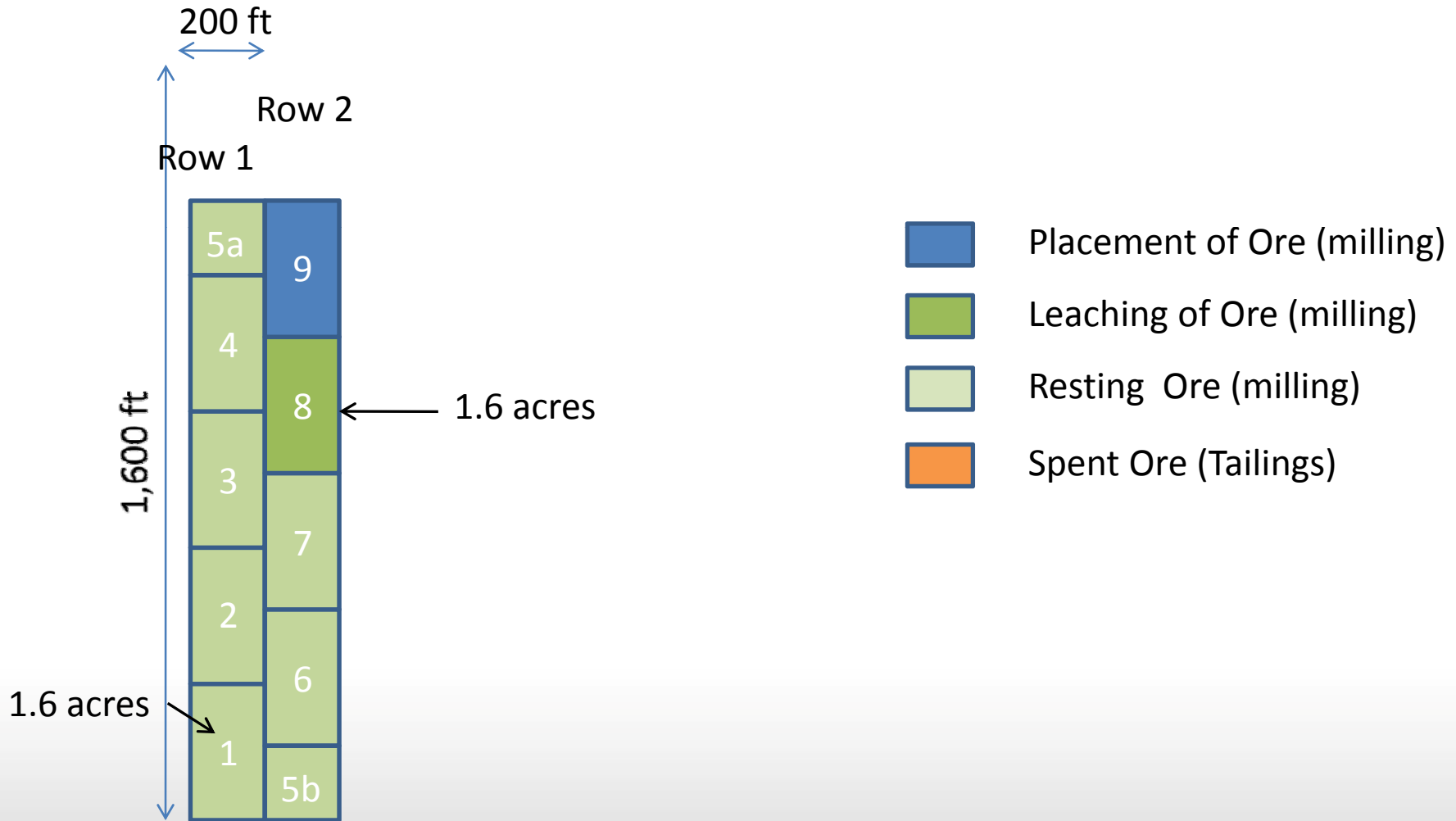
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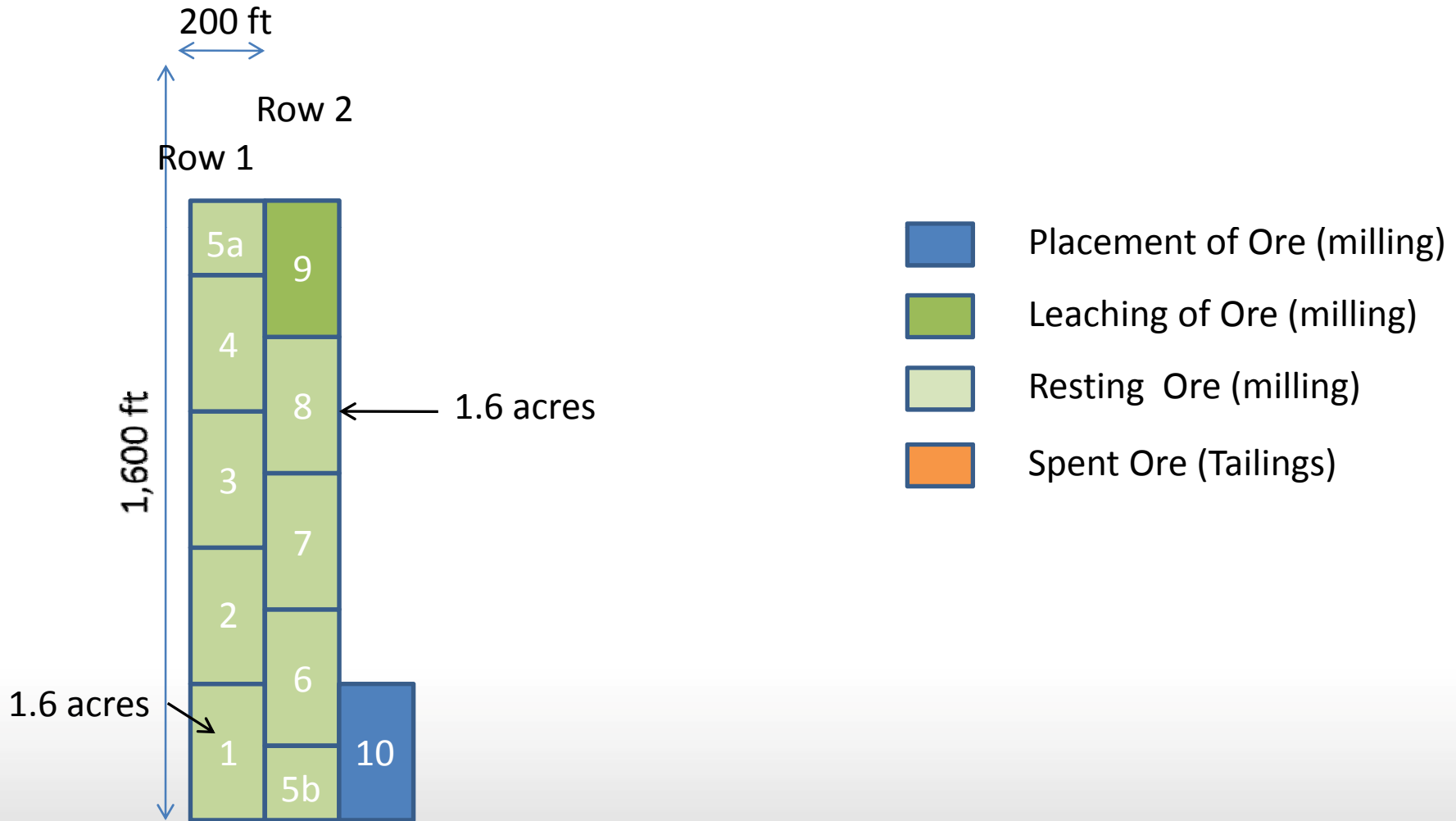
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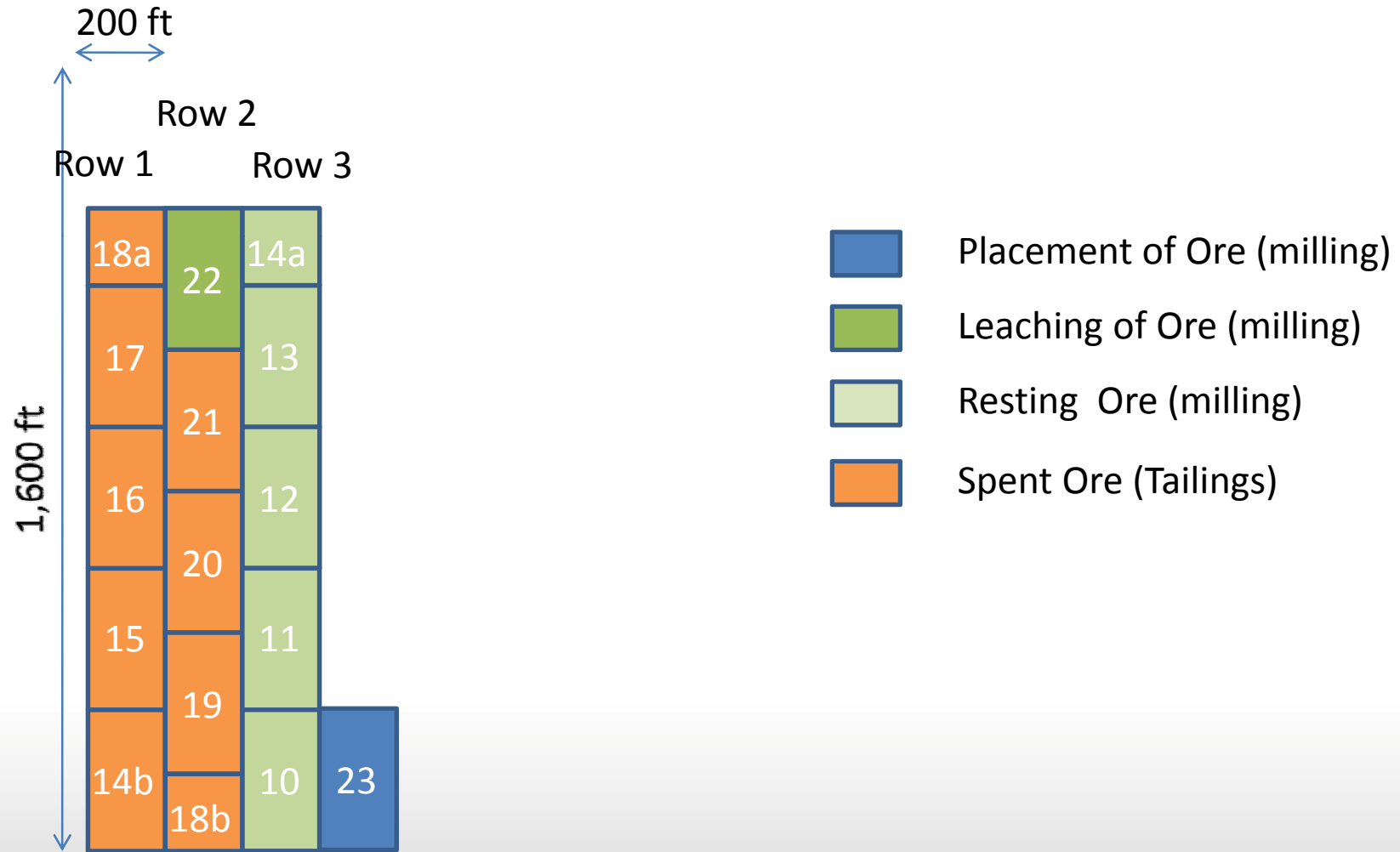
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

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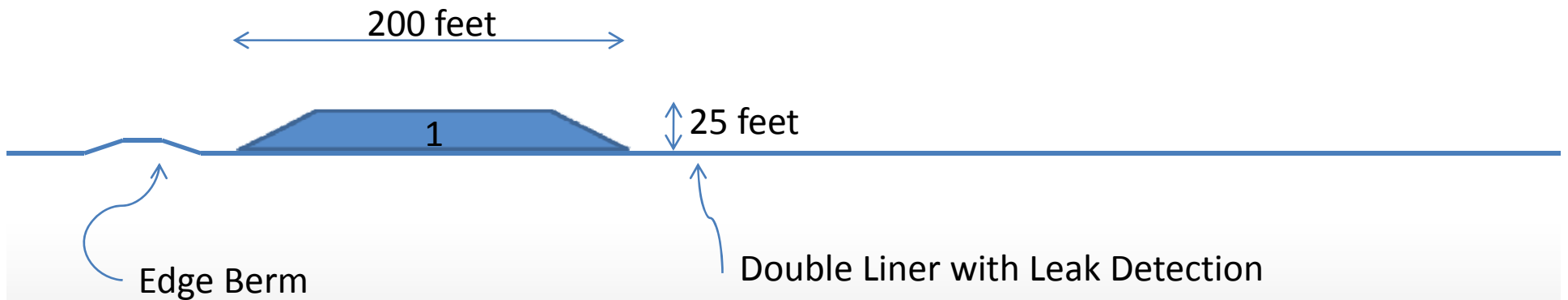
# Stacking and Leaching Sequence









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-  Placement of Ore (milling)
-  Leaching of Ore (milling)
-  Resting Ore (milling)
-  Spent Ore (Tailings)





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

-  Placement of Ore (milling)
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-  Resting Ore (milling)
-  Spent Ore (Tailings)











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-  Placement of Ore (milling)
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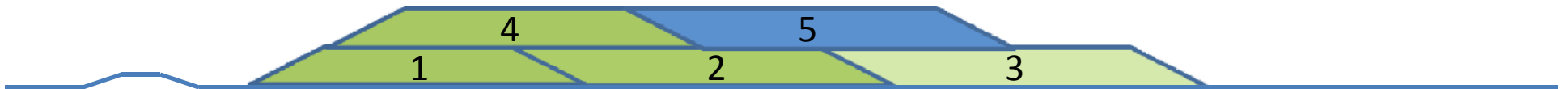
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

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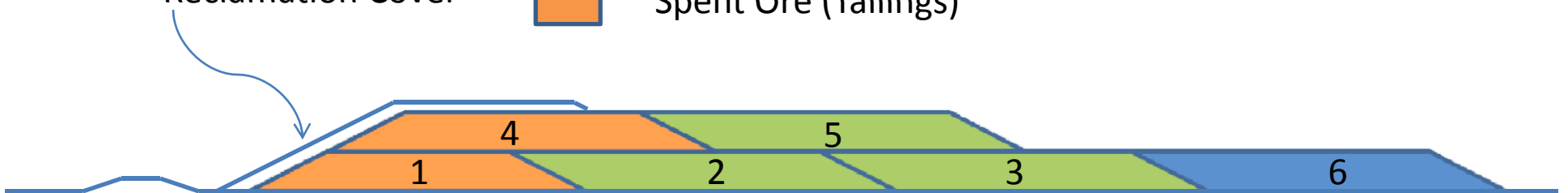




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

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Reclamation Cover

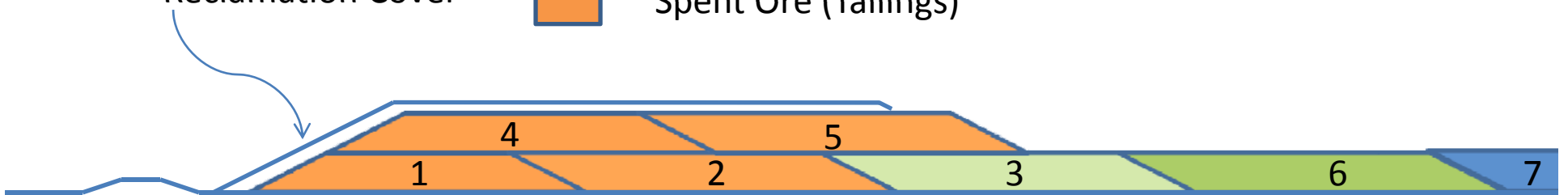




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

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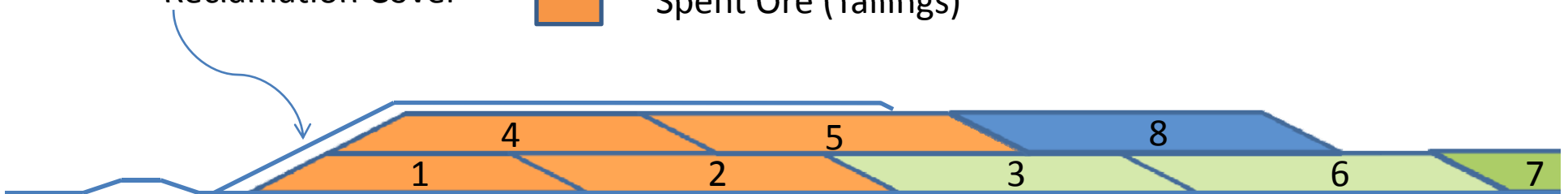




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

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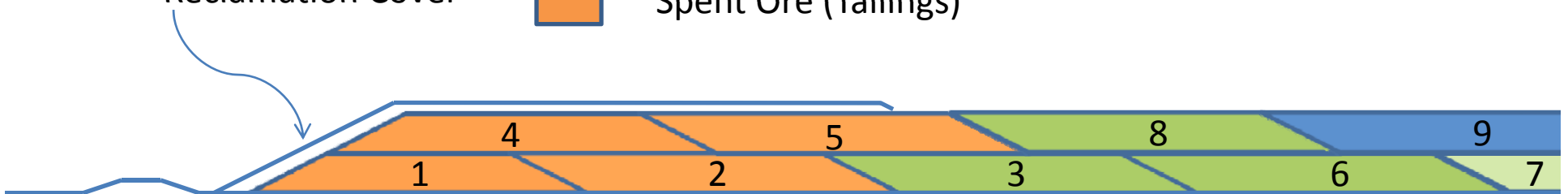




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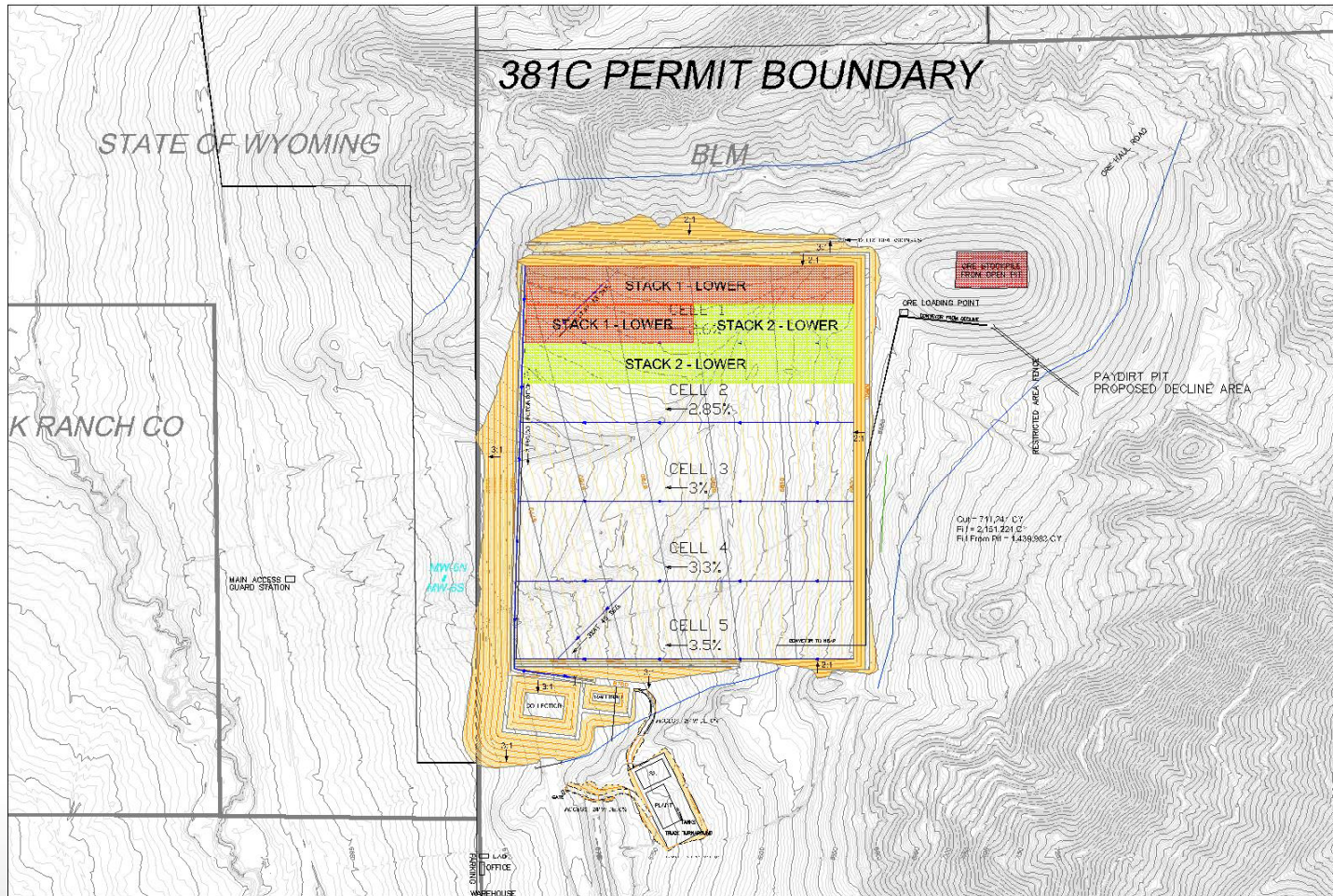
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Reclamation Cover





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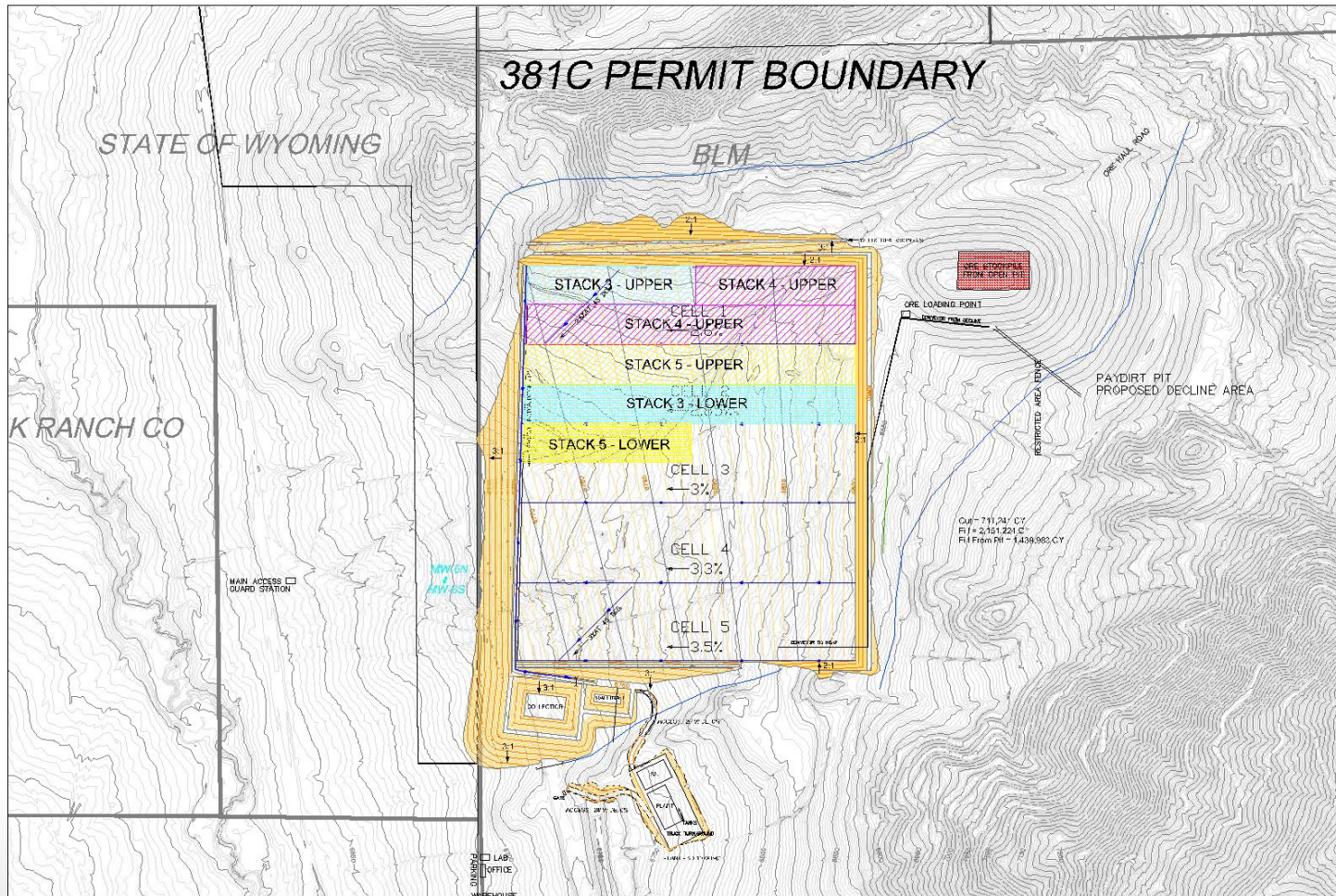
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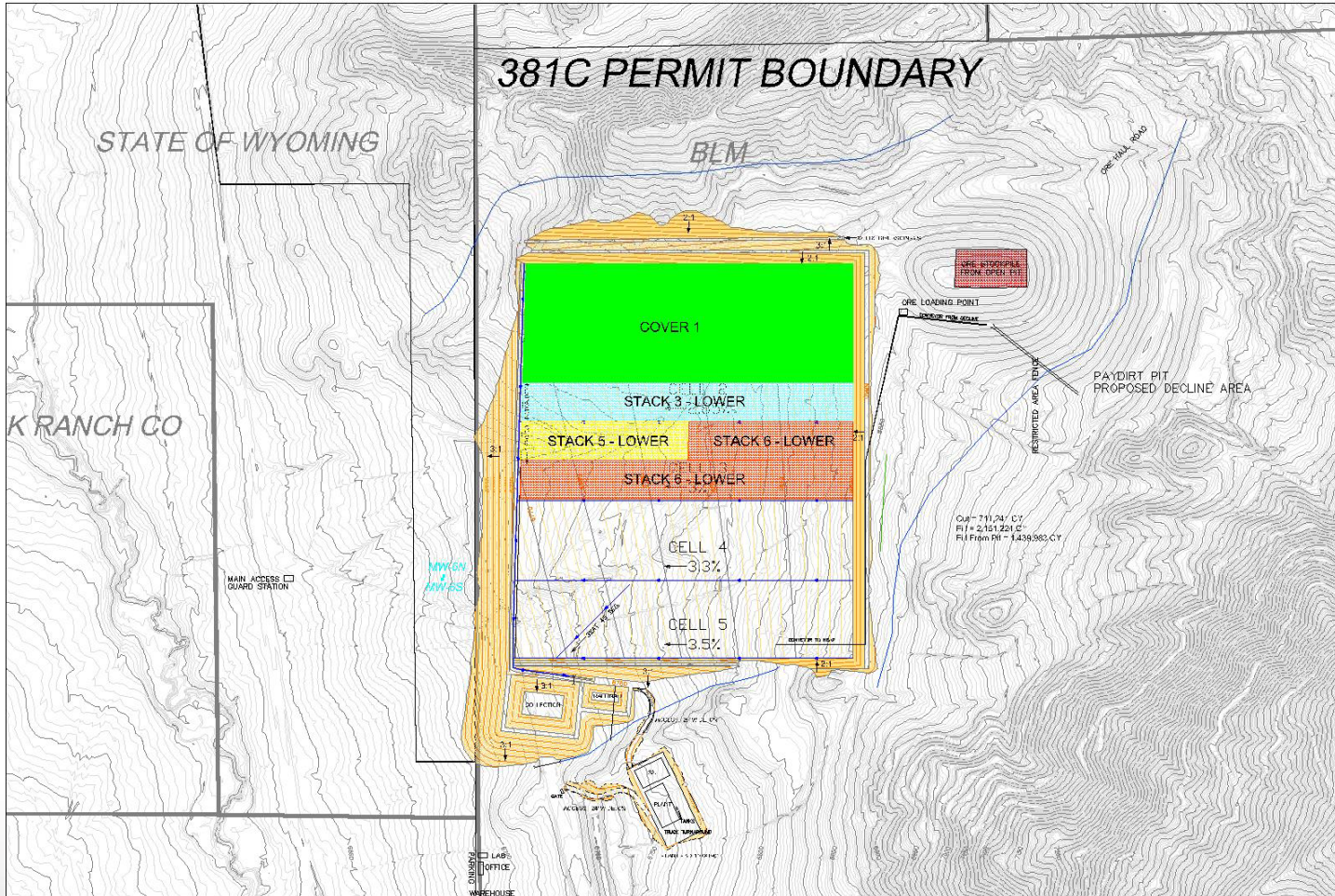
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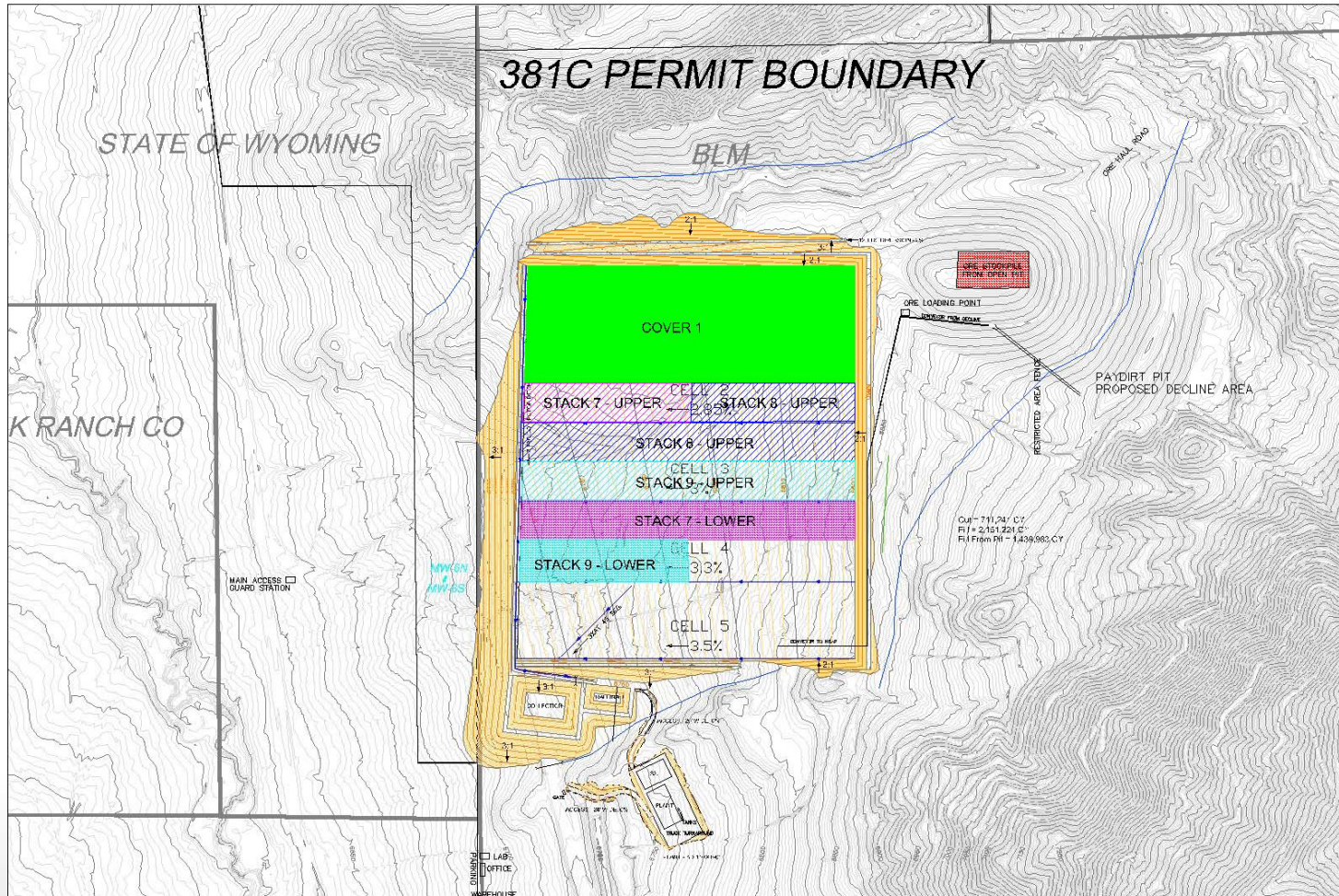
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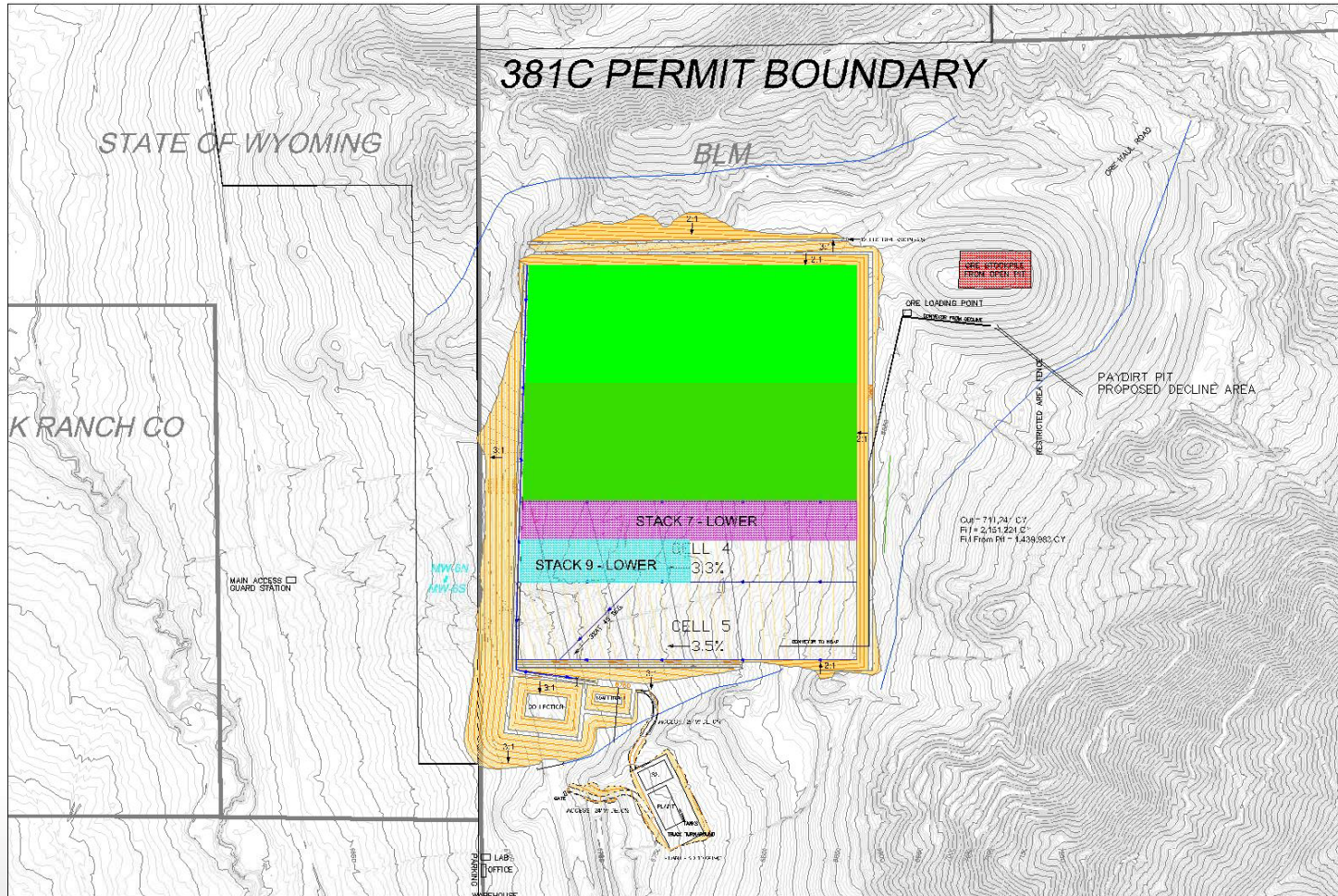
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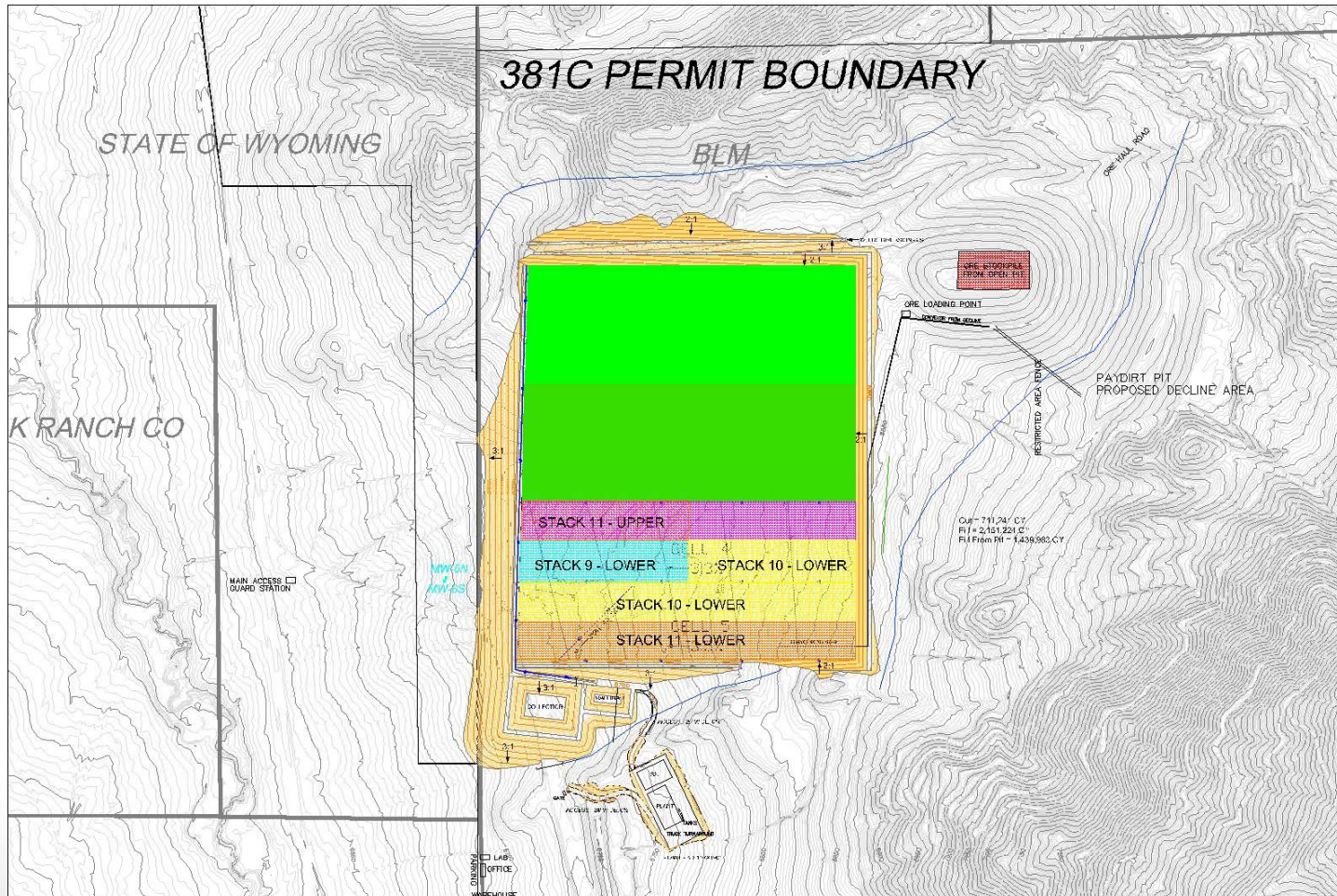
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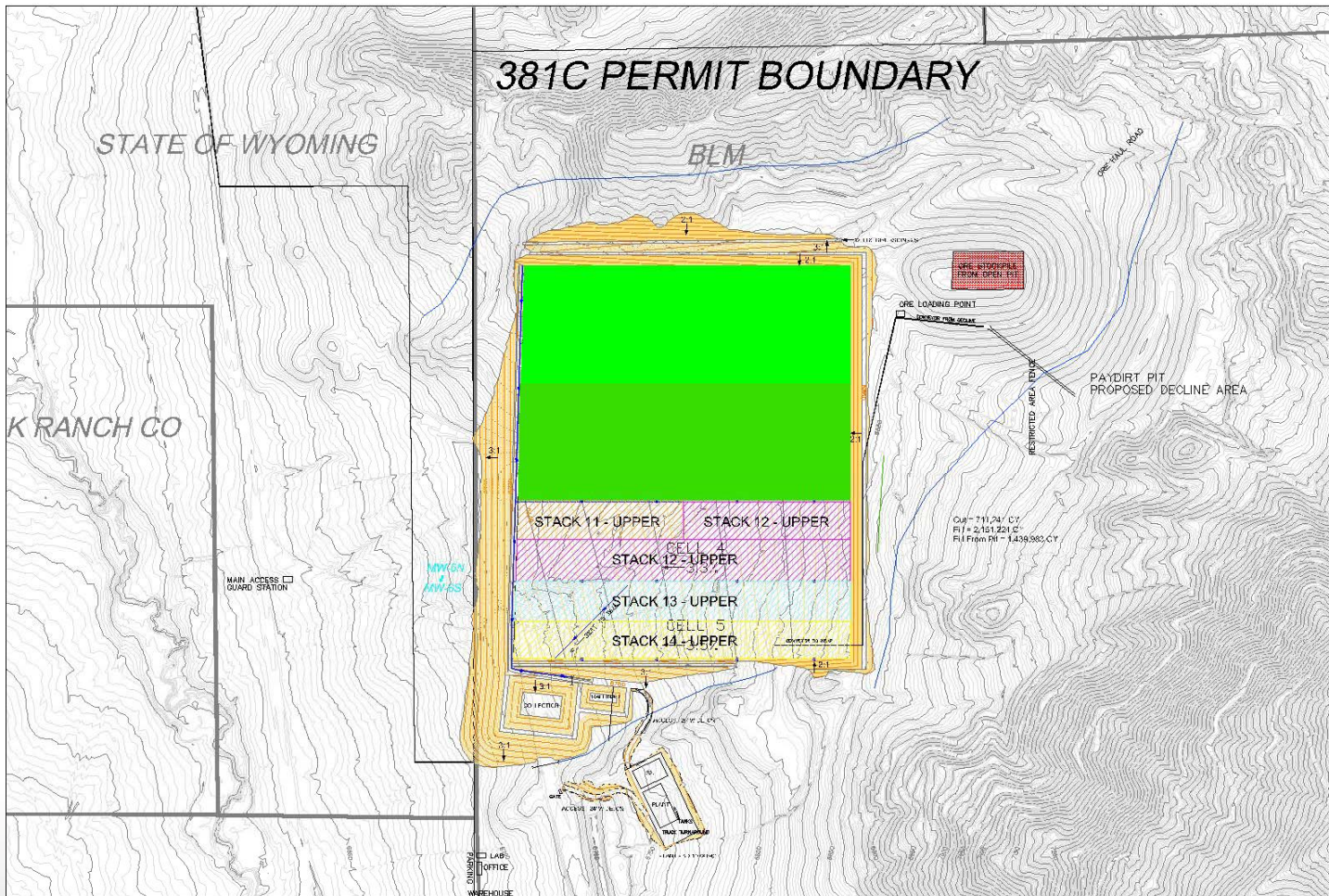
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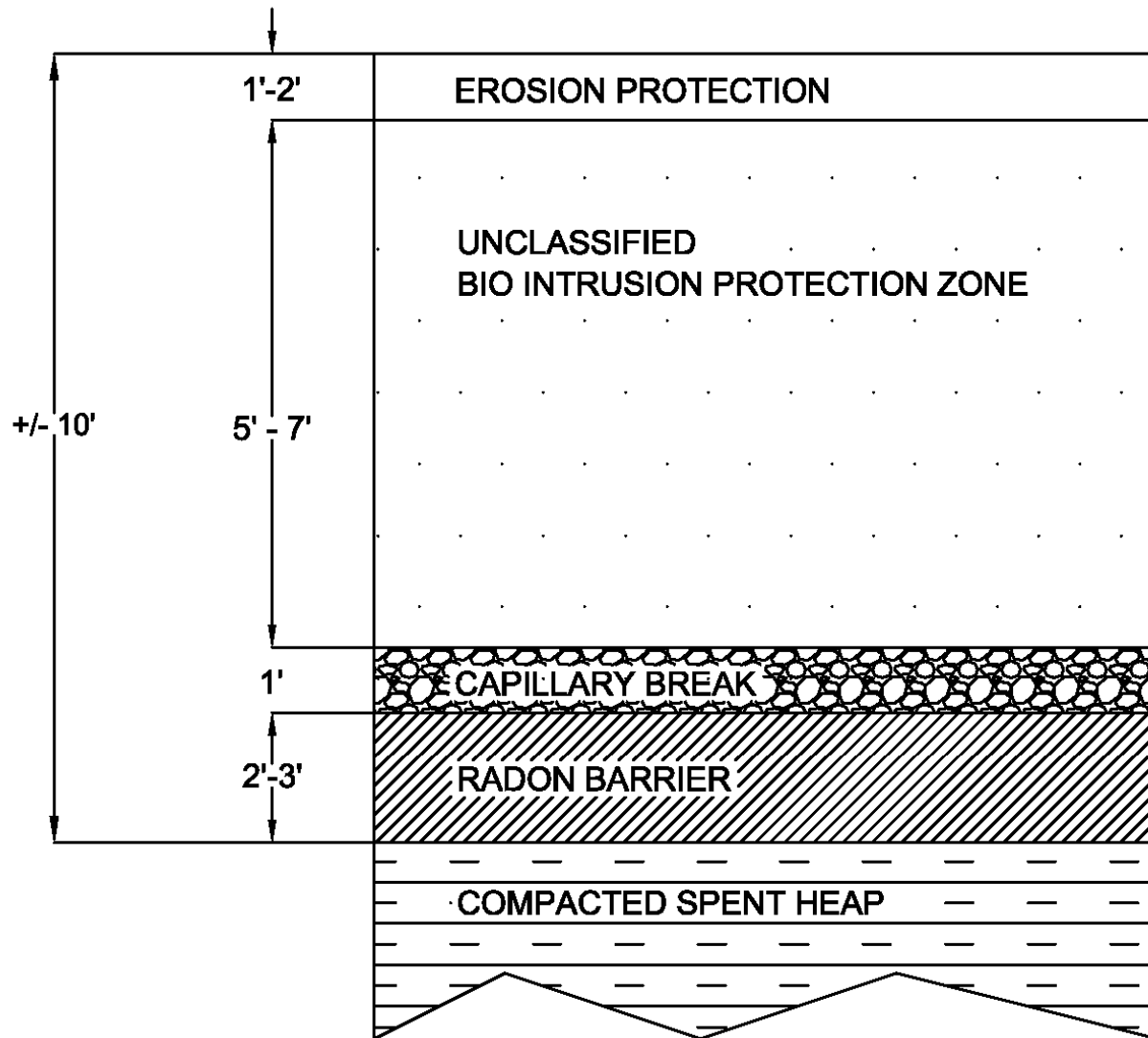
## **Heap Leach Facility (con't)**

- Start reclamation of spent heap surface after uranium recovery (milling) of heap section is complete on individual stacking rows:

- Compaction and minor grading of heap surface
- Placement of final radon barrier
- Biointrusion layer
- Freeze/thaw protection
- Radon flux verification measurements
- Erosion protection (rip rap)



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# Heap Cap and Cover Detail





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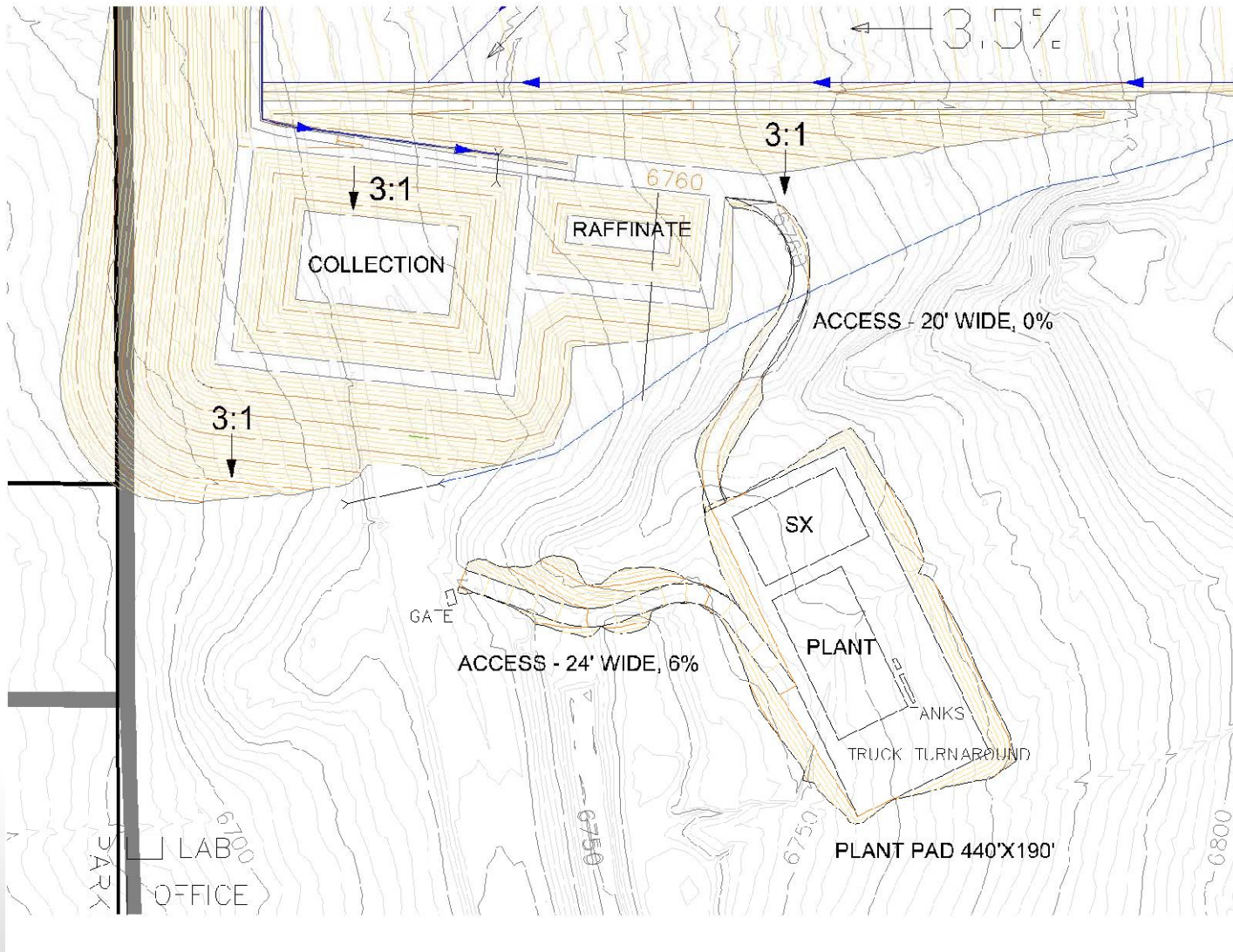
## Heap Leach Facility (con't)

### Process Ponds

- Double lined, leak detection, clay amended sub-grade
- Barren Pond (raffinate, lixiviant make up)
  - acid addition
  - make up water
- Pregnant Pond (collection)
  - Loaded raffinate
  - Blending of leachates for grade control
- Analogous to mill leach process tanks
- Will not contain any wastes or “tailings”
- **Active** leach pads as well as **process** ponds are part of the mill, no wastes ever present
- Only after uranium recovery is complete are tailings present

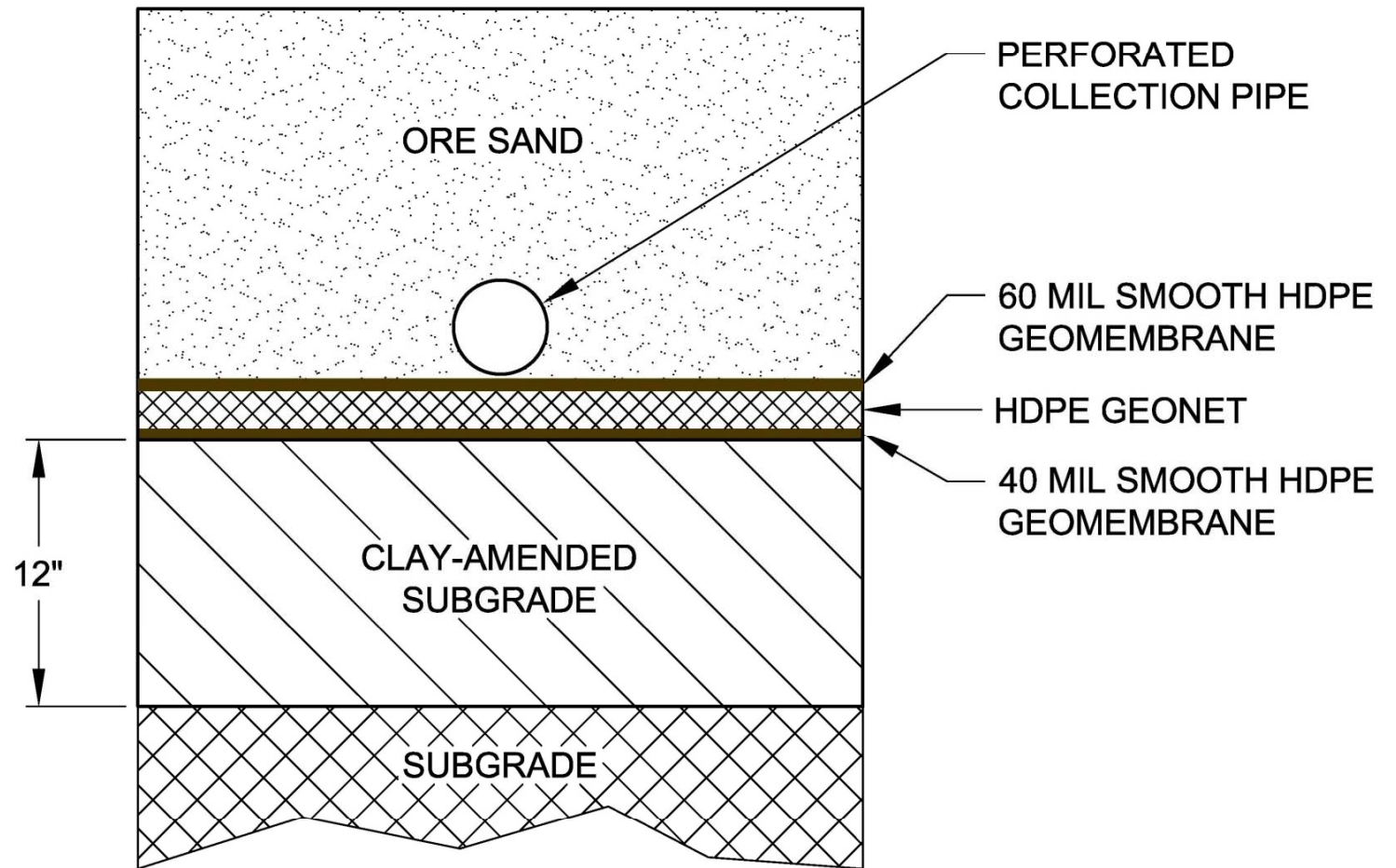


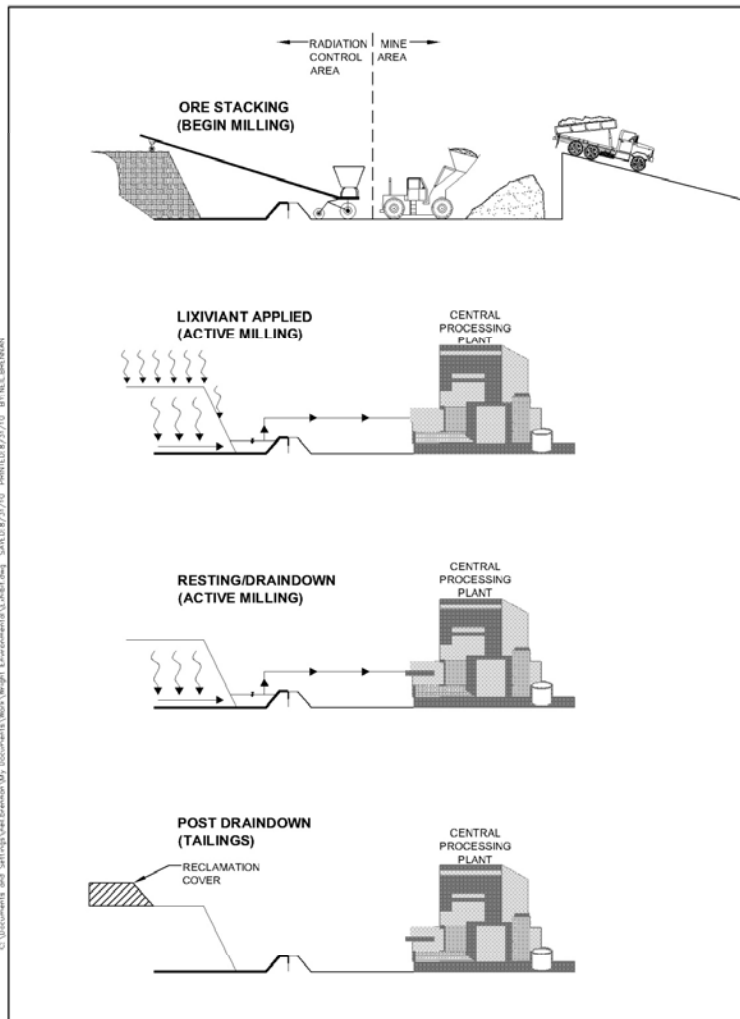
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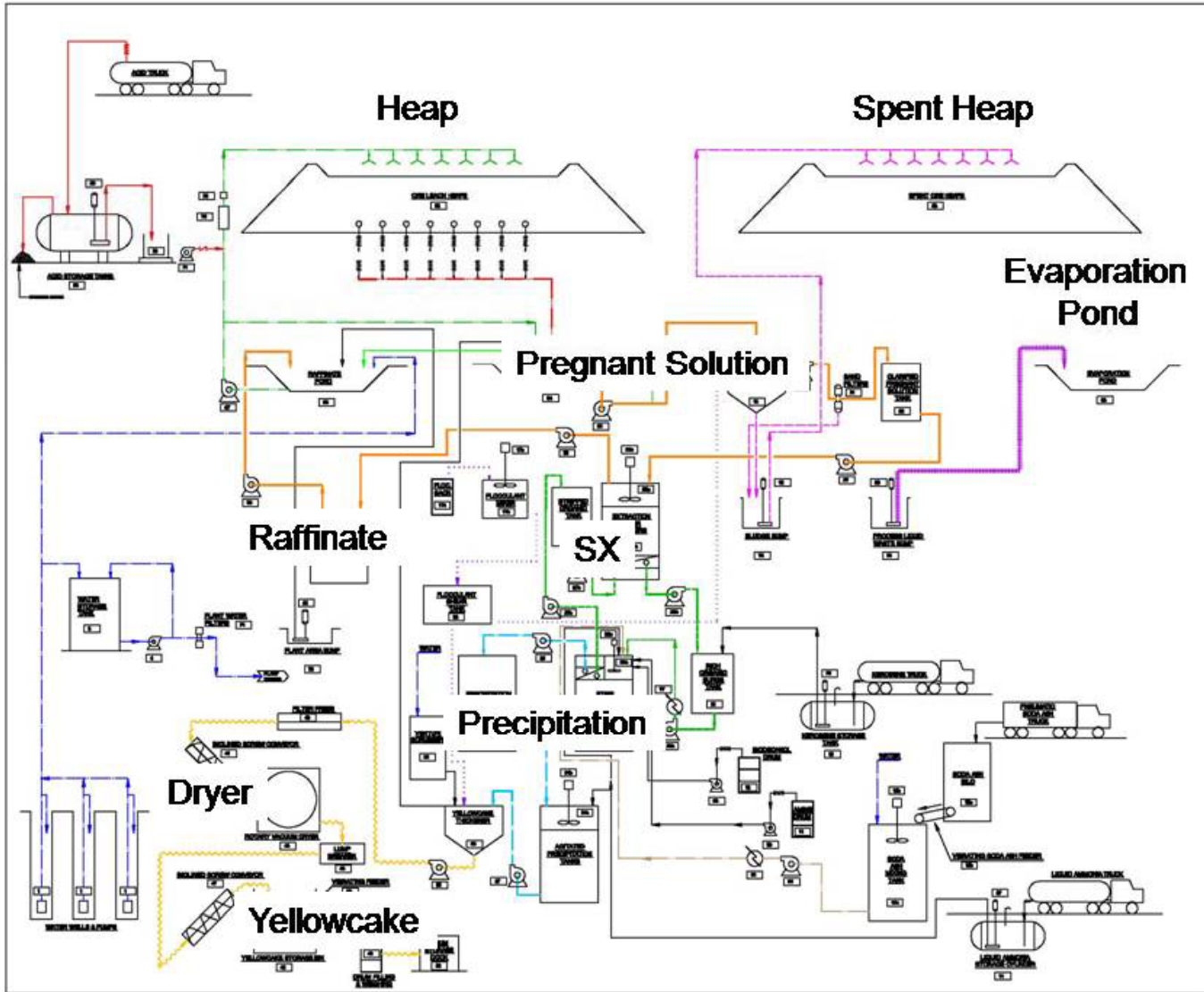


## Status of Active Heaps and 10 CFR Part 61, subpart W

- Active heap is active “milling”
- Heap material during active milling is not 11e.(2) byproduct material
- Have rad. monitoring and rad. protection programs to ensure public and occupational exposures remain ALARA
- “Resting” a heap is part of active milling
- Heap becomes 11e.(2) when drain down and recovery of values is completed and the heap is inactive

## **Central Processing Plant**

- SX
- IX Polishing
- Precipitation
- Vacuum Drying & Drumming
- Process Bleed to Tanks
- Operations
  - Process flow rates approx. 360gpm,
    - low anticipated Rn-222 levels
  - Process bleed rates of 5% to 10%
    - 18 to 35 gpm
  - 10 gpm waste stream from precipitation circuit
  - Liquid wastes will be managed in double lined evaporation ponds with leak detection and clay subliner



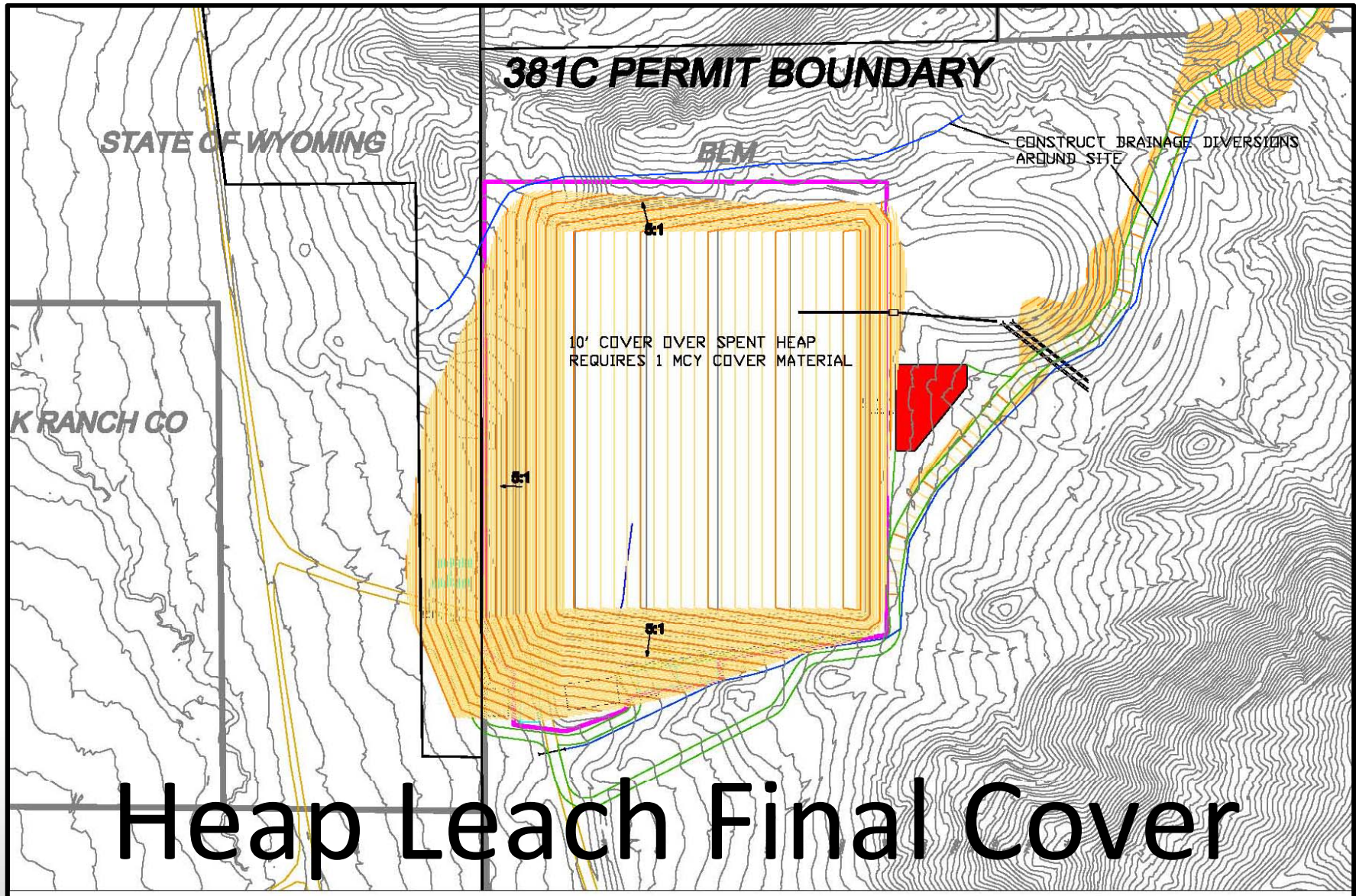


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# Mine and Reclamation Planning



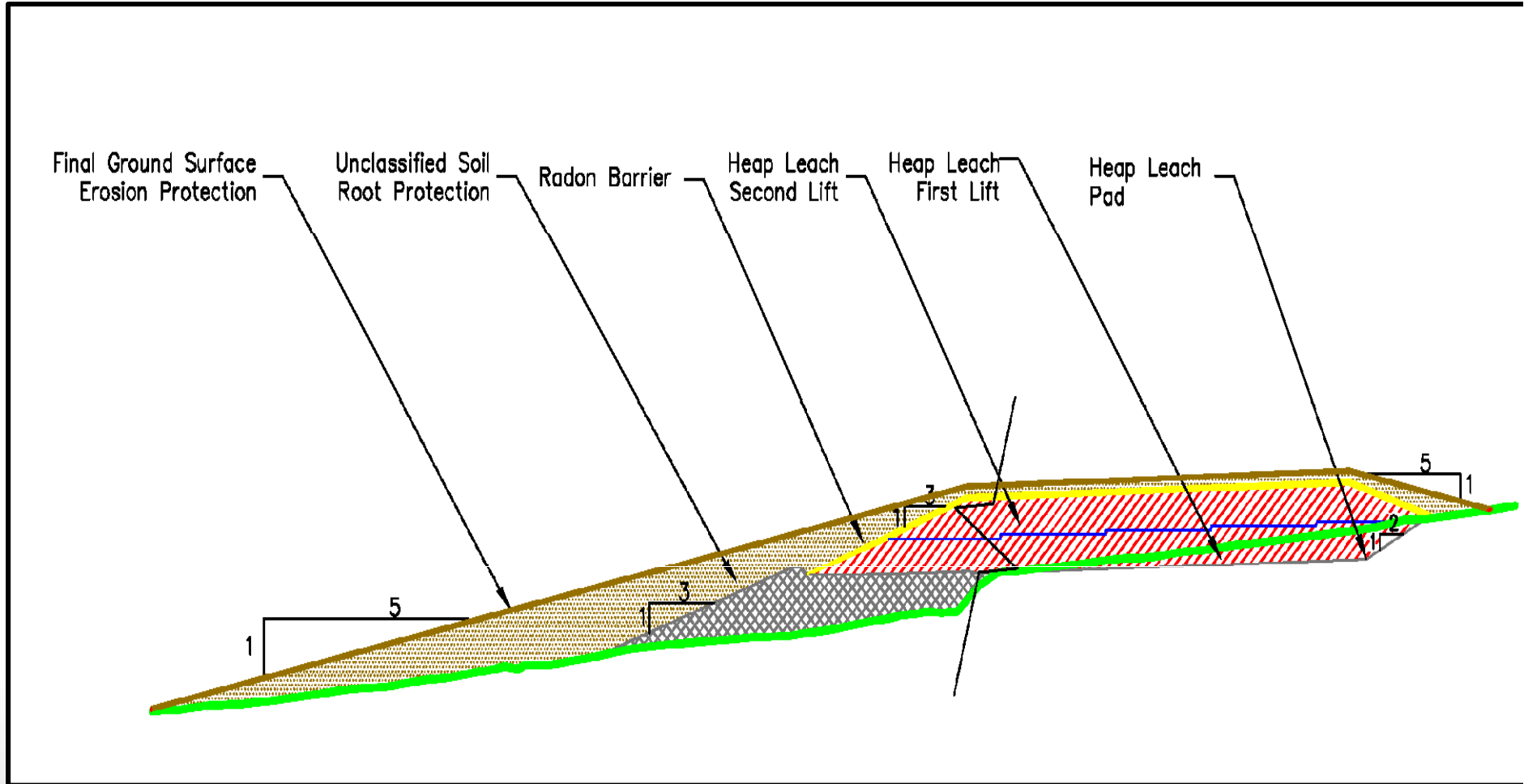
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# Items for Discussion

## Issues for Discussion

- Status of 40 CFR 192 GW standards update
- Status of Active Heaps & Inactive Heaps
- Status of Process Ponds
- Other?

# Our Understanding

- There are no size limits on the size of **active** heaps
- Heap pad designs are approved solely by NRC
- Process ponds that will never contain wastes are part of the mill
- Process Pond designs are approved solely by NRC
- Heap material only become tailings (11e.(2) byproduct material) once active uranium recovery is complete

# Our Understanding (con't)

- Part 61, subpart W applies only to spent heap material (tailings)
- We are practicing *phased disposal* of tailings
- We are allowed no more than two 40 acre cells in area of exposed tailings
- We will have appropriate environmental monitoring and radiation programs in place to ensure compliance with 10 CFR Part 20 subpart B and subpart C requirements

## 40 CFR Part 61.250 (subpart W)

- (b) 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 limit emissions consistent with applicable Federal standards.
- (c) 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.
- (e) Operational means that an impoundment is being used for the ***continued placement of new tailings*** [emphasis added] or is in standby status for such placement. ***An impoundment is in operation from the day that tailings are first placed in the impoundment until the day that final closure begins*** [emphasis added].
- (f) Phased disposal means a method of tailings management and disposal which uses lined impoundments which are filled and then immediately dried and covered to meet all applicable Federal standards.
- Section 101(8) of the Uranium Mill Tailings Radiation Control Act of 1978, 42 U.S.C. 7911(8).  
“Tailings” means the remaining portion of a metal-bearing ore after some or all of such metal, such as uranium, has been extracted.

EPA-2342

**Reid Rosnick/DC/USEPA/US**

04/13/2011 10:51 AM

To Beth Miller

cc

bcc

Subject Minutes



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**Subpart W Quarterly Conference Call**  
April 7, 2011, 11:00 am – 12:00 pm  
Washington, DC

**[DRAFT] Conference Call Notes**

**Meeting Participants:**

EPA HQ: Reid Rosnick, Emily Atkinson, Sue Stahle  
EPA Regions: None  
CCAT: Sharyn Cunningham, Paul Carestia, Lynn Holtz Minasi, Kay Hawkle  
Industry: Oscar Paulson (Kennecott), Wayne Heili (URS Energy)  
Other: Sarah Fields (Uranium Watch), Travis Stills (Energy Minerals Law Center),

**Status Update on Action Items from Last Call**

R. Rosnick: Lets begin with a brief discussion of actions I had as follow-ups from the last conference call, as well as new topics that have come up since our last call.

As you can imagine my office has been decimated on technical expertise with the Japan reactors incident. Most of the people in our office have been giving information to the public from that incident and it has been difficult to focus on anything other than the Japanese incident.

On follow-up issues, back in January there was some question on whether or not EPAs contractor on various risk calculations for various scenarios had actually contacted some of the facilities that are either operating or on stand-by. Once we received funding for our contractor because it had lapsed – they began a dialogue with Oscar Paulson of Kennecott and Jim Cain of Cotter. Both gentlemen were able to point us in the direction of NRC data or EPA data held by Colorado Public Health and Environment. That is underway and we have followed up with that. It is in process. As a result, we have discovered that we may not have had all of the data to work with but do now. That information was provided to the contractor and they are now following up. We do not have a revised report with the risk calculations, but expect to have one in several weeks.

O. Paulson: Had I already stated that the document had gone around for review?

R. Rosnick: The original first draft had been developed by the contractor, and there have been comments from the work group back to the contractor. As a result of that review, we were made aware of more data available and now the contractor has that new data, as well as the original work group comments, which are being incorporated.

- O. Paulson: Most if not all of the information we have related to radon flux measurements is all public record. Most is either submitted to the EPA and/or NRC.
- R. Rosnick: I have your email to the contractor in front of me and we appreciate you helping to direct us to that information.
- T. Stills: Are you aware that Cotter is no longer monitoring radon flux at their impoundments?
- R. Rosnick: I had spoken to someone at CDPHE and since the impoundments were no longer operating and they intended to close, we discussed whether or not it was still required to do the radon testing. They felt the Subpart W requirements pertained specifically to operating impoundments and once a facility is going into a non-operational status, the measurements are no longer required.
- P. Carestia: Once they announce they are going to close, they now fall under the milestones provision they are still required to do one final flux test.
- S. Fields: Isn't it the EPA that makes the call that monitoring must continue and not the Colorado Department of Health. I think the EPA should make a decision about that and it should be made publically available. The milestones as part of the license should be part of the plan and the EPA should require them to continue to monitor. The EPA is not taking a hard enough line with this facility because this should all have been included in the milestones.
- ?: Are the milestones used to establish the cap? I think the decommissioning plan should include these milestones, but it may not.
- The EPA told them they should have done the tests in June 2010, but they refused to do it. I don't think we have seen anything from them since them, even though they did not have the milestones in their plan.
- R. Rosnick: Unfortunately we don't have a Region 8 representative on the line today to fill us in on the details of on-going conversations they have had with that facility and with CDPHE.
- S. Fields: The Colorado Public Health Department is currently in violation of their agreement with NRC because they haven't gotten the plan in place for public comment.
- R. Rosnick: Your concern is a licensing requirement so it should be brought up with the NRC.



- S. Fields: Subpart C can be requested by anyone, including the EPA.
- R. Rosnick: At this point, if it is an issue with the reclamation plan, the State and Region 8 are the best resources to answer questions.
- T. Stills: A lot of this goes to the point that this falls under the Subpart W plan. Some companies take advantage of the interim time between when a plant stops receiving waste and when they shut down is a problem that the EPA should consider.
- R. Rosnick: Yes, the EPA will be looking at that. These facilities were built and operating before the 1989 published guidelines with strict rules.
- T. Stills: I don't see why EPA is making that distinction.
- R. Rosnick: The original distinction came in because there were a number of impoundments that could not be retrofitted. Those facilities were given a radon flux standard if they were pre-1989. Post 1989 facilities were asked to conform to different standards, work practice standards.
- R. Rosnick: Update on the risk document that is still in draft form – ORIA management chain is still discussing what type of peer-review will take place. In January we discussed a peer-review process similar to the one being considered for 40 CFR 192 rulemaking. No decision has been made on that – issues and options have been presented. Hopefully by the time of our next call I will have more information for you on that.

The next issue to follow-up on – issues of impoundments where precipitation exceeds evaporation and we are in the process of obtaining and reviewing data that is available.

Subpart W references 40 CFR 192.32(a), and those are the UMTRCA standards for tailings impoundments. That regulation references 40 CFR 264.221 and at that regulation you find surface impoundments design and operating requirements for hazardous waste surface impoundments regulated under the Resource Conservation and Recovery Act (RCRA). If you look at 40 CFR 264.221(g) and (h) there are requirements that can be used to ensure proper operation of tailings impoundments. §264.221(g) states that impoundments must be designed, constructed, maintained and operated to prevent overtopping resulting from normal or abnormal operations; overfilling; wind and rain action; rainfall; run-on; malfunctions of level controllers, alarms and other equipment; and human error. §264.221(h) states that impoundments must have dikes that are designed, constructed and maintained with sufficient structural integrity to prevent massive failure of the dikes. In ensuring structural integrity, it must not be presumed that the liner system will function without leakage during the

active life of the unit. We are reviewing the language in the regulation. This regulation for design and monitoring the facilities is a strict one and it is where we are starting from. We will continue to look at this; we are concerned that more facilities may exist in areas where precipitation exceeds evaporation.

- T. Stills: Is a numeric emissions limit still being considered as part of this review?
- R. Rosnick: It is being considered as an option. One of the issues that we are reviewing is that for impoundments regulated under Subpart W, not all contain solid tailings; the current method for determining radon flux is Method 115. One of the things we will be asking for comment on is are there any other methods that are more precise or easier to use without the loss of data quality, as compared to method 115? With areas without a solid surface, what methods are available to give us good radon readings? We are in the process of determining if they are efficient and on par with the Method 115 monitoring system.
- O. Paulson: Besides Washington State, there are four facilities of impoundments in Texas (processing into the 1990's) by General Atomics and Chevron (Patamaria). One was in Ray Point, TX in the late 1960's, and one in Carnes County and the Conoco Conquista. Phil Saver and Chuck McClendon have been there a long time.
- R. Rosnick: One of the things I can look at is getting in touch with the Texas groups to obtain any information they have for those facilities.
- O. Paulson: You were talking about alternative methods and at one of the workshops Dr. Ken Baker and Al Cox presented a paper on radon measurements on fluid, essentially using a floating version of Method 115. They essentially put a life preserver out on the pond to get measurements. The Uranium Industry may be publishing information on other methods in the future.
- R. Rosnick: I was at that meeting too and it is certainly a novel idea. We will be asking others to contribute information on any new methods other than the one we currently use. If others have good ideas, we want to see and review them.
- There is one other type of uranium recovery operation I would like to discuss: heap leach pile. They have not existed in the US for a long time. There are some proposals for starting up new heap leach piles and I would like to know from the group if there are any historical radon measurements taken at former heap leach piles.
- O. Paulson: I am not, but I am aware of one by Energy Fields or UMETCO.

- T. Stills: Colorado license was operational until a few years ago. You said there are some proposals, can you list them. Durita – NRC documents and federal register documents. It was still licensed within the last 5 or 6 years. The ground water contamination was measured and it is now a DOE site.
- R. Rosnick: I know of one – I believe it is Sheep Mountain, WY. There have been talks ongoing for the construction and operation of a heap leach pile with the NRC. That is the only one I am aware of.
- S. Fields: I do have one issue that may come up with the Uranium Mill in Paradox Valley – having mines underground or surface mines right next to the Subpart W regulated site. Then you have a situation with emissions from a mill and a mine simultaneously. How would the EPA take into consideration two impact facilities with radon emissions from two types of facilities right next door to one another? Currently the EPA has not radon standards for pit mines. I just wonder in looking at Subpart W facilities, if you are really going to look at the Subpart W facility as totally independent of neighboring facilities that may contribute to pollution?
- R. Rosnick: Well, I haven't given this any thought, but I assume the Region 8 people have. My hunch is that you could determine the difference between the radon and segregate between the radon values between the mine and Subpart W facility. I would expect the NRC guidelines for emission release could be useful. Good background monitoring would be the key to this. I would suspect it probably has been done and I would guess our Region 8 people have thought about this and have taken steps to accommodate that.
- T. Stills: Are you looking at the mills located in the same geographic footprint and the health impacts with accumulative impacts? Because that is the way the industry is headed. Are you looking at that in the Subpart W review?
- R. Rosnick: On this example, we don't have a lot to look at since it hasn't begun construction yet.
- T. Stills: I would hope that in the absence of data you would regulate more rather than less if there is not data, since this is hazardous material.
- O. Paulson: To be complete we should review what the future will look like with facilities located next to each other and how radon emissions will be impacted.
- S. Fields: There is no provision under Subpart A for background monitoring prior to the installation of a radon facility. I think the EPA should take a look at the requirements that should be provided if facilities are located next to one another.

- R. Rosnick: Subpart W includes tailings piles, which exist in heap leach piles. This is one school of thought we are reviewing. So we are looking at this entire spectrum. There may be other collection ponds, evaporation ponds that may contain material that would fall under Subpart W. Where does the radon fit within our regulations?
- S. Fields: This was discussed at the NRC workshop in January about whether Subpart W would cover heap leach piles. The EPA has full authority to create another subpart or regulate radionuclide material.
- R. Rosnick: If you have any ideas or thoughts about this, please submit them to me. It is an interesting thing to debate and we would be more than happy to take your thoughts on this.
- T. Stills: I appreciate the various debates we have had, they have been interesting and some have been productive. We, however, are past due on when the updates and revisions will be proposed. If you gamed us I would be stunned. If you have moved it out, we are at least owed an explanation.
- R. Rosnick: Winter 2011 is not coming up until December 2011. I have not moved the date at all. Maybe this is a semantics problem, but winter 2011 has always meant December 2011.
- O. Paulson: Mines have been co-located with pits and it is really nothing new. Separating radon from pits and mines may be difficult. With the high variability in the background and margin of error, soil radon levels and mine/pit radon levels – as it is all coming together the process will have to be carefully thought out before it is implemented.
- R. Rosnick: We are going to be asking for new methods for how to measure radon levels in all these areas as they converge.
- S. Cunningham: On the website you posted the ATSDR health assessment. That was a draft out for public comment, and the comment period ended in November 2010. In the title on the website, that is not evident. I would just like to request that is updated.
- R. Rosnick: If that is the case, then I apologize and I will have it corrected. When the finalized document is released, I would appreciate if it could be submitted to me and I will post it on the website.
- T. Stills: I would like to see more information listed on the website for us to review, as well as to have the 2010 FOIA responded to in the near future.

R. Rosnick: The FOIA is being processed. We attempted to contact you several times after we received the request, in an attempt to determine the scope of your inquiry, and you refused to speak with us. We are now going through every document that that might possibly be pertinent to your request. I have been doing a lot of juggling between the rulemaking and the FOIA. I suspect that we will complete the task and submit the information to you by no later than May 15.

Our next call is on July 7<sup>th</sup> at 11am EDT. Until we speak again, have a nice Spring.

***ACTION ITEM:***

- Reid: Reclamation plan and radon test milestones for the facility from Region 8 staff
- Reid: One of the things I can look at is getting in touch with the Texas groups to obtain any information they have for those facilities. Phil Saver has been there a long time.
- Reid: Will update the health assessment to reflect it is a draft.
- Reid: Post contractor emails and any others that have gone to me or the Regions.

EPA-2342

**Reid Rosnick/DC/USEPA/US**

04/13/2011 10:51 AM

To Beth Miller

cc

bcc

Subject Minutes



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rosnick.reid@epa.gov

**Subpart W Quarterly Conference Call**  
April 7, 2011, 11:00 am – 12:00 pm  
Washington, DC

**[DRAFT] Conference Call Notes**

**Meeting Participants:**

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EPA Regions: None  
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- R. Rosnick: I had spoken to someone at CDPHE and since the impoundments were no longer operating and they intended to close, we discussed whether or not it was still required to do the radon testing. They felt the Subpart W requirements pertained specifically to operating impoundments and once a facility is going into a non-operational status, the measurements are no longer required.
- P. Carestia: Once they announce they are going to close, they now fall under the milestones provision they are still required to do one final flux test.
- S. Fields: Isn't it the EPA that makes the call that monitoring must continue and not the Colorado Department of Health. I think the EPA should make a decision about that and it should be made publically available. The milestones as part of the license should be part of the plan and the EPA should require them to continue to monitor. The EPA is not taking a hard enough line with this facility because this should all have been included in the milestones.
- ?: Are the milestones used to establish the cap? I think the decommissioning plan should include these milestones, but it may not.
- The EPA told them they should have done the tests in June 2010, but they refused to do it. I don't think we have seen anything from them since them, even though they did not have the milestones in their plan.
- R. Rosnick: Unfortunately we don't have a Region 8 representative on the line today to fill us in on the details of on-going conversations they have had with that facility and with CDPHE.
- S. Fields: The Colorado Public Health Department is currently in violation of their agreement with NRC because they haven't gotten the plan in place for public comment.
- R. Rosnick: Your concern is a licensing requirement so it should be brought up with the NRC.



- S. Fields: Subpart C can be requested by anyone, including the EPA.
- R. Rosnick: At this point, if it is an issue with the reclamation plan, the State and Region 8 are the best resources to answer questions.
- T. Stills: A lot of this goes to the point that this falls under the Subpart W plan. Some companies take advantage of the interim time between when a plant stops receiving waste and when they shut down is a problem that the EPA should consider.
- R. Rosnick: Yes, the EPA will be looking at that. These facilities were built and operating before the 1989 published guidelines with strict rules.
- T. Stills: I don't see why EPA is making that distinction.
- R. Rosnick: The original distinction came in because there were a number of impoundments that could not be retrofitted. Those facilities were given a radon flux standard if they were pre-1989. Post 1989 facilities were asked to conform to different standards, work practice standards.
- R. Rosnick: Update on the risk document that is still in draft form – ORIA management chain is still discussing what type of peer-review will take place. In January we discussed a peer-review process similar to the one being considered for 40 CFR 192 rulemaking. No decision has been made on that – issues and options have been presented. Hopefully by the time of our next call I will have more information for you on that.

The next issue to follow-up on – issues of impoundments where precipitation exceeds evaporation and we are in the process of obtaining and reviewing data that is available.

Subpart W references 40 CFR 192.32(a), and those are the UMTRCA standards for tailings impoundments. That regulation references 40 CFR 264.221 and at that regulation you find surface impoundments design and operating requirements for hazardous waste surface impoundments regulated under the Resource Conservation and Recovery Act (RCRA). If you look at 40 CFR 264.221(g) and (h) there are requirements that can be used to ensure proper operation of tailings impoundments. §264.221(g) states that impoundments must be designed, constructed, maintained and operated to prevent overtopping resulting from normal or abnormal operations; overfilling; wind and rain action; rainfall; run-on; malfunctions of level controllers, alarms and other equipment; and human error. §264.221(h) states that impoundments must have dikes that are designed, constructed and maintained with sufficient structural integrity to prevent massive failure of the dikes. In ensuring structural integrity, it must not be presumed that the liner system will function without leakage during the

active life of the unit. We are reviewing the language in the regulation. This regulation for design and monitoring the facilities is a strict one and it is where we are starting from. We will continue to look at this; we are concerned that more facilities may exist in areas where precipitation exceeds evaporation.

- T. Stills: Is a numeric emissions limit still being considered as part of this review?
- R. Rosnick: It is being considered as an option. One of the issues that we are reviewing is that for impoundments regulated under Subpart W, not all contain solid tailings; the current method for determining radon flux is Method 115. One of the things we will be asking for comment on is are there any other methods that are more precise or easier to use without the loss of data quality, as compared to method 115? With areas without a solid surface, what methods are available to give us good radon readings? We are in the process of determining if they are efficient and on par with the Method 115 monitoring system.
- O. Paulson: Besides Washington State, there are four facilities of impoundments in Texas (processing into the 1990's) by General Atomics and Chevron (Patamaria). One was in Ray Point, TX in the late 1960's, and one in Carnes County and the Conoco Conquista. Phil Saver and Chuck McClendon have been there a long time.
- R. Rosnick: One of the things I can look at is getting in touch with the Texas groups to obtain any information they have for those facilities.
- O. Paulson: You were talking about alternative methods and at one of the workshops Dr. Ken Baker and Al Cox presented a paper on radon measurements on fluid, essentially using a floating version of Method 115. They essentially put a life preserver out on the pond to get measurements. The Uranium Industry may be publishing information on other methods in the future.
- R. Rosnick: I was at that meeting too and it is certainly a novel idea. We will be asking others to contribute information on any new methods other than the one we currently use. If others have good ideas, we want to see and review them.
- There is one other type of uranium recovery operation I would like to discuss: heap leach pile. They have not existed in the US for a long time. There are some proposals for starting up new heap leach piles and I would like to know from the group if there are any historical radon measurements taken at former heap leach piles.
- O. Paulson: I am not, but I am aware of one by Energy Fields or UMETCO.

- T. Stills: Colorado license was operational until a few years ago. You said there are some proposals, can you list them. Durita – NRC documents and federal register documents. It was still licensed within the last 5 or 6 years. The ground water contamination was measured and it is now a DOE site.
- R. Rosnick: I know of one – I believe it is Sheep Mountain, WY. There have been talks ongoing for the construction and operation of a heap leach pile with the NRC. That is the only one I am aware of.
- S. Fields: I do have one issue that may come up with the Uranium Mill in Paradox Valley – having mines underground or surface mines right next to the Subpart W regulated site. Then you have a situation with emissions from a mill and a mine simultaneously. How would the EPA take into consideration two impact facilities with radon emissions from two types of facilities right next door to one another? Currently the EPA has not radon standards for pit mines. I just wonder in looking at Subpart W facilities, if you are really going to look at the Subpart W facility as totally independent of neighboring facilities that may contribute to pollution?
- R. Rosnick: Well, I haven't given this any thought, but I assume the Region 8 people have. My hunch is that you could determine the difference between the radon and segregate between the radon values between the mine and Subpart W facility. I would expect the NRC guidelines for emission release could be useful. Good background monitoring would be the key to this. I would suspect it probably has been done and I would guess our Region 8 people have thought about this and have taken steps to accommodate that.
- T. Stills: Are you looking at the mills located in the same geographic footprint and the health impacts with accumulative impacts? Because that is the way the industry is headed. Are you looking at that in the Subpart W review?
- R. Rosnick: On this example, we don't have a lot to look at since it hasn't begun construction yet.
- T. Stills: I would hope that in the absence of data you would regulate more rather than less if there is not data, since this is hazardous material.
- O. Paulson: To be complete we should review what the future will look like with facilities located next to each other and how radon emissions will be impacted.
- S. Fields: There is no provision under Subpart A for background monitoring prior to the installation of a radon facility. I think the EPA should take a look at the requirements that should be provided if facilities are located next to one another.

- R. Rosnick: Subpart W includes tailings piles, which exist in heap leach piles. This is one school of thought we are reviewing. So we are looking at this entire spectrum. There may be other collection ponds, evaporation ponds that may contain material that would fall under Subpart W. Where does the radon fit within our regulations?
- S. Fields: This was discussed at the NRC workshop in January about whether Subpart W would cover heap leach piles. The EPA has full authority to create another subpart or regulate radionuclide material.
- R. Rosnick: If you have any ideas or thoughts about this, please submit them to me. It is an interesting thing to debate and we would be more than happy to take your thoughts on this.
- T. Stills: I appreciate the various debates we have had, they have been interesting and some have been productive. We, however, are past due on when the updates and revisions will be proposed. If you gamed us I would be stunned. If you have moved it out, we are at least owed an explanation.
- R. Rosnick: Winter 2011 is not coming up until December 2011. I have not moved the date at all. Maybe this is a semantics problem, but winter 2011 has always meant December 2011.
- O. Paulson: Mines have been co-located with pits and it is really nothing new. Separating radon from pits and mines may be difficult. With the high variability in the background and margin of error, soil radon levels and mine/pit radon levels – as it is all coming together the process will have to be carefully thought out before it is implemented.
- R. Rosnick: We are going to be asking for new methods for how to measure radon levels in all these areas as they converge.
- S. Cunningham: On the website you posted the ATSDR health assessment. That was a draft out for public comment, and the comment period ended in November 2010. In the title on the website, that is not evident. I would just like to request that is updated.
- R. Rosnick: If that is the case, then I apologize and I will have it corrected. When the finalized document is released, I would appreciate if it could be submitted to me and I will post it on the website.
- T. Stills: I would like to see more information listed on the website for us to review, as well as to have the 2010 FOIA responded to in the near future.

R. Rosnick: The FOIA is being processed. We attempted to contact you several times after we received the request, in an attempt to determine the scope of your inquiry, and you refused to speak with us. We are now going through every document that that might possibly be pertinent to your request. I have been doing a lot of juggling between the rulemaking and the FOIA. I suspect that we will complete the task and submit the information to you by no later than May 15.

Our next call is on July 7<sup>th</sup> at 11am EDT. Until we speak again, have a nice Spring.

***ACTION ITEM:***

- Reid: Reclamation plan and radon test milestones for the facility from Region 8 staff
- Reid: One of the things I can look at is getting in touch with the Texas groups to obtain any information they have for those facilities. Phil Saver has been there a long time.
- Reid: Will update the health assessment to reflect it is a draft.
- Reid: Post contractor emails and any others that have gone to me or the Regions.

EPA-1071

"Phelleps, Moya"  
<MPhelleps@nma.org>  
04/21/2011 03:58 PM

To Reid Rosnick  
cc  
bcc  
Subject Uranium Recovery Workshop 2011 -- Speaker Information

1 attachment



Rosnick Speaker Form.doc

Reid:

Thank you very much for agreeing to participate in Uranium Recovery Workshop 2011, sponsored by the National Mining Association and the Nuclear Regulatory Commission. The workshop is May 25-26 at the Grand Hyatt Denver, Denver, Colo. This e-mail will provide you with information concerning your presentation and registration.

**Your presentation, "EPA Update: Subpart W Activities, Planned Review of EPA UMTRCA-Based Regulations" is on Thursday, March 26 from 11:25 a.m. – 12:05 p.m.** The formal remarks should be approximately 30 minutes with 10 minutes for question and answer.

Attached is a form that requests your audiovisual needs and permission to post your presentation on the URW page located on the NMA web site. NMA also would appreciate receiving biographical information that can be for an introduction. **The deadline for the speaker form and the biographical information is Monday, May 9.**

If you are giving a PowerPoint presentation, NMA would appreciate receiving a copy of the presentation by **Friday, May 20** so it may be pre-loaded on the laptop ready for your use.

If you have not registered, registration may be done on-line at <http://www.uraniumrecoveryworkshop2011.myevent.com/>. To reserve a room, please call the Grand Hyatt Denver at (303) 295-1234 or (800) 233-1234 and refer to the "National Mining Association" block of rooms. The hotel block is available until **Tuesday, May 3** at the NMA room rate of \$141 per night subject to room availability.

Please return all of the requested materials to my attention at [mphelleps@nma.org](mailto:mphelleps@nma.org) or fax (202) 463-2648. Should you have any questions or need further information, please contact me at (202) 463-2639.

Thank you very much.

Moya

Moya Phelleps  
Senior Vice President, Member Services  
National Mining Association  
101 Constitution Avenue, N.W.  
Washington, DC 20001  
Phone: 202-463-2639



# Uranium Recovery Workshop 2011



## Speaker Form

Topic/Presenter: **EPA Update: Subpart W Activities, Planned Review of EPA UMTRCA-Based Regulations**

**Thursday, May 26  
11:25 a.m. – 12:05 p.m.**

Reid Rosnick, Environmental Scientist, Office of Radiation and Indoor Air, Radiation Protection Division, U.S. EPA

### AUDIO VISUAL REQUIREMENTS:

- PowerPoint Presentation
- Lavalier Microphone
- Other (please be specific) \_\_\_\_\_

**I give the National Mining Association and the Nuclear Regulatory Commission, the sponsors of Uranium Recovery Workshop 2011, permission to post my presentation on the URW page on the NMA web site.**

Name: \_\_\_\_\_

Signature: \_\_\_\_\_

Title: \_\_\_\_\_

Affiliation: \_\_\_\_\_

Date: \_\_\_\_\_

Please return this form by **Monday, May 9** to Moya PHELLEPS at [mpelleps@nma.org](mailto:mpelleps@nma.org) or by fax to (202) 463-2648.



EPA-1443

Reid Rosnick/DC/USEPA/US

04/22/2011 06:47 AM

To Tom Peake

cc

bcc

Subject Fw: Uranium Recovery Workshop 2011 -- Speaker Information

Tom,

I assumed that Andrea might not be available for making a presentation to the NMA group. Is that a valid assumption?

---

Reid J. Rosnick

Radiation Protection Division (6608J)

U.S. Environmental Protection Agency

1200 Pennsylvania Ave., NW

Washington, DC 20460

202.343.9563

rosnick.reid@epa.gov

----- Forwarded by Reid Rosnick/DC/USEPA/US on 04/22/2011 06:47 AM -----

From: "Phelleps,Moya" <MPhelleps@nma.org>

To: Reid Rosnick/DC/USEPA/US@EPA

Date: 04/21/2011 03:58 PM

Subject: Uranium Recovery Workshop 2011 -- Speaker Information

---

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Thank you very much.

Moya

Moya Phelleps  
Senior Vice President, Member Services  
National Mining Association  
101 Constitution Avenue, N.W.  
Washington, DC 20001  
Phone: 202-463-2639



Rosnick Speaker Form.doc



# Uranium Recovery Workshop 2011



## Speaker Form

Topic/Presenter: **EPA Update: Subpart W Activities, Planned Review of EPA UMRCA-Based Regulations**

**Thursday, May 26  
11:25 a.m. – 12:05 p.m.**

Reid Rosnick, Environmental Scientist, Office of Radiation and Indoor Air, Radiation Protection Division, U.S. EPA

### AUDIO VISUAL REQUIREMENTS:

- PowerPoint Presentation
- Lavalier Microphone
- Other (please be specific) \_\_\_\_\_

**I give the National Mining Association and the Nuclear Regulatory Commission, the sponsors of Uranium Recovery Workshop 2011, permission to post my presentation on the URW page on the NMA web site.**

Name: \_\_\_\_\_

Signature: \_\_\_\_\_

Title: \_\_\_\_\_

Affiliation: \_\_\_\_\_

Date: \_\_\_\_\_

Please return this form by **Monday, May 9** to Moya PHELLEPS at [mpelleps@nma.org](mailto:mpelleps@nma.org) or by fax to (202) 463-2648.

April 20, 2011

United States Environmental Protection Agency, Region 8 Office  
Attn: Stephen S. Tuber, Assistant Regional Administrator  
Office of Partnerships and Regulatory Assistance  
1595 Wynkoop Street  
Denver, CO 80202-1129

Re: Response to EPA Inquiry Regarding Subpart W Requirements for Christiensen Ranch/Irigaray ISR (now known as Willow Creek ISR) Site

Dear Mr. Tuber:

Uranium One Americas (Uranium One) is in receipt of a request from the United States Environmental Protection Agency's (EPA) Region 8 Office dated February 11, 2011 entitled *Subpart W Requirements for Christiensen Ranch/Irigaray ISR* (hereinafter "Notice"). This Notice states that "any type of uranium recovery facility that is managing uranium byproduct material or tailings, including, but not limited to, ISR facilities, is subject to Subpart W." More specifically regarding the scope of this Notice, EPA states:

"[t]he requirements of Subpart W specifically apply to the structures at the uranium ISR facility which are used to manage or contain the uranium byproduct or tailings. At ISR facilities, common names for these structures include, but are not limited to, evaporation or holding ponds."

As a result, it appears that the focus of EPA's Request is an assertion that Uranium One's evaporation, storage, and other associated ponds at its Willow Creek ISR facility are subject to EPA's jurisdiction under 40 CFR Part 61, Subpart W.

40 CFR Part 61, Subpart W, entitled *National Emission Standards for Radon Emissions from Operating Mill Tailings*, was promulgated to address radon emissions at *active* (including standby) uranium mill tailings facilities. Thus, Subpart W applies to operators of uranium mill tailings facilities while they are processing uranium/thorium ores and creating 11e.(2) byproduct material:

"The provisions of this subpart apply to owners or operators of facilities

licensed to manage uranium byproduct materials during and following the processing of uranium ores, commonly referred to as uranium mills and their *associated tailings*. This subpart does not apply to the [final] disposal of *tailings*.”

In accordance with Subpart W, new tailings impoundments constructed after December 15, 1989 must comply with one of two *work practice* standards:<sup>1</sup> (1) *phased disposal* in lined impoundments of forty (40) acres and meet the requirements of 40 CFR § 192.32(a) with no more than two impoundments in operation at one time; or (2) *continuous disposal* of tailings that are dewatered and immediately disposed of with no more than ten acres uncovered at one time. Tailings facilities in existence prior to December 15, 1989 are required to satisfy a 20 pCi/m<sup>2</sup>/s radon flux standard.

On December 31, 1991, EPA proposed to rescind another portion of its regulations known as 40 CFR Part 61, Subpart T “as it applies to owners and operators of uranium mill tailings disposal sites that are licensed by the Nuclear Regulatory Commission (NRC) or an affected NRC Agreement State....”<sup>2</sup> EPA’s proposed rescission notice included a section specifically devoted to the question of “whether the requirement extends to the evaporation pond [located on top of a tailings impoundment] thereby jeopardizing the other remedial aspects of the UMTRCA program.”<sup>3</sup> This discussion recognized that evaporation ponds play an important role in the UMTRCA remedial action programs at uranium mill tailings sites:

“The regulations contemplated by this notice seek to control the emission of radon-222 by requiring the installation of an earthen cover over the disposal piles as expeditiously as practicable considering technological feasibility. However, there are other aspects to the UMTRCA regulatory scheme, including the long-term maintenance of the piles (once controlled) against erosion, and the reclamation and maintenance of groundwater....*These actions entail the use of evaporation ponds that in some instances....have been placed directly upon the disposal site.*”<sup>4</sup>

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<sup>1</sup> 40 CFR § 61.252(a) (2011).

<sup>2</sup> 56 Fed. Reg. 67561. This language demonstrates that EPA acknowledges that evaporation ponds are not to be considered as part of the class of facilities known as “uranium mill tailings piles.”

<sup>3</sup> *Id.*

<sup>4</sup> *Id.* (emphasis added). The fact that evaporation ponds could be (and had been) located on top of an inoperative tailings piles to de-water piles and assist in groundwater corrective action was made known to EPA by American Mining Congress (AMC) negotiators during the settlement negotiations that ultimately led to the rescission of Subpart T.

After discussing whether evaporation ponds were to be subject to its 40 CFR Part 61, Subpart T standard, EPA concluded:

*“EPA does not intend that the expeditious radon cover requirement extend to the areas where evaporation ponds are located, even if on the pile itself, to the extent that such evaporation pond is deemed by the implementing agency (NRC or an affected Agreement State) to be an appropriate aspect to the overall remedial program for the particular site involved.”*<sup>5</sup>

Indeed, EPA’s Proposed Rule prescribed an approach to evaporation pond remediation as follows: “the evaporation pond area may be covered to control radon *after it is no longer in use and ready for covering.*”<sup>6</sup> EPA supported this conclusion by reasoning that:

*“the ponds themselves serve as an effective radon barrier, thus this decision is bolstered by the absence of any evidence that there is a significant public health risk presented by the radon emissions from these evaporation ponds during the period they are employed as part of the overall remediation of the site.”*<sup>7</sup>

Then, on November 15, 1993, EPA promulgated a final Subpart W rule applicable to operational NRC/Agreement State licensed uranium mill tailings facilities. In this Federal Register notice/Final Rule, EPA responded to a number of public comments, including comments related to the application of Subpart W requirements to evaporation ponds. As stated by EPA:

*“EPA reiterates that the Agency does not intend the expeditious radon cover requirement to extend to areas where evaporation ponds are located, even if on the pile itself, to the extent that such evaporation pond is deemed by the implementing agency...to be an appropriate aspect of the overall remedial program for the particular site.”*<sup>8</sup>

Essentially, in this final Subpart W rule, EPA restated its conclusion in the Subpart T rescission regulatory record that active evaporation ponds do not represent a significant potential radon source term.<sup>9</sup> Thus, it is plain from the language of EPA’s administrative rulemaking records as discussed above that Subpart W never was intended to apply to evaporation or other associated

<sup>5</sup> *Id.* (emphasis added).

<sup>6</sup> 56 Fed. Reg. 67561 (emphasis added).

<sup>7</sup> *Id.*

<sup>8</sup> 56 Fed. Reg. 67561 (emphasis added).

<sup>9</sup> *Id.*

ponds. Therefore, pursuant to the Supreme Court's decision in *State Farm*,<sup>10</sup> it is impermissible for EPA to engage in *post hoc* rationalization re-interpreting the scope of its regulatory authority under Subpart W after its own administrative rulemaking record concluded that Subpart W does not apply to these ponds. Indeed, there was never any mention of Subpart W requirements applying to evaporation ponds much less asserting that such jurisdiction applies "specifically" as stated in EPA Region 8's February 11, 2011, letter.

Further, it is apparent that on their face neither of the *work practice* standards in Subpart W are consistent with the concept of evaporation or storage ponds at either a conventional uranium mill or an ISR facility---(1) "phased disposal" is not consistent with water in an evaporation pond which EPA, as noted above, concluded does not present a significant risk to public health from radon emissions and the word "disposal" suggests a "tailings disposal facility"<sup>11</sup> rather than a water storage facility from which water will be evaporated and the liner will then be disposed of in an offsite, licensed "tailings disposal facility;" and (2) "continuous disposal" of de-watered tailings has even less association with evaporation or storage ponds. Further, it also is apparent that Method 115, the designated Subpart W methodology to comply with measuring radon emissions from mill tailings impoundments, is not applicable to measuring radon from fluid-filled evaporation or other ponds.

Unlike conventional uranium milling which involves crushing and grinding of uranium ores and the generation of uranium mill tailings, ISL facilities *do not generate uranium mill tailings* as per UMTRCA's definition of "tailings," as incorporated by EPA in 40 CFR Part 61.<sup>12</sup> Water stored in an evaporation pond from either active ISR operations or groundwater restoration is not consistent with the UMTRCA definition of "tailings" as water is not part of "the remaining portion of the metal-bearing ore from which uranium was extracted"—the sandy waste material containing the radioactive decay products. Given that EPA's regulations in 40

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<sup>10</sup> *Motor Vehicle Mfrs. Ass'n of U.S., Inc. v. State Farm Mut. Auto. Ins. Co.*, 463 U.S. 29, 50-51 (1983) ("It is well-established that an agency's action must be upheld, if at all, on the basis articulated by the agency itself.")

<sup>11</sup> As 10 CFR Part 40, Appendix A, Criterion 1 states with respect to disposal cells/impoundments: "The general goal or broad objective in siting and design decisions is permanent isolation of tailings and associated contaminants by minimizing disturbance and dispersion by natural forces, and to do so without ongoing maintenance."

<sup>12</sup> 42 U.S.C. § 7911(8). "Tailings" is defined by UMTRCA and 40 CFR Part 61 as, "[t]he term 'tailings' means *the remaining portion of a metal-bearing ore after some or all of such metal, such as uranium, has been extracted.*"<sup>12</sup>

CFR Part 61, Subpart T incorporate the UMTRCA definition of “tailings,”<sup>13</sup> EPA arguably has accepted the distinction between tailings in a tailings pile or impoundment and water related to uranium milling (including ISR) in an evaporation pond that may have resulted either from processing or from groundwater restoration.

As discussed above, based on EPA’s existing administrative rulemaking records and regulatory definitions and the fact that the Willow Creek facility does not have any uranium mill tailings impoundments, it is Uranium One’s position that Subpart W does not apply to the Willow Creek facility. Further, prior to the acquisition of the Christensen Ranch/Irigary ISR site by Uranium One, the prior owner (COGEMA Mining, Inc.) stated in an October 8, 2008 letter:

“During the 1990-1992 radon flux testing, representatives from EPA Region 8 were involved in the establishment of the sampling protocols at both Lucky Mc and Shirley Basin....There was at that time concurrence between EPA Region 8 and Pathfinder Mines regarding what type of tailings material was being regulated under Subpart W and hence required radon flux testing: solid tailings generated by conventional mill ore grinding and uranium extraction from that processes ore. Solution ponds at both sites were appropriately excluded from the sampling protocol.”<sup>14</sup>

Thus, based on EPA’s current administrative record regarding applicability of Subpart W *generally* to evaporation, storage or other associated ponds at uranium recovery sites and specifically its inspection records over thirty (30) years for the Willow Creek ISR site, which are not consistent with Subpart W being applicable to evaporation, storage or other associated ponds at such sites, Uranium One does not believe that submission of an “approval application” for its on-site ponds is appropriate at this time.

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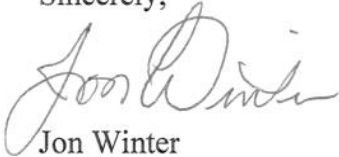
<sup>13</sup> It should be noted that Subpart W’s definition of “uranium byproduct material or tailings” adopts essentially the same definition of “11e.(2) byproduct material in Section 11(e) of the AEA, as amended by UMTRCA.

<sup>14</sup> Letter from Tom Hardgrove, Manager, Environmental and Regulatory Affairs, COGEMA Mining, Inc. to Charles Garlow, Attorney-Advisor, United States Environmental Protection Agency (October 8, 2008).



If you have any questions regarding this matter, please do not hesitate to contact me at 307-234-8235, ext. 331. Thank you for your time and cooperation in this matter.

Sincerely,



Jon Winter  
Manager, Wyoming Environmental and Regulatory Affairs

Cc: Donna Wichers – Uranium One  
Mike Griffin – Uranium One

EPA-1998

**Angelique  
Diaz/R8/USEPA/US**  
04/28/2011 04:47 PM

To: Albion Carlson, Deborah Lebow-Aal, Kenneth Distler  
cc: Reid Rosnick, Susan Stahle, Sara Laumann  
bcc:  
Subject: Uranium One Response to EvapPond/Subpart W Letter

Attached is the response letter from Uranium One to EPA regarding the applicability of Subpart W to in situ uranium recovery (ISR) evaporation ponds. You may recall that we sent out a letter to Uranium One informing them that their ISR evaporation ponds are subject to Subpart W and that we do not have on file a Construction Approval for the ponds at their Willow Creek Facility (formerly known as Christensen Ranch/Irigaray). I also attached the letter we sent to them in February 2011.



EPA Letter - SubWEvapPonds, 021111.pdf



042011Uranium OneResponse - SubW, EvapPonds.pdf

Let's discuss next steps.

-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



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY  
REGION 8

1595 Wynkoop Street  
DENVER, CO 80202-1129  
Phone 800-227-8917  
<http://www.epa.gov/region08>

FEB 11 2011

Ref: 8P-AR

Jon F. Winter  
Manager, Environmental and Regulatory Affairs  
Uranium One Americas  
907 N. Poplar Street  
Suite 260  
Casper, WY 82601

Re: Subpart W Requirements for Christiensen Ranch/Irigaray ISR

Dear Mr. Winter:

You are receiving this letter as an operator of In Situ Recovery (ISR) uranium facilities, including the Christiensen Ranch/Irigaray ISR located in Johnson and Campbell Counties, Wyoming. This letter outlines the applicability and requirements of 40 CFR Part 61, Subpart W, National Emission Standards for Radon Emissions from Operating Mill Tailings ("Subpart W") to ISR uranium facilities.

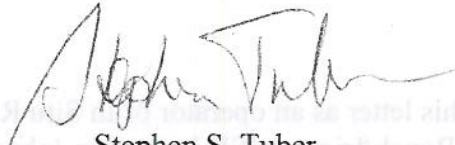
Subpart W applies to "owners or operators of facilities licensed to manage uranium byproduct material during and following the processing of uranium ores, commonly referred to as uranium mills and their associated tailings." (See 40 CFR §61.250) Subpart W defines "uranium byproduct material or tailings" as "the waste produced by the extraction or concentration of uranium from any ore processed primarily for its source material content." (See 40 CFR §61.251(g)) Thus, any type of uranium recovery facility that is managing uranium byproduct material or tailings, including, but not limited to, ISR facilities, is subject to Subpart W. The requirements of Subpart W specifically apply to the structures at the uranium ISR facility which are used to manage or contain the uranium byproduct or tailings. At ISR facilities, common names for these structures include, but are not limited to, evaporation or holding ponds. Subpart W therefore applies to the ponds at the Christensen Ranch/Irigaray ISR facility as well as other operating ISR facilities.

Subpart W requires that ISR operators meet either the standard in 40 CFR §61.252(a) for those facilities in existence prior to 1989 or choose one of the two work practice standards in 40 CFR §61.252(b) for facilities constructed after 1989. In addition to the requirements of Subpart W, the requirements in 40 CFR Part 61 Subpart A ("Subpart A") General Provisions apply to Subpart W regulated structures at ISR facilities. Subpart A, 40 CFR §61.07, requires owners or operators to submit to EPA an approval application for either construction or modification of Subpart W regulated structures (i.e., evaporation or holding ponds). Resuming operation of the ponds is considered

to be a modification, requiring that a modification approval application be submitted to EPA before the modification is planned to commence.

We understand that the Christiensen Ranch/Irigaray facilities have resumed operation. We have not received an approval application for the ponds onsite, as required by 40 CFR §61.07. We look forward to receiving the applications for Christiensen Ranch/Irigaray, as well as the required construction or modification approval applications for other current and future operating ISR facilities. This letter grants no relief to the owner or operator from the legal responsibility for compliance with any applicable provisions of 40 CFR Part 61 Subparts A and W, or any other applicable Federal, State or local requirement. If you have any questions please contact Deborah Lebow Aal of my staff at (303) 312-6223 or [lebow-aal.deborah@epa.gov](mailto:lebow-aal.deborah@epa.gov).

Sincerely,



Stephen S. Tuber  
Assistant Regional Administrator  
Office of Partnerships and Regulatory Assistance

cc: John Corra, Director, WYDEQ  
Steve Ingle, Land Quality Division, WYDEQ  
Bill von Till, Chief – Uranium Recovery Licensing Branch, NRC  
Robert Dye, U.S. Environmental Protection Agency, Region 7

EPA-2033

Reid Rosnick/DC/USEPA/US

05/05/2011 08:30 AM

To: Andrea Cherepy

cc

bcc

Subject: Fw: Uranium Recovery Workshop 2011 -- Speaker Information

Speaker form is at the bottom

---

Reid J. Rosnick  
Radiation Protection Division (6608J)  
U.S. Environmental Protection Agency  
1200 Pennsylvania Ave., NW  
Washington, DC 20460  
202.343.9563  
rosnick.reid@epa.gov

----- Forwarded by Reid Rosnick/DC/USEPA/US on 05/05/2011 08:29 AM -----

From: "Phelleps,Moya" <MPhelleps@nma.org>  
To: Reid Rosnick/DC/USEPA/US@EPA  
Date: 04/21/2011 03:58 PM  
Subject: Uranium Recovery Workshop 2011 -- Speaker Information

---

Reid:

Thank you very much for agreeing to participate in Uranium Recovery Workshop 2011, sponsored by the National Mining Association and the Nuclear Regulatory Commission. The workshop is May 25-26 at the Grand Hyatt Denver, Denver, Colo. This e-mail will provide you with information concerning your presentation and registration.

**Your presentation, "EPA Update: Subpart W Activities, Planned Review of EPA UMTRCA-Based Regulations" is on Thursday, March 26 from 11:25 a.m. – 12:05 p.m.** The formal remarks should be approximately 30 minutes with 10 minutes for question and answer.

Attached is a form that requests your audiovisual needs and permission to post your presentation on the URW page located on the NMA web site. NMA also would appreciate receiving biographical information that can be for an introduction. **The deadline for the speaker form and the biographical information is Monday, May 9.**

If you are giving a PowerPoint presentation, NMA would appreciate receiving a copy of the presentation by **Friday, May 20** so it may be pre-loaded on the laptop ready for your use.

If you have not registered, registration may be done on-line at <http://www.uraniumrecoveryworkshop2011.myevent.com/>. To reserve a room, please call the Grand Hyatt Denver at (303) 295-1234 or (800) 233-1234 and refer

to the "National Mining Association" block of rooms. The hotel block is available until **Tuesday, May 3** at the NMA room rate of \$141 per night subject to room availability.

Please return all of the requested materials to my attention at [mphelleps@nma.org](mailto:mphelleps@nma.org) or fax (202) 463-2648. Should you have any questions or need further information, please contact me at (202) 463-2639.

Thank you very much.

Moya

Moya Phelleps  
Senior Vice President, Member Services  
National Mining Association  
101 Constitution Avenue, N.W.  
Washington, DC 20001  
Phone: 202-463-2639



Rosnick Speaker Form.doc



# Uranium Recovery Workshop 2011



## Speaker Form

Topic/Presenter: **EPA Update: Subpart W Activities, Planned Review of EPA UMRCA-Based Regulations**

**Thursday, May 26  
11:25 a.m. – 12:05 p.m.**

Reid Rosnick, Environmental Scientist, Office of Radiation and Indoor Air, Radiation Protection Division, U.S. EPA

### AUDIO VISUAL REQUIREMENTS:

- PowerPoint Presentation
- Lavalier Microphone
- Other (please be specific) \_\_\_\_\_

**I give the National Mining Association and the Nuclear Regulatory Commission, the sponsors of Uranium Recovery Workshop 2011, permission to post my presentation on the URW page on the NMA web site.**

Name: \_\_\_\_\_

Signature: \_\_\_\_\_

Title: \_\_\_\_\_

Affiliation: \_\_\_\_\_

Date: \_\_\_\_\_

Please return this form by **Monday, May 9** to Moya PHELLEPS at [mpelleps@nma.org](mailto:mpelleps@nma.org) or by fax to (202) 463-2648.

EPA-1072

Reid Rosnick/DC/USEPA/US

05/09/2011 09:46 AM

To "Phelleps,Moya"

cc Andrea Cherepy

bcc

Subject Re: Uranium Recovery Workshop 2011 -- Speaker Information

Moya,

Attached are the speaker form and bio information you requested. Please be aware that I will be giving the presentation on the Subpart W update, and my colleague Andrea Cherepy will be presenting the review of the UMTRCA-Based regulations. We will each do approximately 15 minutes for each topic, and then will allow 10 minutes for questions. I spoke with Katie Sweeney last week to confirm this, and she said it would not be a problem. We will do our best to get the presentations to you by the 20th. Please contact me if you have any questions, or desire further information. Thank you.

Reid



Rosnick Speaker Form.pdf



Reid Rosnick bio information.docx

---

Reid J. Rosnick  
Radiation Protection Division (6608J)  
U.S. Environmental Protection Agency  
1200 Pennsylvania Ave., NW  
Washington, DC 20460  
202.343.9563  
rosnick.reid@epa.gov

"Phelleps,Moya"

Reid:

04/21/2011 03:58:42 PM

From: "Phelleps,Moya" <MPhelleps@nma.org>  
To: Reid Rosnick/DC/USEPA/US@EPA  
Date: 04/21/2011 03:58 PM  
Subject: Uranium Recovery Workshop 2011 -- Speaker Information

Reid:

Thank you very much for agreeing to participate in Uranium Recovery Workshop 2011, sponsored by the National Mining Association and the Nuclear Regulatory Commission. The workshop is May 25-26 at the Grand Hyatt Denver, Denver, Colo. This e-mail will provide you with information concerning your presentation and registration.

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presentation on the URW page located on the NMA web site. NMA also would appreciate receiving biographical information that can be for an introduction. **The deadline for the speaker form and the biographical information is Monday, May 9.**

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Please return all of the requested materials to my attention at [mphelleps@nma.org](mailto:mphelleps@nma.org) or fax (202) 463-2648. Should you have any questions or need further information, please contact me at (202) 463-2639.

Thank you very much.

Moya

Moya Phelleps  
Senior Vice President, Member Services  
National Mining Association  
101 Constitution Avenue, N.W.  
Washington, DC 20001  
Phone: 202-463-2639

[attachment "Rosnick Speaker Form.doc" deleted by Reid Rosnick/DC/USEPA/US]



# Uranium Recovery Workshop 2011



## Speaker Form

Topic/Presenter: **EPA Update: Subpart W Activities, Planned Review of EPA UMTRCA-Based Regulations**

**Thursday, May 26  
11:25 a.m. – 12:05 p.m.**

Reid Rosnick, Environmental Scientist, Office of Radiation and Indoor Air, Radiation Protection Division, U.S. EPA

### AUDIO VISUAL REQUIREMENTS:

- PowerPoint Presentation
- Lavalier Microphone
- Other (please be specific) \_\_\_\_\_

**I give the National Mining Association and the Nuclear Regulatory Commission, the sponsors of Uranium Recovery Workshop 2011, permission to post my presentation on the URW page on the NMA web site.**

Name: Reid J. Rosnick

Signature: [Handwritten Signature]

Title: Environmental Scientist

Affiliation: U.S. EPA

Date: 5/9/2011

Please return this form by **Monday, May 9** to Moya Phelleps at [mpheleps@nma.org](mailto:mpheleps@nma.org) or by fax to (202) 463-2648.

EPA-2192

Angelique  
Diaz/R8/USEPA/US  
05/11/2011 09:20 AM

To: Wendy Cheung  
cc: Reid Rosnick  
bcc:  
Subject: Re: evap pits at ISR facilities

Wendy, let me see what we have. I don't recall any studies but we may have something we can share that was done for the Subpart W Workgroup. Whatever we have will more than likely only look at the impacts from radon from the evaporation/holding ponds, no other constituents.

As an FYI, we received this letter from Uranium One in response to our letter (also attached) to them informing them that Subpart W applies to evaporation ponds. Basically they don't agree with EPA that ISR evap ponds are subject to Subpart W. Looks like Christiansen is now called Willow Creek.



042011Uranium OneResponse - SubW, EvapPonds.pdf EPA Letter - SubWEvapPonds, 021111.pdf

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

Wendy Cheung

Angelique, I am working on a document for the...

05/10/2011 10:13:43 AM

From: Wendy Cheung/R8/USEPA/US  
To: Angelique Diaz/R8/USEPA/US@EPA  
Date: 05/10/2011 10:13 AM  
Subject: evap pits at ISR facilities

Angelique,

I am working on a document for the Christiansen Ranch ISR project and looking at pros and cons for different disposal methods. Do you have any studies regarding the public health concerns of evaporation pits?

Thanks,

Wendy Cheung  
US EPA Region 8  
Mailcode: 8P-W-GW  
1595 Wynkoop Street  
Denver, CO 80202-1129  
work: (303) 312-6242  
fax: (303) 312-7084

April 20, 2011

United States Environmental Protection Agency, Region 8 Office  
Attn: Stephen S. Tuber, Assistant Regional Administrator  
Office of Partnerships and Regulatory Assistance  
1595 Wynkoop Street  
Denver, CO 80202-1129

Re: Response to EPA Inquiry Regarding Subpart W Requirements for Christiensen Ranch/Irigaray ISR (now known as Willow Creek ISR) Site

Dear Mr. Tuber:

Uranium One Americas (Uranium One) is in receipt of a request from the United States Environmental Protection Agency's (EPA) Region 8 Office dated February 11, 2011 entitled *Subpart W Requirements for Christiensen Ranch/Irigaray ISR* (hereinafter "Notice"). This Notice states that "any type of uranium recovery facility that is managing uranium byproduct material or tailings, including, but not limited to, ISR facilities, is subject to Subpart W." More specifically regarding the scope of this Notice, EPA states:

"[t]he requirements of Subpart W specifically apply to the structures at the uranium ISR facility which are used to manage or contain the uranium byproduct or tailings. At ISR facilities, common names for these structures include, but are not limited to, evaporation or holding ponds."

As a result, it appears that the focus of EPA's Request is an assertion that Uranium One's evaporation, storage, and other associated ponds at its Willow Creek ISR facility are subject to EPA's jurisdiction under 40 CFR Part 61, Subpart W.

40 CFR Part 61, Subpart W, entitled *National Emission Standards for Radon Emissions from Operating Mill Tailings*, was promulgated to address radon emissions at *active* (including standby) uranium mill tailings facilities. Thus, Subpart W applies to operators of uranium mill tailings facilities while they are processing uranium/thorium ores and creating 11e.(2) byproduct material:

"The provisions of this subpart apply to owners or operators of facilities

licensed to manage uranium byproduct materials during and following the processing of uranium ores, commonly referred to as uranium mills and their *associated tailings*. This subpart does not apply to the [final] disposal of *tailings*.”

In accordance with Subpart W, new tailings impoundments constructed after December 15, 1989 must comply with one of two *work practice* standards:<sup>1</sup> (1) *phased disposal* in lined impoundments of forty (40) acres and meet the requirements of 40 CFR § 192.32(a) with no more than two impoundments in operation at one time; or (2) *continuous disposal* of tailings that are dewatered and immediately disposed of with no more than ten acres uncovered at one time. Tailings facilities in existence prior to December 15, 1989 are required to satisfy a 20 pCi/m<sup>2</sup>/s radon flux standard.

On December 31, 1991, EPA proposed to rescind another portion of its regulations known as 40 CFR Part 61, Subpart T “as it applies to owners and operators of uranium mill tailings disposal sites that are licensed by the Nuclear Regulatory Commission (NRC) or an affected NRC Agreement State....”<sup>2</sup> EPA’s proposed rescission notice included a section specifically devoted to the question of “whether the requirement extends to the evaporation pond [located on top of a tailings impoundment] thereby jeopardizing the other remedial aspects of the UMTRCA program.”<sup>3</sup> This discussion recognized that evaporation ponds play an important role in the UMTRCA remedial action programs at uranium mill tailings sites:

“The regulations contemplated by this notice seek to control the emission of radon-222 by requiring the installation of an earthen cover over the disposal piles as expeditiously as practicable considering technological feasibility. However, there are other aspects to the UMTRCA regulatory scheme, including the long-term maintenance of the piles (once controlled) against erosion, and the reclamation and maintenance of groundwater....*These actions entail the use of evaporation ponds that in some instances....have been placed directly upon the disposal site.*”<sup>4</sup>

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<sup>1</sup> 40 CFR § 61.252(a) (2011).

<sup>2</sup> 56 Fed. Reg. 67561. This language demonstrates that EPA acknowledges that evaporation ponds are not to be considered as part of the class of facilities known as “uranium mill tailings piles.”

<sup>3</sup> *Id.*

<sup>4</sup> *Id.* (emphasis added). The fact that evaporation ponds could be (and had been) located on top of an inoperative tailings piles to de-water piles and assist in groundwater corrective action was made known to EPA by American Mining Congress (AMC) negotiators during the settlement negotiations that ultimately led to the rescission of Subpart T.

After discussing whether evaporation ponds were to be subject to its 40 CFR Part 61, Subpart T standard, EPA concluded:

*“EPA does not intend that the expeditious radon cover requirement extend to the areas where evaporation ponds are located, even if on the pile itself, to the extent that such evaporation pond is deemed by the implementing agency (NRC or an affected Agreement State) to be an appropriate aspect to the overall remedial program for the particular site involved.”<sup>5</sup>*

Indeed, EPA’s Proposed Rule prescribed an approach to evaporation pond remediation as follows: “the evaporation pond area may be covered to control radon *after it is no longer in use and ready for covering.*”<sup>6</sup> EPA supported this conclusion by reasoning that:

*“the ponds themselves serve as an effective radon barrier, thus this decision is bolstered by the absence of any evidence that there is a significant public health risk presented by the radon emissions from these evaporation ponds during the period they are employed as part of the overall remediation of the site.”<sup>7</sup>*

Then, on November 15, 1993, EPA promulgated a final Subpart W rule applicable to operational NRC/Agreement State licensed uranium mill tailings facilities. In this Federal Register notice/Final Rule, EPA responded to a number of public comments, including comments related to the application of Subpart W requirements to evaporation ponds. As stated by EPA:

*“EPA reiterates that the Agency does not intend the expeditious radon cover requirement to extend to areas where evaporation ponds are located, even if on the pile itself, to the extent that such evaporation pond is deemed by the implementing agency...to be an appropriate aspect of the overall remedial program for the particular site.”<sup>8</sup>*

Essentially, in this final Subpart W rule, EPA restated its conclusion in the Subpart T rescission regulatory record that active evaporation ponds do not represent a significant potential radon source term.<sup>9</sup> Thus, it is plain from the language of EPA’s administrative rulemaking records as discussed above that Subpart W never was intended to apply to evaporation or other associated

<sup>5</sup> *Id.* (emphasis added).

<sup>6</sup> 56 Fed. Reg. 67561 (emphasis added).

<sup>7</sup> *Id.*

<sup>8</sup> 56 Fed. Reg. 67561 (emphasis added).

<sup>9</sup> *Id.*

ponds. Therefore, pursuant to the Supreme Court's decision in *State Farm*,<sup>10</sup> it is impermissible for EPA to engage in *post hoc* rationalization re-interpreting the scope of its regulatory authority under Subpart W after its own administrative rulemaking record concluded that Subpart W does not apply to these ponds. Indeed, there was never any mention of Subpart W requirements applying to evaporation ponds much less asserting that such jurisdiction applies "specifically" as stated in EPA Region 8's February 11, 2011, letter.

Further, it is apparent that on their face neither of the *work practice* standards in Subpart W are consistent with the concept of evaporation or storage ponds at either a conventional uranium mill or an ISR facility---(1) "phased disposal" is not consistent with water in an evaporation pond which EPA, as noted above, concluded does not present a significant risk to public health from radon emissions and the word "disposal" suggests a "tailings disposal facility"<sup>11</sup> rather than a water storage facility from which water will be evaporated and the liner will then be disposed of in an offsite, licensed "tailings disposal facility;" and (2) "continuous disposal" of de-watered tailings has even less association with evaporation or storage ponds. Further, it also is apparent that Method 115, the designated Subpart W methodology to comply with measuring radon emissions from mill tailings impoundments, is not applicable to measuring radon from fluid-filled evaporation or other ponds.

Unlike conventional uranium milling which involves crushing and grinding of uranium ores and the generation of uranium mill tailings, ISL facilities *do not generate uranium mill tailings* as per UMTRCA's definition of "tailings," as incorporated by EPA in 40 CFR Part 61.<sup>12</sup> Water stored in an evaporation pond from either active ISR operations or groundwater restoration is not consistent with the UMTRCA definition of "tailings" as water is not part of "the remaining portion of the metal-bearing ore from which uranium was extracted"—the sandy waste material containing the radioactive decay products. Given that EPA's regulations in 40

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<sup>10</sup> *Motor Vehicle Mfrs. Ass'n of U.S., Inc. v. State Farm Mut. Auto. Ins. Co.*, 463 U.S. 29, 50-51 (1983) ("It is well-established that an agency's action must be upheld, if at all, on the basis articulated by the agency itself.")

<sup>11</sup> As 10 CFR Part 40, Appendix A, Criterion 1 states with respect to disposal cells/impoundments: "The general goal or broad objective in siting and design decisions is permanent isolation of tailings and associated contaminants by minimizing disturbance and dispersion by natural forces, and to do so without ongoing maintenance."

<sup>12</sup> 42 U.S.C. § 7911(8). "Tailings" is defined by UMTRCA and 40 CFR Part 61 as, "[t]he term 'tailings' means *the remaining portion of a metal-bearing ore after some or all of such metal, such as uranium, has been extracted.*"<sup>12</sup>

CFR Part 61, Subpart T incorporate the UMTRCA definition of “tailings,”<sup>13</sup> EPA arguably has accepted the distinction between tailings in a tailings pile or impoundment and water related to uranium milling (including ISR) in an evaporation pond that may have resulted either from processing or from groundwater restoration.

As discussed above, based on EPA’s existing administrative rulemaking records and regulatory definitions and the fact that the Willow Creek facility does not have any uranium mill tailings impoundments, it is Uranium One’s position that Subpart W does not apply to the Willow Creek facility. Further, prior to the acquisition of the Christensen Ranch/Irigary ISR site by Uranium One, the prior owner (COGEMA Mining, Inc.) stated in an October 8, 2008 letter:

“During the 1990-1992 radon flux testing, representatives from EPA Region 8 were involved in the establishment of the sampling protocols at both Lucky Mc and Shirley Basin....There was at that time concurrence between EPA Region 8 and Pathfinder Mines regarding what type of tailings material was being regulated under Subpart W and hence required radon flux testing: solid tailings generated by conventional mill ore grinding and uranium extraction from that processes ore. Solution ponds at both sites were appropriately excluded from the sampling protocol.”<sup>14</sup>

Thus, based on EPA’s current administrative record regarding applicability of Subpart W *generally* to evaporation, storage or other associated ponds at uranium recovery sites and specifically its inspection records over thirty (30) years for the Willow Creek ISR site, which are not consistent with Subpart W being applicable to evaporation, storage or other associated ponds at such sites, Uranium One does not believe that submission of an “approval application” for its on-site ponds is appropriate at this time.

---

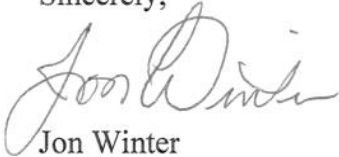
<sup>13</sup> It should be noted that Subpart W’s definition of “uranium byproduct material or tailings” adopts essentially the same definition of “11e.(2) byproduct material in Section 11(e) of the AEA, as amended by UMTRCA.

<sup>14</sup> Letter from Tom Hardgrove, Manager, Environmental and Regulatory Affairs, COGEMA Mining, Inc. to Charles Garlow, Attorney-Advisor, United States Environmental Protection Agency (October 8, 2008).



If you have any questions regarding this matter, please do not hesitate to contact me at 307-234-8235, ext. 331. Thank you for your time and cooperation in this matter.

Sincerely,



Jon Winter  
Manager, Wyoming Environmental and Regulatory Affairs

Cc: Donna Wichers – Uranium One  
Mike Griffin – Uranium One



**UNITED STATES ENVIRONMENTAL PROTECTION AGENCY  
REGION 8**

1595 Wynkoop Street  
DENVER, CO 80202-1129  
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FEB 11 2011

Ref: 8P-AR

Jon F. Winter  
Manager, Environmental and Regulatory Affairs  
Uranium One Americas  
907 N. Poplar Street  
Suite 260  
Casper, WY 82601

Re: Subpart W Requirements for Christiensen Ranch/Irigaray ISR

Dear Mr. Winter:

You are receiving this letter as an operator of In Situ Recovery (ISR) uranium facilities, including the Christiensen Ranch/Irigaray ISR located in Johnson and Campbell Counties, Wyoming. This letter outlines the applicability and requirements of 40 CFR Part 61, Subpart W, National Emission Standards for Radon Emissions from Operating Mill Tailings ("Subpart W") to ISR uranium facilities.

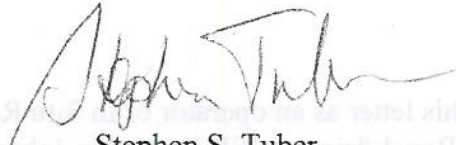
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to be a modification, requiring that a modification approval application be submitted to EPA before the modification is planned to commence.

We understand that the Christiensen Ranch/Irigaray facilities have resumed operation. We have not received an approval application for the ponds onsite, as required by 40 CFR §61.07. We look forward to receiving the applications for Christiensen Ranch/Irigaray, as well as the required construction or modification approval applications for other current and future operating ISR facilities. This letter grants no relief to the owner or operator from the legal responsibility for compliance with any applicable provisions of 40 CFR Part 61 Subparts A and W, or any other applicable Federal, State or local requirement. If you have any questions please contact Deborah Lebow Aal of my staff at (303) 312-6223 or [lebow-aal.deborah@epa.gov](mailto:lebow-aal.deborah@epa.gov).

Sincerely,



Stephen S. Tuber  
Assistant Regional Administrator  
Office of Partnerships and Regulatory Assistance

cc: John Corra, Director, WYDEQ  
Steve Ingle, Land Quality Division, WYDEQ  
Bill von Till, Chief – Uranium Recovery Licensing Branch, NRC  
Robert Dye, U.S. Environmental Protection Agency, Region 7

EPA-1073

"Phelleps, Moya"  
<MPhelleps@nma.org>  
05/11/2011 11:22 AM

To: Reid Rosnick  
cc: Andrea Cherepy  
bcc:  
Subject: RE: Uranium Recovery Workshop 2011 -- Speaker Information

1 attachment



Cherepy Form.doc

Reid:

We have allocated 40 minutes for the presentation so that should be fine for you and Andrea.

Andrea, attached is a speaker form for you to complete and return to me as soon as possible.

Please let me know if you have any questions.

Thanks.

Moya

Moya Phelleps  
Senior Vice President, Member Services  
National Mining Association  
101 Constitution Avenue, N.W.  
Washington, DC 20001  
Phone: 202-463-2639

**From:** Rosnick.Reid@epamail.epa.gov [mailto:Rosnick.Reid@epamail.epa.gov]  
**Sent:** Monday, May 09, 2011 9:46 AM  
**To:** Phelleps, Moya  
**Cc:** Cherepy.Andrea@epamail.epa.gov  
**Subject:** Re: Uranium Recovery Workshop 2011 -- Speaker Information

Moya,

Attached are the speaker form and bio information you requested. Please be aware that I will be giving the presentation on the Subpart W update, and my colleague Andrea Cherepy will be presenting the review of the UMTRCA-Based regulations. We will each do approximately 15 minutes for each topic, and then will allow 10 minutes for questions. I spoke with Katie Sweeney last week to confirm this, and she said it would not be a problem. We will do our best to get the presentations to you by the 20th. Please contact me if you have any questions, or desire further information. Thank you.

Reid

---

Reid J. Rosnick  
Radiation Protection Division (6608J)  
U.S. Environmental Protection Agency  
1200 Pennsylvania Ave., NW  
Washington, DC 20460  
202.343.9563  
[rosnick.reid@epa.gov](mailto:rosnick.reid@epa.gov)

From: "Phelleps,Moya" <[MPhelleps@nma.org](mailto:MPhelleps@nma.org)>  
To: Reid Rosnick/DC/USEPA/US@EPA  
Date: 04/21/2011 03:58 PM  
Subject: Uranium Recovery Workshop 2011 -- Speaker Information

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Reid:

Thank you very much for agreeing to participate in Uranium Recovery Workshop 2011, sponsored by the National Mining Association and the Nuclear Regulatory Commission. The workshop is May 25-26 at the Grand Hyatt Denver, Denver, Colo. This e-mail will provide you with information concerning your presentation and registration.

**Your presentation, "EPA Update: Subpart W Activities, Planned Review of EPA UMTRCA-Based Regulations" is on Thursday, March 26 from 11:25 a.m. – 12:05 p.m.** The formal remarks should be approximately 30 minutes with 10 minutes for question and answer.

Attached is a form that requests your audiovisual needs and permission to post your presentation on the URW page located on the NMA web site. NMA also would appreciate receiving biographical information that can be for an introduction. **The deadline for the speaker form and the biographical information is Monday, May 9.**

If you are giving a PowerPoint presentation, NMA would appreciate receiving a copy of the presentation by **Friday, May 20** so it may be pre-loaded on the laptop ready for your use.

If you have not registered, registration may be done on-line at <http://www.uraniumrecoveryworkshop2011.myevent.com/>. To reserve a room, please call the Grand Hyatt Denver at (303) 295-1234 or (800) 233-1234 and refer to the "National Mining Association" block of rooms. The hotel block is available until **Tuesday, May 3** at the NMA room rate of \$141 per night subject to room availability.

Please return all of the requested materials to my attention at [mphelleps@nma.org](mailto:mphelleps@nma.org) or fax (202) 463-2648. Should you have any questions or need further information, please contact me at (202) 463-2639.

Thank you very much.

Moya

Moya Phelleps

Senior Vice President, Member Services

National Mining Association

101 Constitution Avenue, N.W.

Washington, DC 20001

Phone: 202-463-2639

[attachment "Rosnick Speaker Form.doc" deleted by Reid Rosnick/DC/USEPA/US]



# Uranium Recovery Workshop 2011



## Speaker Form

Topic/Presenter: **EPA Update: Subpart W Activities, Planned Review of EPA UMTRCA-Based Regulations**

**Thursday, May 26  
11:25 a.m. – 12:05 p.m.**

Reid Rosnick, Environmental Scientist, Office of Radiation and Indoor Air, Radiation Protection Division, U.S. EPA

Andrea Cherepy, Office of Radiation and Indoor Air, Radiation Protection Division, U.S. EPA

### AUDIO VISUAL REQUIREMENTS:

- PowerPoint Presentation
- Lavalier Microphone
- Other (please be specific) \_\_\_\_\_

**I give the National Mining Association and the Nuclear Regulatory Commission, the sponsors of Uranium Recovery Workshop 2011, permission to post my presentation on the URW page on the NMA web site.**

Name: \_\_\_\_\_

Signature: \_\_\_\_\_

Title: \_\_\_\_\_

Affiliation: \_\_\_\_\_

Date: \_\_\_\_\_

Please return this form by **Monday, May 9** to Moya Phelleps at [mpheleps@nma.org](mailto:mpheleps@nma.org) or by fax to (202) 463-2648.

EPA-2220

**Reid Rosnick/DC/USEPA/US**

05/11/2011 02:03 PM

To: Andrea Cherepy

cc

bcc

Subject: PP



Rosnick NMA Uranium Recovery 2011.pptx

---

Reid J. Rosnick  
Radiation Protection Division (6608J)  
U.S. Environmental Protection Agency  
1200 Pennsylvania Ave., NW  
Washington, DC 20460  
202.343.9563  
rosnick.reid@epa.gov





# ***U.S. EPA NESHAP Subpart W Revisions Update***

---

Reid J. Rosnick

Radiation Protection Division

NRC/NMA Uranium Recovery Workshop

May 26, 2011

# Purpose of Presentation

- Provide background and status update on 40 CFR 61, Subpart W (radon emissions from uranium mill tailings under Clean Air Act)



## 40 CFR 61 Subpart W Summary

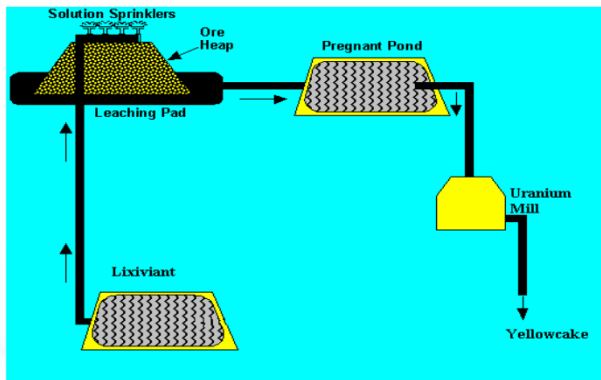
- Applies to radon emissions from operating uranium mill tailings
  - Radon emissions flux standard: 20 pCi/m<sup>2</sup>-sec
- After 12/15/1989, new impoundments were required to meet one of two new work practices
  - ✓ Phased disposal – Impoundment size  $\leq$  40 acres
  - ✓ Continuous disposal – dewatered tailings with no more than 10 acres uncovered
  - ✓ Both must meet design, construction, ground-water monitoring standards at 40 CFR 192.32(a)
- Work practices were designed to achieve at least equivalent emissions reductions as obtained by the numerical standard



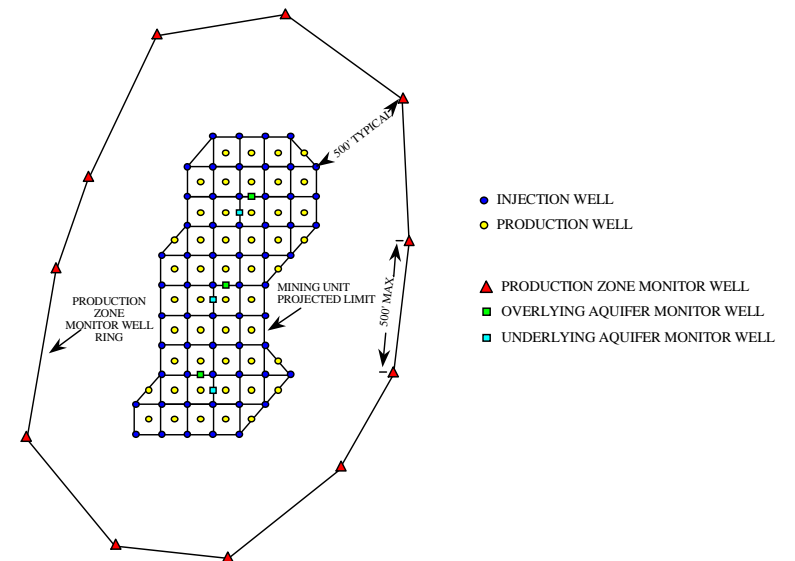
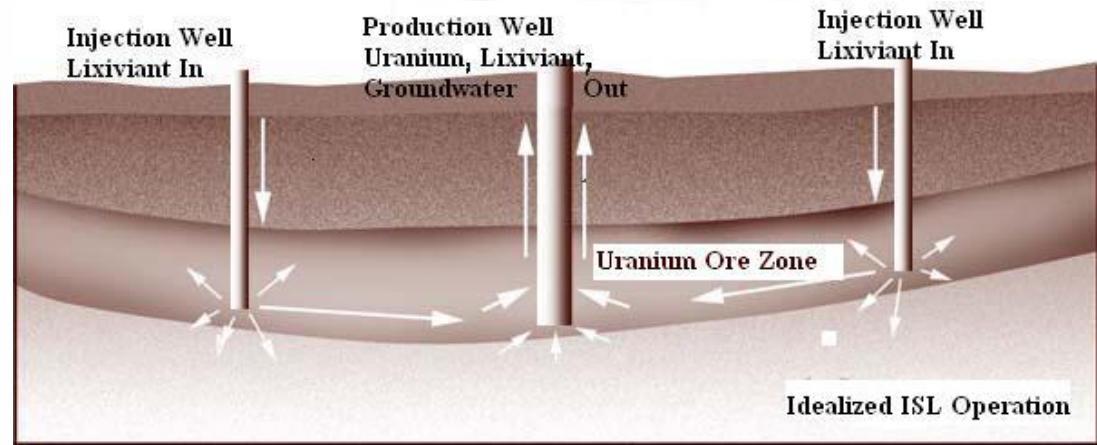
# Background



Conventional Surface mill



Heap leaching



# Review of Subpart W

- Review began after receiving Notice of Intent to Sue (NOI) by two Colorado environmental groups
  - ✓ Based on EPA's alleged failure to review & revise regulation within ten years after enactment of Clean Air Act Amendments of 1990 (11/15/2000)
  - ✓ Plaintiffs filed suit against EPA in October 2008
  - ✓ Settlement agreement reached November 2009
  
- EPA is currently revising Subpart W, projected proposal, late this year



# Subpart W, continued

- In Situ Leach (ISL) extraction has become more commonplace since original promulgation and does not generate significant tailings, but wastes containing uranium byproduct material are placed in evaporation ponds/impoundments
- ISL, conventional mill, heap leach operations expected
- Regulatory Reviews
  - ✓ of the current standard
  - ✓ of the original EPA radon risk assessment



## Subpart W, Scientific Data/Research

- Review and compile a list of existing & proposed U mill tailing facilities & the containment technologies being used, as well as proposed
- Compare & contrast those technologies with the engineering requirements of RCRA Subtitle C land disposal facilities, which are used as the design basis for existing uranium byproduct material impoundments
  - ✓ Review regulatory history of Rad-NESHAPS and Subpart W, Tailings impoundment technologies, and radon measurement method
  - ✓ Comparison of 1989 risk assessment with current risk assessment approaches (adequacy and appropriateness)



# Status of 40 CFR Part 61, Subpart W

- Regulation is under formal review
- Work has reached deliberative phase, EPA workgroup is preparing options for regulation revision to Assistant Administrator.
- AA will provide direction on which options to include in preamble of proposal
- Focus has been:
  - ✓ External -- Public information meetings to address settlement agreement requirements
  - ✓ Internal -- Technical review





# Communications Plan

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



# Outreach

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



# Outreach

- ✓ Quarterly conference calls to answer stakeholder questions
- ✓ Next call – July 7, 2011 – 11:00 AM EDT
- ✓ Call in number is 1-866-299-3188. You will be prompted for a conference code, which will be 2023439563. After entering the conference code press the # key and you will then be placed into the conference call
- ✓ Public participation by e-mail:
  - [subpartw@epa.gov](mailto:subpartw@epa.gov)



# Thank You



EPA-5202

**Reid Rosnick/DC/USEPA/US**

05/12/2011 11:31 AM

To Travis Stills

cc Jonathan Edwards, Alan Perrin, Tom Peake, Emily Atkinson

bcc

Subject FOIA Requests HQ-FOI-01484-10, HQ-FOI-01490-10

Dear Travis,

This is to inform you that our final response to the above-mentioned FOIA requests has been sent to you via UPS overnight service. You should receive the package tomorrow (Friday, 5/13/2011) afternoon. I have attached, below, for your convenience the cover letter that accompanies the package. Thank you.



HQ-FOI-01484-11 and 01490\_FinalResponse.pdf

---

Reid J. Rosnick  
Radiation Protection Division (6608J)  
U.S. Environmental Protection Agency  
1200 Pennsylvania Ave., NW  
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202.343.9563  
rosnick.reid@epa.gov



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY  
WASHINGTON, D.C. 20460

MAY 11 2011

Travis Stills  
Energy Minerals Law Center  
1911 Main Avenue, Suite 238  
Durango, Colorado 81301

OFFICE OF  
AIR AND RADIATION

Dear Mr. Stills:

This is the final response to your Freedom of Information Act (FOIA) requests (FOIA HQ-FOI-01484-10 and FOIA HQ-FOI-01490-10) dated June 18, 2010, for information regarding the ongoing review of radon emissions regulations at uranium recovery facilities (NESHAP Subpart W and overlapping review of 40 CFR 192) and for information regarding regulation of radon emissions from the uranium mill in Cañon City, CO.

Enclosed is a disc containing all 2,303 responsive emails we identified, including 2,065 unredacted emails (2065\_Emails.pdf), an electronic index of the email attachments (Email\_Attachment\_Index.pdf) and a folder containing the attachments, as well as a folder with 238 emails and attachments saved as individual files. Portions of approximately 190 of the 2,303 documents released are being withheld in part because those portions have been claimed to be internal Agency communications that are protected under FOIA Exemption 5 (See 5 U.S.C. § 552(b)(5)).

This is the final Agency response to your requests dated June 18, 2010. If you choose to do so, you may file an administrative appeal of this determination by writing to the National Freedom of Information Officer, U.S. EPA, FOIA and Privacy Branch, 1200 Pennsylvania Avenue, NW, Washington, DC 20460 (U.S. Postal Service only), FAX: (202) 566-2147, E-mail: [hq.foia@epa.gov](mailto:hq.foia@epa.gov). Only items mailed through the U.S. Postal Service may be delivered to 1200 Pennsylvania Avenue, NW. If you are submitting your appeal via hand delivery, courier service or overnight delivery, you must address your correspondence to 1301 Constitution Avenue, NW, Room 6416J, Washington, DC 20001. Your appeal must be made in writing, and must be submitted no later than 30 calendar days from the date of this letter. The Agency will not consider appeals received after the 30 calendar day limit. The appeal letter and its envelope should be marked "Freedom of Information Act Appeal."

If you have any questions, please contact Alan Perrin at 202-343-9775.

Sincerely,

A handwritten signature in blue ink, appearing to read "Jonathan Edwards".

Jonathan Edwards, Director  
Radiation Protection Division

Enclosure

cc: Alan Perrin, ORIA  
Larry Gottesman, National FOIA Office

EPA-3549

**Reid Rosnick/DC/USEPA/US**

05/20/2011 09:26 AM

To "Phelleps,Moya"

cc Andrea Cherepy

bcc

Subject Presentation

Good Morning,

Attached is my presentation for next week. Please let me know if you have any questions or comments.  
Thanks



Rosnick NMA Uranium Recovery 2011.pptx

---

Reid J. Rosnick  
Radiation Protection Division (6608J)  
U.S. Environmental Protection Agency  
1200 Pennsylvania Ave., NW  
Washington, DC 20460  
202.343.9563  
rosnick.reid@epa.gov



# ***U.S. EPA NESHAP Subpart W Revisions Update***

---

Reid J. Rosnick

Radiation Protection Division

NRC/NMA Uranium Recovery Workshop

May 26, 2011



# Purpose of Presentation

- Provide background and status update on 40 CFR 61, Subpart W (National Emission Standard for Radon Emissions from Operating Mill Tailings under Clean Air Act)



# 40 CFR 61 Subpart W Summary

- Applies to radon emissions from operating uranium mill tailings
  - Radon emissions flux standard: 20 pCi/m<sup>2</sup>-sec
- After 12/15/1989, new impoundments were required to meet one of two new work practices
  - ✓ Phased disposal – Impoundment size(2)  $\leq$  40 acres
  - ✓ Continuous disposal – dewatered tailings with no more than 10 acres uncovered
  - ✓ Both must meet design, construction, ground-water monitoring standards at 40 CFR 192.32(a)
- Work practices were designed to achieve at least equivalent risk reductions as obtained by the numerical standard



# Review of Subpart W

- Review began after receiving Notice of Intent to Sue (NOI) by two Colorado environmental groups
  - ✓ Based on EPA's alleged failure to review & revise regulation within ten years after enactment of Clean Air Act Amendments of 1990 (11/15/2000)
  - ✓ Plaintiffs filed suit against EPA
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- EPA is currently revising Subpart W, projected proposal, late this year



# Subpart W, continued

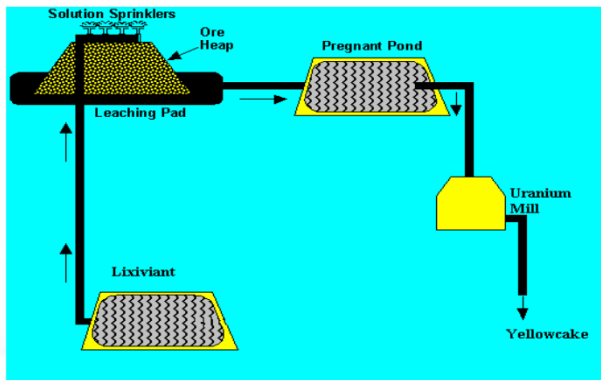
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- ISL/ISR, conventional mill, heap leach operations expected
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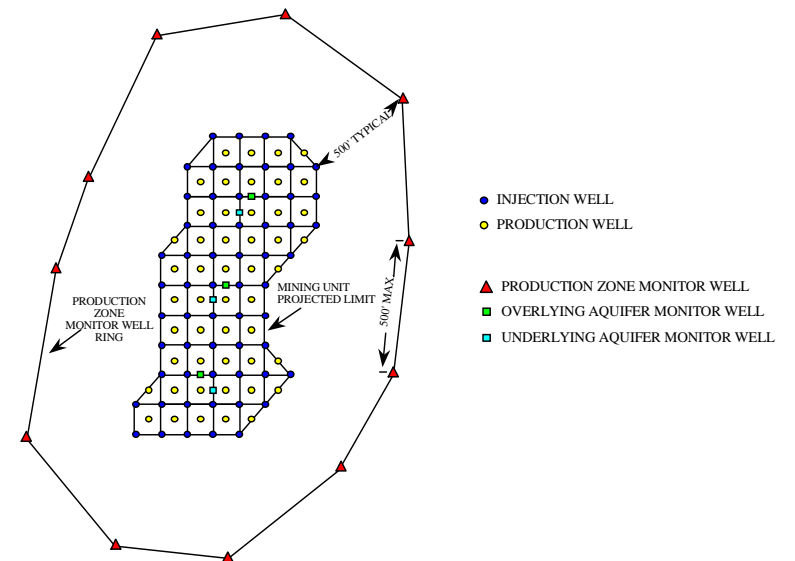
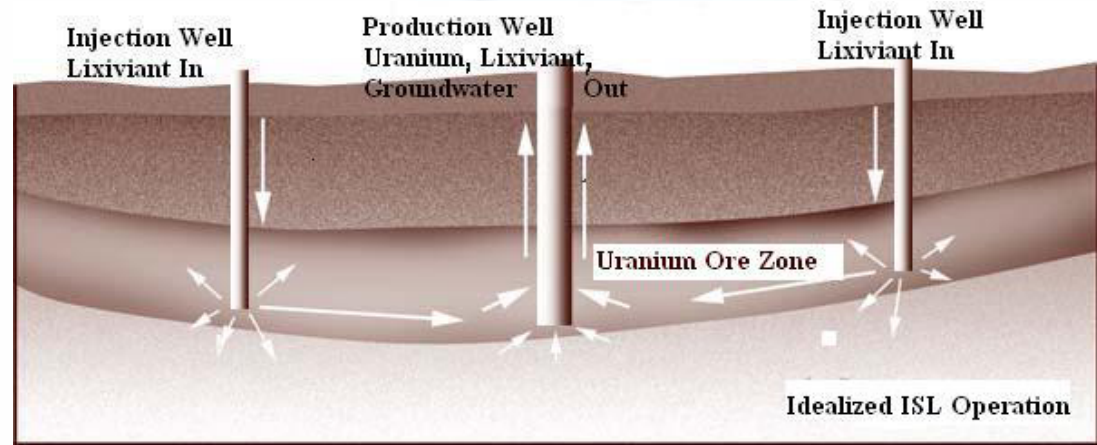
# Background



Conventional Surface mill



Heap leaching



## Subpart W, Scientific Data/Research

- Review and compile a list of existing & proposed U mill tailing facilities & the containment technologies being used, as well as proposed
- Compare & contrast those technologies with the engineering requirements of RCRA Subtitle C land disposal facilities, which are used as the design basis for existing uranium byproduct material impoundments
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  - ✓ Comparison of 1989 risk assessment with current risk assessment approaches (adequacy and appropriateness)



# Status of 40 CFR Part 61, Subpart W

- Regulation is under formal review
- Work has reached deliberative phase, EPA workgroup is preparing options for regulation revision to Assistant Administrator.
- AA will provide direction on which options to include in preamble of proposal
- Focus has been:
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# Communications Plan

- ✓ EPA is committed to maintaining an open and transparent rulemaking process
- ✓ Objectives:
  - Inform stakeholders of potential changes in EPA's Subpart W requirements
  - Give stakeholders an opportunity to provide feedback
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  - States
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# Outreach

- ✓ Established a dedicated web site to act as an information outlet
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- ✓ Public participation by e-mail:
  - [subpartw@epa.gov](mailto:subpartw@epa.gov)



Thank You



EPA-2409

**Reid Rosnick/DC/USEPA/US**

05/20/2011 09:27 AM

To "Phelleps,Moya"

cc Andrea Cherepy

bcc

Subject Presentation

Good Morning,

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Thanks



Rosnick NMA Uranium Recovery 2011.pptx

---

Reid J. Rosnick  
Radiation Protection Division (6608J)  
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1200 Pennsylvania Ave., NW  
Washington, DC 20460  
202.343.9563  
rosnick.reid@epa.gov



# ***U.S. EPA NESHAP Subpart W Revisions Update***

---

Reid J. Rosnick

Radiation Protection Division

NRC/NMA Uranium Recovery Workshop

May 26, 2011

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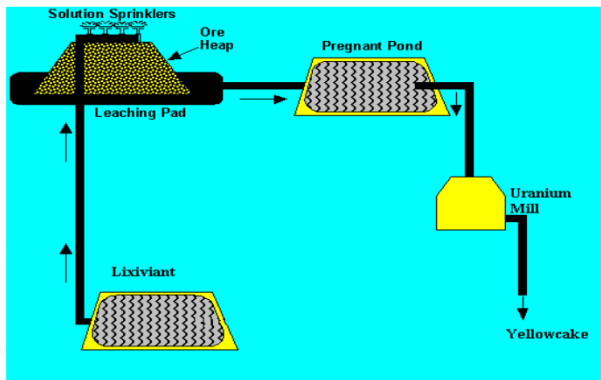
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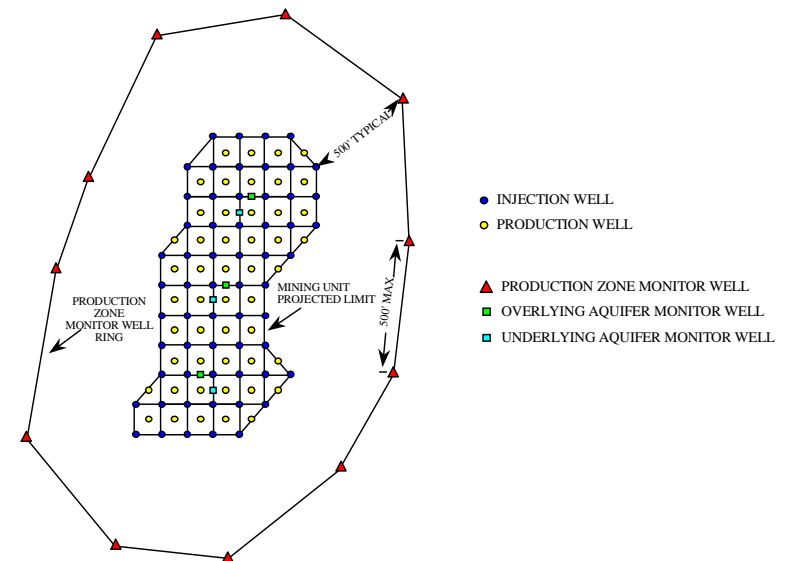
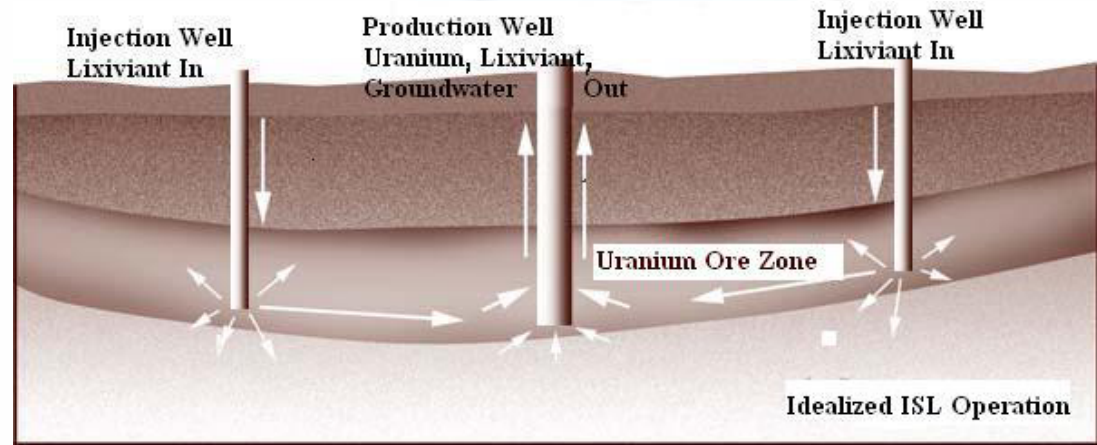
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Conventional Surface mill



Heap leaching



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  - ✓ Review regulatory history of Rad-NESHAPS and Subpart W, Tailings impoundment technologies, and radon measurement method
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# Status of 40 CFR Part 61, Subpart W

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  - [subpartw@epa.gov](mailto:subpartw@epa.gov)



Thank You





EPA-1903

**Marcos Aquino/R3/USEPA/US**

05/25/2011 04:37 PM

To Reid Rosnick, Daniel Schultheisz, Schulingkamp.Cristina

cc

bcc

Subject Fw: Questions for EPA

Here are the emails with the questions.

Marcos Aquino  
Regional Radiation Program Manager  
Office of Voluntary Air Programs  
Air Protection Division (3AP50)  
US EPA Region III  
1650 Arch Street  
Philadelphia, Pennsylvania 19103-2029  
215.814.3422 office  
215.514.8357 mobile  
aquino.marcos@epa.gov  
<http://www.epa.gov/reg3artd/radiation/radiation.htm>

----- Forwarded by Marcos Aquino/R3/USEPA/US on 05/25/2011 10:14 AM -----

**Fw: Questions for EPA**

**Karen Maute** to: Marcos Aquino

05/25/2011 07:27 AM

---

Karen,

Here are my questions for the EPA, with an accompanying map illustrating that the proposed Coles Hill mine/mill has a history of a 2010 flood on Mill Creek that is on record with the National Weather Service office in Blacksburg.



Questions for Karen Maute to share with EPA reps at her June meeting 5-10-11.pdf



Map showing FEMA flood zones and historic flood events at proposed Coles Hill mining area 5-11-11.pdf -----

Forwarded by Marcos Aquino/R3/USEPA/US on 05/25/2011 10:14 AM -----

**Fw: EPA questions**

**Karen Maute** to: Marcos Aquino

05/25/2011 07:31 AM

---

Is there a 0 discharge allowance in the Western USA regarding uranium contamination but an "exception" granted where there is more rainfall than evaporation?

Are all the tailings out in the Western USA buried below grade? If so, how will tailings be managed here with our high water table?

Does NRC say burial is preferred but not required? What are EPA's recommendations?

How will tailings that will be put in underground mines mixed with concrete be regulated? Will these types of containment systems require a liner?

How are chemicals/alkaline bases used in milling disposed of? Are they reused over and over? Would "reuse" make the concentrations higher?

The hydrology at the Coles Hill site is complex. What protocol is used to determine, where monitoring wells will be placed, how many will be needed and to what depth to monitor safety of water used by citizens near the mine. What type of hydrological information does EPA require in order to insure adequate placement of monitoring wells? At what distance from mining, milling activities and tailings storage would placement of monitoring wells be placed? Would monitoring wells typically be placed N, S, E and West of the mine, mill and tailings storage sites? one expect to see how far away will they be monitored since the water in this area flows all different ways? How many are required?

Describe the process for monitoring of radon and its decay products on-site and off-site for underground and open pit mines. How would our climate (with regard to the air pressure and high humidity) effect radon disperse differently than in a dryer climate as in the SW USA?

Due to all the cutbacks and understaffing how often does EPA do inspections? Do they have enough staff to take on what may become a major undertaking of mining throughout Virginia?

I think the most important thing to get out of this meeting is what exactly are the federal regulations and agencies that oversee u mining operations. what permits are issued federally by EPA with regard to uranium mining, milling, storage of tailings, hazardous transportation, on-site storage and disposal of hazardous wastes? please cite regulations regarding these permits

what opportunities for public comment are available with each permit? are comment periods advertised in local media?

please cite regulations applicable for public comment periods.

- "I understand that the tailings impoundment liners are guaranteed to last only 25 years... if true, how can we be sure they'll last thousands of years-- the time it will take for the radioactive wastes to no longer be dangerous?"
- "Realistically, just how long will the radioactive tailings have to be monitored and by whom?"
- "Will putting three feet of dirt over radioactive wastes and heavy metal contaminants really keep our air, water and soil safe?"
- "Who will pay for the upkeep, in perpetuity, of these tailings impoundments?"
- "With our wet climate and history of flooding, following major storms, what happens if a sludge impoundment overfills and radioactive wastes pollute the Banister River and further on, the Roanoke River and drinking water supplies all the way down to NC and Virginia Beach?"
- "How would EPA go about cleaning up drinking water supplies should a major spill occur?"
- "Who will have to pay to bring in clean drinking water to those impacted by radioactive, heavy metals-contaminated drinking water? Will the taxpayers pick up the tab or the polluting mining companies?"

- "Who will compensate those working in the state's largest industry, agriculture, when its \$55 billion annual income is negatively impacted?... Will EPA make the mining companies and a uranium mill pay the state for lost agricultural revenues, should the industry be harmed?"
- "Who will compensate those who work in Virginia's second largest industry, tourism, if it is negatively impacted?...Do you visit a region of uranium mines and a mill or take the family elsewhere for a vacation? Will EPA make the mining companies pay the state for this lost revenue?"
- "What if there's a prolonged drought which both states of VA and NC have seen in recent decades... Will VUI, other mines and the mill shut down when water levels drop to critically low levels?"
- "Is the answer always 'dilution is the solution'?"
- "What do you think of the Va Beach Study finding which said...?"
- "Why is Coles Hill even considered for uranium mining and milling, other than the fact there's uranium there, when the site is listed in a FEMA flood zone?"

Questions 1 through 6, focusing on The Uranium Mill Tailings Radiation Control Act of 1978 (UMTRCA) are based on our reading of an article by Ronald H. Rosenberg titled *Uranium Mining and Milling in Virginia: An Analysis of Regulatory Choice*. (College of William & Mary Law School, 1984). A digital copy of Rosenberg's article is available at <https://www.box.net/shared/pqu9kql7k2>.

### 1. OWNERSHIP OF TAILINGS.

Rosenberg states (page 100), "The Act [UMTRCA] required that the land used for mill tailings disposal, as well as the tailings themselves, be transferred to the United States or the state in which the land is located."

- a. Could you please discuss the feature of UMTRCA in which ownership of the tailings and the land upon which they are stored is transferred to the federal or state government?
- b. In which states is ownership under the federal government?
- c. In which states is ownership under the state government?
- d. At what point in the uranium milling process does this transfer of ownership occur – during or after the cessation of milling operations?
- e. Is the ownership in perpetuity?
- f. How do you determine whether the state or the federal government takes ownership of the tailings site?
- g. Do "agreement states" typically take ownership of tailings sites under their jurisdiction?

### 2. COST OF TAILINGS MAINTENANCE.

Rosenberg states (page 100), "The burden of responsibility over long term maintenance could be a major consideration in a state's determination of whether to accept custody of tailings sites."

- a. Can you help us determine the cost of maintaining a uranium mill tailing site?
- b. Historically, what is the average annual expenditure for owning and maintaining a uranium tailings site?
- c. Has there been political pressure from the U.S. Congress to cut federal appropriations in support of the cost of maintaining uranium mill sites? If so, please describe specifically. What has been the Congressional rationale for reducing these appropriations?

### 3. LICENSEE FINANCIAL SURETY.

Rosenberg states (page 100), "The Act also required 'an adequate bond, surety, or other financial arrangement' be provided by the uranium mill licensee 'to permit the completion of all requirements established by the Commission for the decontamination, decommissioning, and reclamation of sites, structures, and equipment used in conjunction with byproduct material.'"

- a. Have the financial arrangements made by uranium mill licensees under UMTRCA been adequate to cover the costs of maintaining tailings sites?
- b. Are there examples where these financial arrangements have been insufficient to cover the activities required by UMTRCA?
- c. What actions have been taken by the federal government in cases where these financial arrangements have been insufficient?

- d. What actions have been taken by state governments in cases where these financial arrangements have been insufficient?
- e. What have been the ramifications for public health and safety and the environment in cases where these financial arrangements have been insufficient?

#### **4. STATE VS. FEDERAL REGULATION.**

Rosenberg states (pages 100-101), "The Act established a cooperative relationship between the NRC and the Environmental Protection Agency (EPA) regarding the promulgation and enforcement of environmental standards regulating uranium mill tailings at both inactive and active tailings sites. . . . EPA's role is to set standards, not to enforce them. The statute clearly allocates the responsibility for implementing and enforcing the EPA standards to the NRC and to those agreement states that assume control over uranium mill operations."

- a. Please compare and contrast (i) the actions taken by NRC and (ii) actions taken by states to enforce EPA's environmental standards regulation uranium mill tailings. Who, from EPA's perspective, is doing a better job of protecting public health and safety and the environment?

#### **5. ADEQUACY OF ENVIRONMENTAL REVIEW.**

Rosenberg states (page 101), "The Act established certain administrative procedures for licensing and rulemaking with which agreement states licensing uranium milling operations must comply. When a mill license is sought, state law must provide an opportunity for written comments, a public hearing, and a written determination subject to judicial review. In addition, the state must prepare a written analysis of environmental effects for 'each license which has a significant impact on the human environment,' that must be available to the general public prior to the licensing hearing. The state must provide for public participation in rulemaking through either a public hearing or the submission of written comments and for judicial review of any rules. In this manner, Congress sought to ensure that the mill licensing activities and the administrative practices of agreement states would be open to public scrutiny and criticism."

- a. Must an agreement state's environmental impact analysis meet or exceed provisions of the federal process under National Environmental Policy Act (NEPA)?
- b. Must an agreement state's environmental impact analysis require coordination with federal agencies such as U.S. Department of Interior, EPA, U.S. Fish & Wildlife Service, etc.? If not, how do these states provide the equivalent level of environmental coordination and review that would be provided under NEPA?

#### **6. INDUSTRY-FUNDED REGULATION.**

Rosenberg (page 129) discusses the issues that Virginia must consider in becoming an agreement state. It says, "Funding the regulatory system [required as an agreement state] is also a key issue. The legislation should secure financial support for the regulatory system through the imposition of severance taxes and/or permit and licensing fees. This policy would force the regulated industry to bear the expenses of its own governmental regulation and would assure that funds not be diverted from other state purposes."

- a. How do existing agreement states fund their regulatory activities?
- b. Do agreement states utilize severance taxes, permit fees, license fees?
- c. Do agreement states force the uranium milling industry to bear the expenses of its own governmental regulation?
- d. If yes, have there been instances among agreement states in which regulatory staff have become too lax in their enforcement, as a result of their misguided perception that they “owe” their jobs to the mining industry?
- e. What are some of the other outcomes, from EPA's perspective, of mining industry money paying for its own regulation?

Other questions.

#### **7. MILLS IN REMEDIATION.**

What percent of existing uranium mills in the U.S. are currently under a federal or state remediation program to address their release of radioactive contamination in violation of UMTRCA?

#### **8. 100% COMPLIANT MILL SITES.**

The uranium mining/milling industry is current plying the Virginia General Assembly with promises that the industry has, in recent decades, drastically improved the safety of its operations, and that Virginia can be confident that mining/milling operations in our state will be safe. Are there any uranium mills – anywhere in the U.S. – whether currently operational or non-operational, that have never been found in violation of federal or state regulations under UMTRCA?

#### **9. MINING AND MILLING IN FLOOD-PRONE AREAS.**

*Flooding at Coles Hill.* The proposed Coles Hill uranium mine and mill site is in a highly flood-prone area. The South Exploration Area in the proposed Coles Hill uranium mine coincides with a FEMA-designated Flood Zone (please see map at <https://www.box.net/shared/enjzocoua4>). The South Exploration Area also coincides with a historic flooding event on Sept. 30, 2010, recorded by the National Weather Service office in Blacksburg, VA. The Coles Hill area has been on National Weather Service “Flood Watch” and “Flood Warning” several times during the past year.

*IAEA on risk caused by flooding.* In 2004, the International Atomic Energy Agency (IAEA) published the final report of a research project on how its member countries have dealt with the challenges of isolating stored uranium mill tailings from the ambient water and air. The report, titled, “The long term stabilization of uranium mill tailings” is available at:  
[www-pub.iaea.org/MTCD/publications/PubDetails.asp?pubId=7054](http://www-pub.iaea.org/MTCD/publications/PubDetails.asp?pubId=7054).

The following are excerpts from the IAEA report that send an unequivocal message that flooding can compromise efforts to isolate uranium mill tailings from ground and surface waters.

--“*Valley (or gully) containment* (Fig. 6) may no longer be considered to be consistent with best practice, although in steep mountainous terrain there may be few or no alternatives. Valleys naturally are *foci* for concentrated water flow, such that water management is a major challenge, especially effective diversion of extreme flows way from the impoundment. **High**

level flows from flood events and extreme rainfall into the impoundment increase the volume of contaminated water to be dealt with, and are a significant cause of catastrophic dam failure.

--Cover design may consider these factors in a probabilistic approach. Where possible, engineering design intends to prevent such events, but a certain amount of care and maintenance is likely to be inevitable [121]. With recent extreme events of flooding in Europe and elsewhere, long-established design parameters, such as maximum rain intensities and rainfall- function for catchment areas have come under scrutiny.

--There is statistical evidence to support the view that most failures relate to the saturation, liquefaction and rheological characteristics of wet tailings held in dams, and that the risk is much higher during the operational phase. Clearly, water management is a critical issue for risk reduction. Dams can fail after closure, mainly as a result of earthquakes, geotechnical factors, and overland flooding.

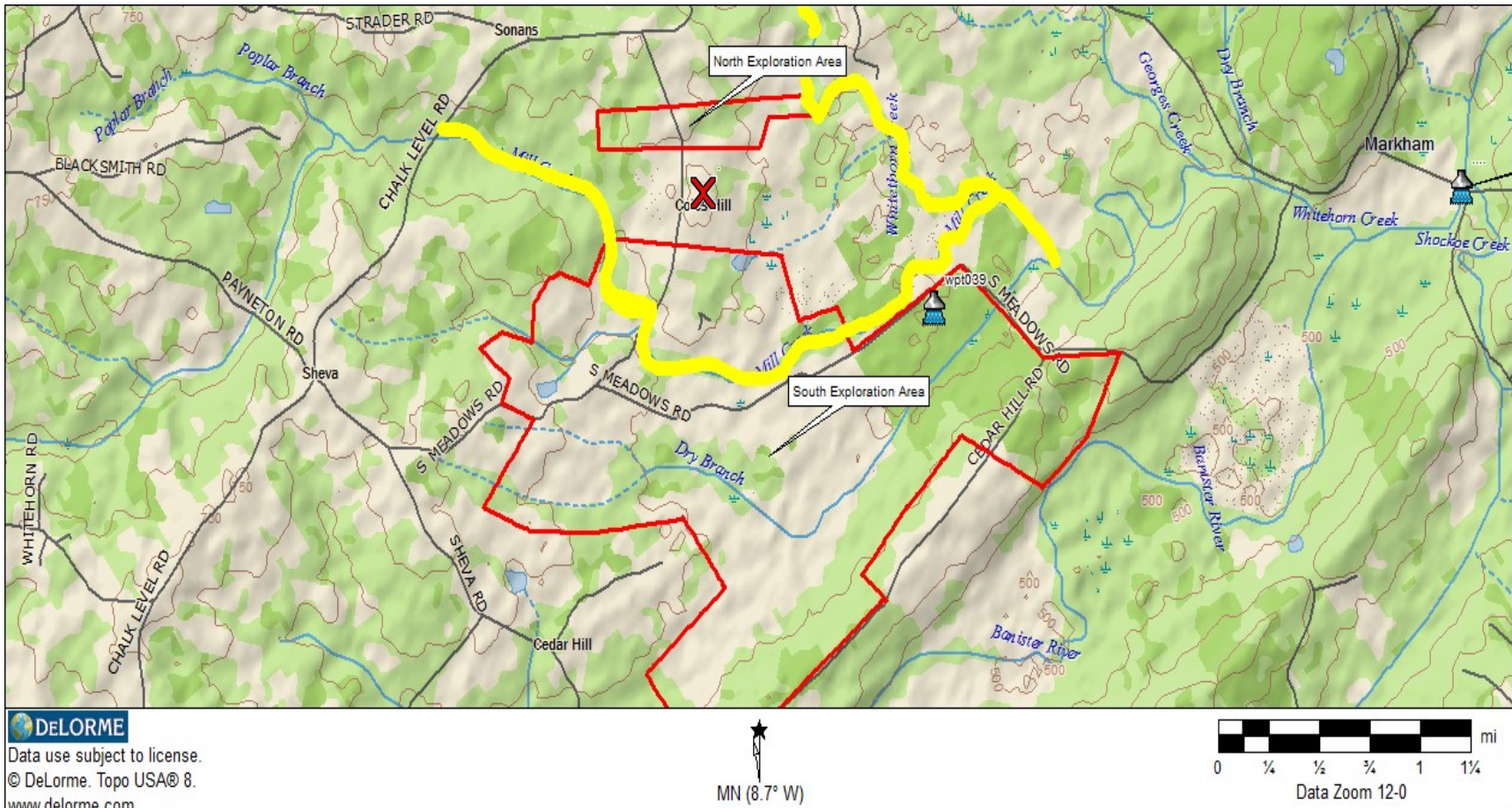
--Dispersal of uranium can take place due to erosion and transport by river waters, chemical dissolution by rain waters and migration into groundwaters, and antropogenically, when mining wastes containing uranium are utilized for construction. Floods may acerbate uranium dispersion.





--A catastrophic flood that took place in Summer 1997 caused rapid erosion and dispersion of the uranium-bearing materials into the Jedlica river valley and stream sediments.”

- a. Are there uranium mills anywhere in the U.S. that have attempted to mill uranium in a FEMA Flood Zone or in an area known to have a history of significant flooding, such as Coles Hill?
- b. If yes, what are the track records of these mines in terms of successful long-term containment of uranium mill tailings?

10. **MINING REGULATION & TENORM.** We understand that Virginia would have jurisdiction over regulation of the mining activities at Coles Hill (as distinct from the regulation of the milling activities, which would be the responsibility of the EPA). However, we also understand that EPA would have some regulatory responsibilities for the mining activities as described in the EPA document, “Technologically Enhanced Naturally Occurring Radioactive Materials From Uranium Mining” (“TENORM”, volumes 1 & 2).

- a. Please discuss the role that EPA would play in regulating the proposed Coles Hill uranium mine.
- b. Which aspects of mine regulation would be delegated to EPA? Which to Virginia?
- c. If the Coles Hill project were to become reality, and if a neighbor near the mine had a complaint about the mine, to which agency would that neighbor's complaint be directed? What laws and regulations would apply?



	denotes Coles Hill residence, located roughly in the center of an area proposed for uranium mining and milling
	denotes flood occurring on 9-30-10, within perimeters of South Exploration Area (source: National Weather Service, Blacksburg, VA)
	denotes FEMA flood zones along Mill and Whitehorn Creeks, within perimeters of North & South Exploration Areas (source: www.fema.gov)
	denotes perimeters of North & South Exploration Areas (source: www.virginiauranium.com)





EPA-1486

Deborah  
Lebow-Aal/R8/USEPA/US  
06/13/2011 03:55 PM

To Tom Peake  
cc Angelique Diaz, Richardv Graham, Reid Rosnick  
bcc  
Subject Re: Fw: Update on Colorado Uranium Mills - Please prepare one-pager

Jim Martin, R8 RA has also asked us to prepare something on this.

Deborah Lebow Aal  
U.S. Environmental Protection Agency  
Region 8 Air Program  
Indoor Air, Toxics, & Transportation Unit  
1595 Wynkoop Street  
Denver, CO 80202  
303 312-6223

Tom Peake

FYI, I have asked Reid to work on this.

06/13/2011 12:01:00 PM

From: Tom Peake/DC/USEPA/US  
To: Deborah Lebow-Aal/R8/USEPA/US@EPA, Angelique Diaz/R8/USEPA/US@EPA  
Cc: Richardv Graham/R8/USEPA/US@EPA, Reid Rosnick/DC/USEPA/US@EPA  
Date: 06/13/2011 12:01 PM  
Subject: Fw: Update on Colorado Uranium Mills - Please prepare one-pager

FYI,  
I have asked Reid to work on this.

Tom Peake  
Director  
Center for Waste Management and Regulations  
US EPA (6608J)  
1200 Pennsylvania Ave, NW  
Washington, DC 20460  
phone: 202-343-9765

Physical Location and for deliveries:  
Room 529  
1310 L St, NW  
Washington, DC 20005

----- Forwarded by Tom Peake/DC/USEPA/US on 06/13/2011 01:57 PM -----

From: Mike Flynn/DC/USEPA/US  
To: Jonathan Edwards/DC/USEPA/US@EPA, Alan Perrin/DC/USEPA/US@EPA  
Cc: Tom Peake/DC/USEPA/US@EPA, Anna Duncan/DC/USEPA/US@EPA  
Date: 06/13/2011 01:47 PM  
Subject: Fw: Update on Colorado Uranium Mills - Please prepare one-pager

Jon/Alan,  
See below - we need to develop one-pager for Bob P. thanks

Mike Flynn, Director  
Office of Radiation and Indoor Air (MC-6601-J)  
U.S. Environmental Protection Agency  
Phone: (202) 343-9320  
Fax: (202) 343-2395

----- Forwarded by Mike Flynn/DC/USEPA/US on 06/13/2011 01:46 PM -----

From: Gina McCarthy/DC/USEPA/US  
To: Mike Flynn/DC/USEPA/US  
Cc: Janet McCabe/DC/USEPA/US, Jim Jones@EPA.GOV, "Don Zinger" <Zinger.Don@EPA.GOV>  
Date: 06/13/2011 01:11 PM  
Subject: Fw: Update on Colorado Uranium Mills

---

Fyi. Looks like we should develop a one-pager for Bob P with cc to Mathy.  
Mathy Stanislaus

----- Original Message -----

**From:** Mathy Stanislaus  
**Sent:** 06/13/2011 12:55 PM EDT  
**To:** Gina McCarthy  
**Cc:** Bob Perciasepe; Lisa Feldt  
**Subject:** Fw: Update on Colorado Uranium Mills

The first issue is an OAR issue. Can you get back to Bob P directly on this. OSWER is checking on the 2nd.

Bob Perciasepe

----- Original Message -----

**From:** Bob Perciasepe  
**Sent:** 06/11/2011 11:24 AM EDT  
**To:** Lisa Feldt; Mathy Stanislaus  
**Subject:** FW: Update on Colorado Uranium Mills

What is your take on this?

Thanks

Bob Perciasepe  
Deputy Administrator  
US EPA  
202 564 4711

----- Forwarded by Bob Perciasepe/DC/USEPA/US on 06/11/2011 11:24:06 AM-----

----- Original Message -----

From : <hilary@sheepmountainalliance.org>  
To : Bob Perciasepe/DC/USEPA/US@EPA, Tom Eagles/DC/USEPA/US@EPA  
Cc : "Travis Stills" <emlc@frontier.net>, "Sharyn Cunningham" <sharyn@bresnan.net>  
Sent on : 06/10/2011 02:55:35 PM  
Subject : Update on Colorado Uranium Mills

Hello Bob and Tom,

You may recall our brief meeting last fall regarding the proposed Pinon Ridge Uranium Mill in SW Colorado and the ongoing contamination at Cotter Corp's Cañon City Uranium Mill, both in Colorado. We again appreciate your time and pledge to help.

As you may be aware, Senator Bennet recently sent a letter to Jim Martin in Denver expressing concern over the permitting process for Piñon Ridge and asking for "careful review of the entire permitting process for the Mill". He reiterated San Miguel County and the Towns of Telluride and Ophir concerns about the radon emissions permitting process. I have attached the letters.

We wanted to give you a brief update from our perspective as the EPA is now directly involved in the permitting for the proposed Piñon Ridge Mill and in ongoing enforcement at Canyon City.

Following your advice from our meeting in DC, I met with Jim Martin in Denver last November. We spoke about the larger issue of the troubling history of the uranium industry in Colorado and the potential for its resurgence and the regulations that would apply. When we started to discuss the NESHAP radon emissions standards that would apply to the recently submitted Pinon Ridge Mill application (subpart W) and the fact that they were being updated, Jim mentioned that he was not directly familiar with the process, but that he had just received a memo from the air division that the strongest standards would apply and that he felt Energy Fuels, the applicant, would not be pleased with the decision as they would be such high standards.

After several requests for public hearings on the NESHAP permitting process from our group as well as regional governments, Region 8 finally agreed to an "informal comment" period after posting the documents related to the pending decision to approve. SMA consulted with 3 technical experts to review the documents. Our environmental and air quality consultant both got back to us with the same comments - **there is not enough technical information to review for either the EPA to make a qualified decision or for us to even comment on.** It seems that instead of the "highest standards" to date the EPA was deferring to the outdated 1989 standards that merely require a tailings disposal site to be no larger than 40 acres. In fact, the 1989 standards were challenged in court in 2008 and a settlement agreement was reached requiring the EPA to immediately initiate a new rulemaking process which would use today's science to ensure compliance with the Clean Air Act. The subpart W rulemaking process has been ongoing for over 2 years and to date there is no posting of technical information on the website.

I have attached our comments recently submitted to Region 8 as well as Administrator Jackson.

Your comment at the end of our meeting was that you "would do your best to bring out the weed wacker and clear the weeds". After meeting with Mr. Martin, I felt confident that EPA oversight into this proposed uranium mill, the first in 25 years in Colorado, would bring severely lacking qualified science and technical expertise into this state run process. And yet here we are with 1989 standards which allow for harmful radon emissions to be released into the air and what seems to be a rubber stamp approval for the first new uranium mill in 25 years promising to continue to harmful legacy of the uranium industry in Colorado, as well as the massive taxpayer responsibility when the operator is allowed to walk away.

We feel we need to fight this proposal with every penny and minute of time we have in order to proactively prevent this legacy from coming back to SW Colorado and we were hopeful that while the State of Colorado seems willing to hold hands with the industry, the EPA would recognize its role in protecting the clean air and environment of SW Colorado.

A similar set of problems continues to plague the uranium mill in Canon City. I've heard from Sharyn Cunningham and CO. Citizens Against Toxic Waste that the State of Colorado and EPA are both stymied by a lack of cooperation by the mill operator, Cotter Corporation/General Atomics. New groundwater plumes of Tetrachloroethylene (TCE) have been documented at the site, but no action is being taken. Cotter is demolishing the mill and dumping the remains into leaking tailings cells, while refusing to monitor and report radon emissions to EPA. On May 3, Cotter asked Colorado to approve a plan to dump 90,000 gallons of contaminated organic solvent into the leaking tailings cells by mixing the solvent with "oil dri" based on the rationale that proper disposal would be too expensive. It is my understanding that neither the Colorado regulators nor EPA's radiation regulators have stepped forward to make the difficult decisions or take enforcement actions necessary to protect the public health and environment from the reckless handling of these dangerous materials.

Both SMA and CCAT have filed legal challenges against the state regarding these mills. In recent weeks the state court allowed both challenges to move forward dismissing state and industry motions to throw them out of court.

From our perspective, it appears that the same problems/attitudes are being carried forward at proposed new mills and the old mills without any government agency stepping forward to protect the environment and the public against an industry that has killed and harmed many people during the 20th Century. Our challenge, and current frustration, is to ensure that this legacy does not carry any further into the 21st Century. Any help you can provide would be greatly appreciated by us and by CCAT.

Thanks again for your time.

Hilary White  
Director  
Sheep Mountain Alliance  
PO Box 389  
Telluride, CO 81435

970-728-3729  - SMCBOCCLtrBennetEPAPermitPinonRidge050411.pdf  -

Bennet\_Pinon\_Ridge.pdf  - C.DTF

# SAN MIGUEL COUNTY

## BOARD OF COMMISSIONERS

ELAINE FISCHER

ART GOODTIMES

JOAN MAY

VIA FACSIMILE

May 4, 2011

The Honorable Michael Bennet  
702 Hart Senate Office Building  
Washington, DC 20510  
Facsimile: 202-228-5036

Dear Senator Bennet:

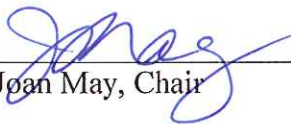
The San Miguel County Board of County Commissioners (BOCC) is appreciative of your interest concerning the licensing process of the proposed Piñon Ridge Uranium Mill in Paradox Valley, Montrose County, Colorado. The BOCC respectfully requests your assistance in writing to the Environmental Protection Agency regarding its 3/7/11 Notice of Intent to Approve the Piñon Ridge Air Permit. The BOCC urges you write a letter to EPA Administrator Evans requesting that the EPA wait and use the updated NESHAP subpart W standards to consider the Piñon Ridge Air Permit.

San Miguel County is concerned that the cumulative impacts on environmental quality that such a facility, and related uranium mining activity, could create are not being addressed in the licensing process. It appears to the County that the Colorado Department of Public Health and Environment, Radiation Program and EPA lack the regulatory jurisdiction to consider the potential cumulative environmental impacts of the proposed mill and related mining activities. The BOCC has submitted comments to the EPA that are enclosed for your review.

Thank you for your gracious consideration and time in reviewing our request for letter and of this issue.

Sincerely,

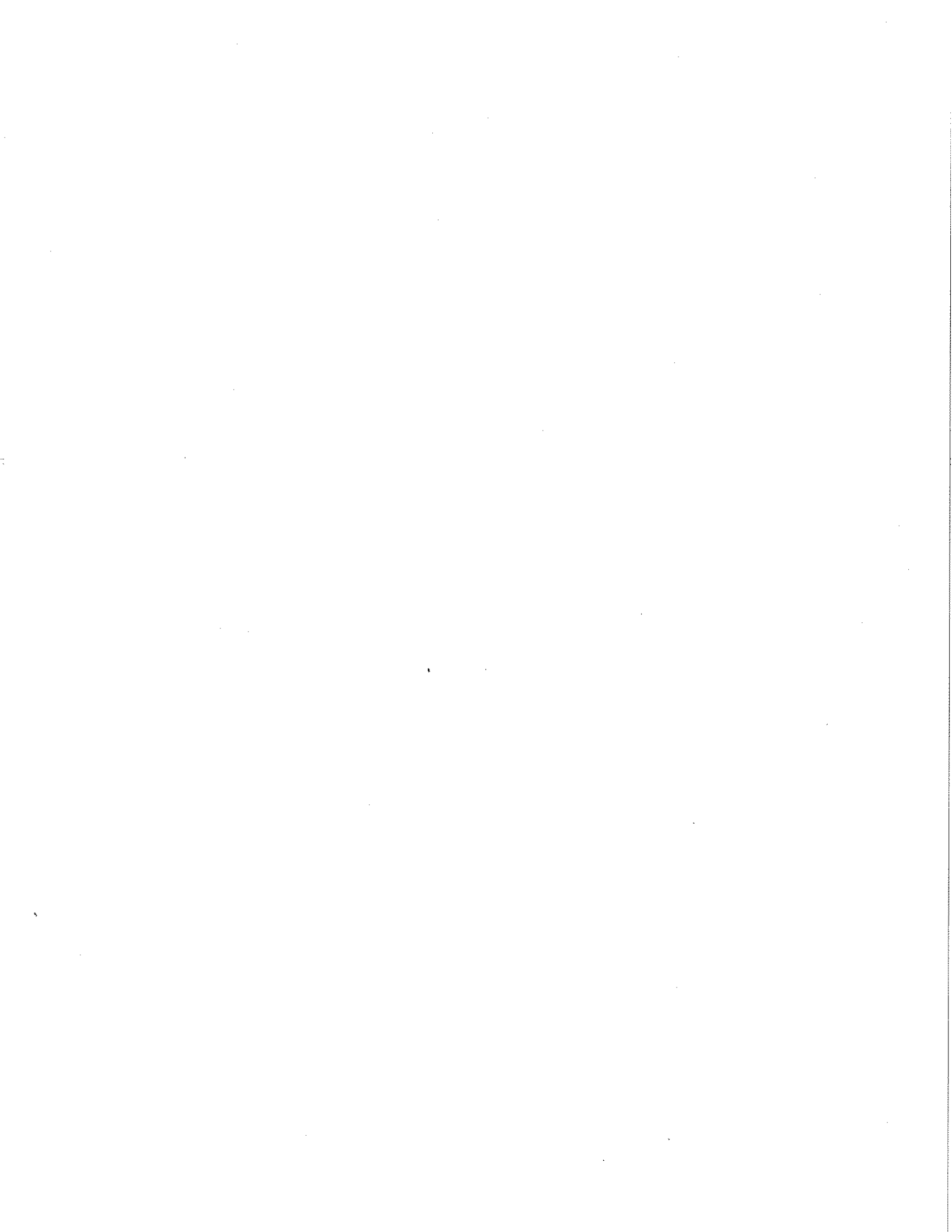
SAN MIGUEL COUNTY, COLORADO  
BOARD OF COUNTY COMMISSIONERS

  
Joan May, Chair

P.O. BOX 1170 • Telluride, Colorado 81435 • (970) 728-3844 • FAX (970) 728-3718

[www.sanmiguelcounty.org](http://www.sanmiguelcounty.org)

5/4/11 Faxed to above





**SAN MIGUEL COUNTY**  
**BOARD OF COMMISSIONERS**

ELAINE FISCHER

ART GOODTIMES

JOAN MAY

VIA EMAIL TO: [lebow-aal.deborah@epa.gov](mailto:lebow-aal.deborah@epa.gov)

April 18, 2011

Deborah Lebow-Aal  
Acting Director EPA Region 8 Air Program  
U.S. Environmental Protection Agency  
Attn. Air Program, Indoor Air, Toxics and Transportation Unit, 8P-AR  
1595 Wynkoop Street  
Denver, CO 80202

Dear Ms. Lebow-Aal

Re: Piñon Ridge Uranium Tailings Facility and Evaporation Pond  
03/07/11 - Notice of Intent to Approve, 40 C.F.R. Part 61, Subpart W  
San Miguel County, Colorado - Comments

The Towns of Telluride and Ophir (collectively the "Town") and the San Miguel County Board of County Commissioners ("County" or "BOCC") appreciate the Environmental Protection Agency ("EPA") providing an informal public review/comment period for its Notice of Intent to grant construction approval for the proposed Piñon Ridge Tailings Facility and Evaporation Pond. As you may be aware the Piñon Ridge proposal to construct a uranium processing mill in the Paradox Valley located in west Montrose County, has been highly controversial among both Town and County residents. Numerous Town and County residents and local organizations have actively participated in both the Colorado Department of Public Health and Environment ("CDPHE") licensing process and the Montrose County land use process. During these proceedings, both the Town and County have repeatedly emphasized the need for the state and federal regulatory agencies with jurisdiction over the proposed Piñon Ridge Uranium Mill to consider the cumulative impacts on environmental quality that such a facility, and related uranium mining activity, could create should it become operational. It is the Town and the County's considered position that the licensing process for the proposed Piñon Ridge Uranium Mill appears to be fundamentally flawed since neither the CDPHE nor EPA apparently has the regulatory jurisdiction to consider the potential cumulative environmental impacts of the proposed mill and related mining activities.

From our review of the EPA's "Background Information for Intent to Approve - 3/07/11" regarding the above referenced facility it appears that the EPA's review has been narrowly focused on analyzing the predicted radon emissions from Mill's proposed Tailings Facility and Evaporation Pond under Subpart W - National Emission Standards for Radon Emissions from Operating Mill Tailings, 40 C.F.R., Part 61, as currently enacted. Neither that regulation, nor the





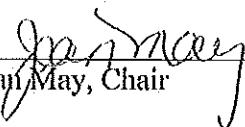
EPA's Notice of Intent to Approve the proposed facility, appear to address the scientific basis for the "Standard" regarding the size limitations for such facilities in 40 C.F.R. §61.252, as well as the construction, operations, and closure standards for such facilities in 40 C.F.R. Subpart D, §192.31. It is our understanding that your Agency entered into a litigation Settlement Agreement in August 2009 in which it committed to a process that was intended to result in a revised and updated Subpart W standard. Since it does not appear that the EPA has adopted such a revised and updated Subpart W standard as provided for in the Settlement Agreement, it would be inappropriate for the EPA to act on the pending Construction Approval until an updated Subpart W standard has been promulgated.

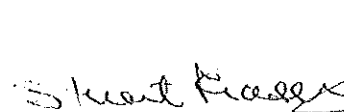
As Colorado is an Agreement State for purposes of Subpart D compliance, it appears that CDPHE may have the regulatory discretion to amend certain aspects of the EPA's Approval under Subpart D, without consulting with, or obtaining approval from, the EPA. Should the EPA proceed to finalize its Construction Approval based upon the current Subpart W standard, we intend to request that the CDPHE review such action under its Subpart D authority.

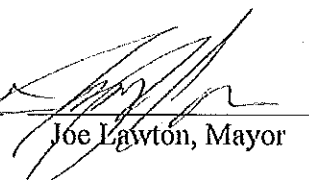
Both the Town and County appreciate the "Approval Provisions" requirements set forth in your Agency's "Background Information for Intent to Approve." In view of CDPHE's dominant role in the uranium mill regulatory process, with limited oversight by the Nuclear Regulatory Commission and the EPA, and given the issuance of the final Colorado Radioactive Materials License Number Colo. 1170-01 on March 7, 2011, by the Radioactive Materials Unit, Hazardous Materials and Waste Management Division, the Town and the BOCC reiterate their position that the EPA should remain actively involved in the Piñon Ridge Uranium Mill licensing process. Consistent with the EPA's regulatory jurisdiction in this matter, the Town and the County consider it imperative that your agency remain actively involved in overseeing the proposed Piñon Ridge Mill facility should it be constructed and become operational. Your attention to this matter is appreciated.

Very truly yours,

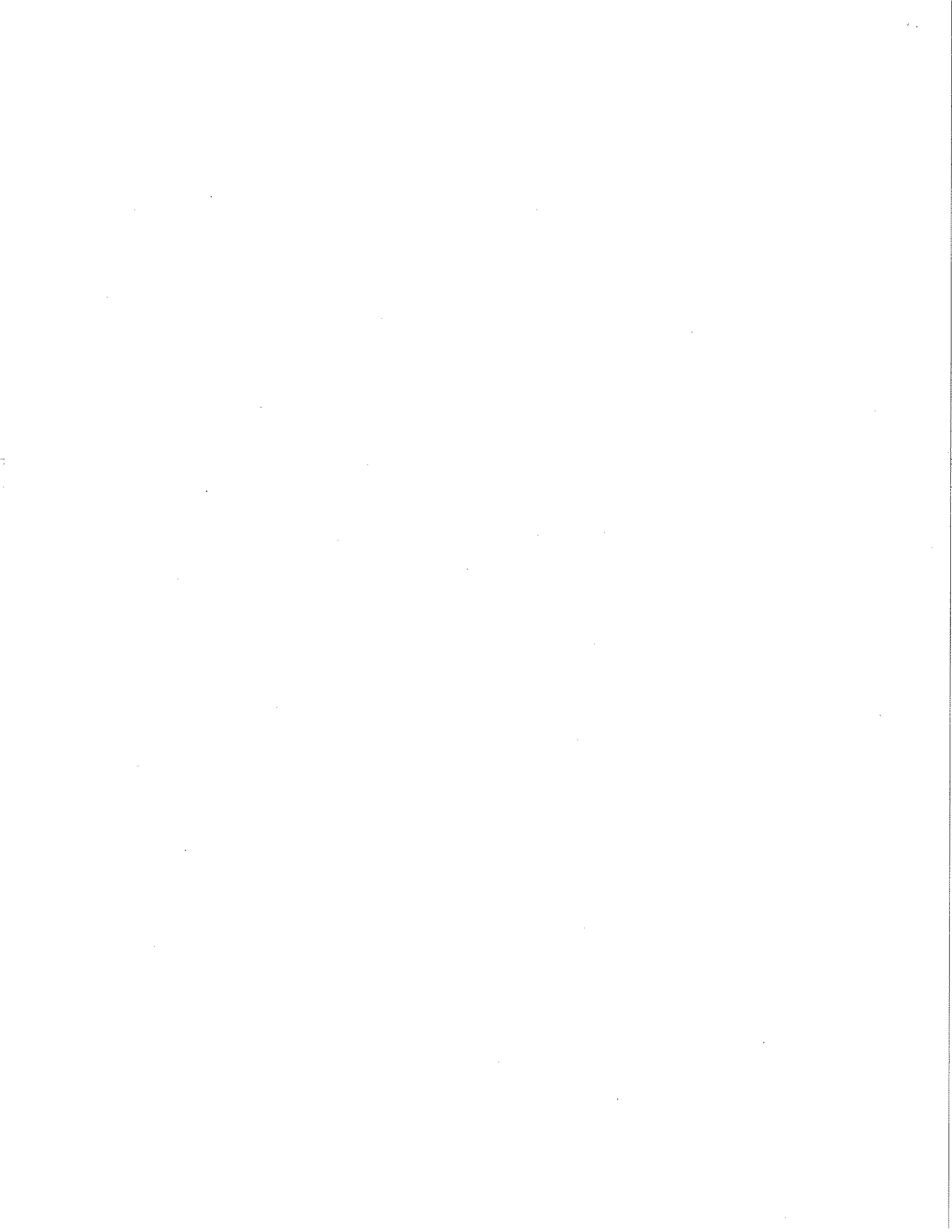
SAN MIGUEL COUNTY, COLORADO    TOWN OF TELLURIDE    TOWN OF OPHIR  
BOARD OF COMMISSIONERS

  
Joan May, Chair

  
Stuart Fraser, Mayor

  
Joe Lawton, Mayor

Pc.    CDPHE Radioactive Materials Unit, Hazardous Materials and Waste Management Div.  
Jim Martin, Regional Administrator, EPA Region 8  
Christopher E. Urbina, MD, MPH, CDPHE Executive Director – Chief Medical Officer  
Stuart Fraser, Mayor, Town of Telluride  
Joseph Lawton, Mayor, Town of Ophir  
Montrose County BOCC



MICHAEL F. BENNET  
COLORADO

COMMITTEES:  
AGRICULTURE, NUTRITION, AND FORESTRY

BANKING, HOUSING, AND  
URBAN AFFAIRS

HEALTH, EDUCATION, LABOR,  
AND PENSIONS

SPECIAL COMMITTEE ON AGING

## United States Senate

WASHINGTON, DC 20510-0609

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(202) 224-5852

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2300 15TH STREET  
SUITE 450  
DENVER, CO 80202  
(303) 455-7600

<http://www.bennet.senate.gov>

May 13, 2011

Jim Martin, Regional Administrator  
U.S. EPA Region 8  
1595 Wynkoop St.  
Denver, CO 80202-1129

Dear Administrator Martin,

I am writing regarding the proposed Pinon Ridge Uranium Mill, to be located in the Paradox Valley outside of Naturita, CO.

In addition to the concerns outlined in the enclosed letter from local governments, I've heard from Coloradans worried about the potential for toxic effects that uranium mining could have in this particular region. They have pointed to the nearby Uravan Mill as an example. As you know, the Uravan Mill is on your agency's Superfund cleanup list because EPA worries hazardous releases from the site may endanger public health, welfare or the environment. Beyond the adverse environmental impacts, that facility has also cost \$120 million in American taxpayer dollars to remediate.

Concerned citizens also point out that EPA needs to be especially mindful of the adverse health effects that past uranium booms had on workers. The federal *Radiation Exposure and Compensation Act* has provided federal benefits to thousands of individuals – Coloradans who became sick and many who died – through their work mining uranium for our Cold War weapons programs. These workers and their families have faced a difficult bureaucracy in seeking compensation for their injuries - some of which may have been preventable with more effective regulation. In my capacity as Senator, I continue to fight for those suffering from injuries by working with other Senators from the West to pass the *Charlie Wolf Nuclear Compensation Act* and *Radiation Exposure Compensation Act Amendments*.

For the reasons outlined above, I support careful EPA oversight of the entire permitting process and any subsequent operation of this mill. Any and all EPA analysis needs to ensure a safe, environmentally-responsible and balanced approach to the potential development of this natural resource.

While the permitting for the mill is being handled in large part by the Colorado Department of Public Health and Environment (CDPHE), I'd like to convey the concerns of many Coloradans about the actions EPA has taken to date and to respectfully ask for your full and thoughtful considerations of their perspective. Hopefully the enclosed letter from the San Miguel Board of County Commissioners and the towns of Telluride and Ophir is helpful to that end. Please keep

my office apprised of your responses to these towns and to the county commissioners and of all future EPA actions to address the issues they raise.

Thank you for your good work to protect the health of Coloradans.

Sincerely,

A handwritten signature in blue ink, appearing to read "Michael F. Bennet". The signature is fluid and cursive, with a distinct loop at the end.

U.S. Senator Michael F. Bennet

CC: Deborah Lebow- Aal, Acting Director, U.S. EPA Region 8 Air Program

CC: Martha Rudolph, Director of Environmental Programs, CDPHE



**SAN MIGUEL COUNTY**  
**BOARD OF COMMISSIONERS**

---

ELAINE FISCHER

ART GOODTIMES

JOAN MAY

---

VIA EMAIL TO: [lebow-aal.deborah@epa.gov](mailto:lebow-aal.deborah@epa.gov)

April 18, 2011

Deborah Lebow-Aal  
Acting Director EPA Region 8 Air Program  
U.S. Environmental Protection Agency  
Attn. Air Program, Indoor Air, Toxics and Transportation Unit, 8P-AR  
1595 Wynkoop Street  
Denver, CO 80202

Dear Ms. Lebow-Aal

Re: Piñon Ridge Uranium Tailings Facility and Evaporation Pond  
03/07/11 - Notice of Intent to Approve, 40 C.F.R. Part 61, Subpart W  
San Miguel County, Colorado - Comments

The Towns of Telluride and Ophir (collectively the "Town") and the San Miguel County Board of County Commissioners ("County" or "BOCC") appreciate the Environmental Protection Agency ("EPA") providing an informal public review/comment period for its Notice of Intent to grant construction approval for the proposed Piñon Ridge Tailings Facility and Evaporation Pond. As you may be aware the Piñon Ridge proposal to construct a uranium processing mill in the Paradox Valley located in west Montrose County, has been highly controversial among both Town and County residents. Numerous Town and County residents and local organizations have actively participated in both the Colorado Department of Public Health and Environment ("CDPHE") licensing process and the Montrose County land use process. During these proceedings, both the Town and County have repeatedly emphasized the need for the state and federal regulatory agencies with jurisdiction over the proposed Piñon Ridge Uranium Mill to consider the cumulative impacts on environmental quality that such a facility, and related uranium mining activity, could create should it become operational. It is the Town and the County's considered position that the licensing process for the proposed Piñon Ridge Uranium Mill appears to be fundamentally flawed since neither the CDPHE nor EPA apparently has the regulatory jurisdiction to consider the potential cumulative environmental impacts of the proposed mill and related mining activities.

From our review of the EPA's "Background Information for Intent to Approve - 3/07/11" regarding the above referenced facility it appears that the EPA's review has been narrowly focused on analyzing the predicted radon emissions from Mill's proposed Tailings Facility and Evaporation Pond under Subpart W - National Emission Standards for Radon Emissions from Operating Mill Tailings, 40 C.F.R., Part 61, as currently enacted. Neither that regulation, nor the

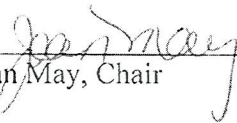
EPA's Notice of Intent to Approve the proposed facility, appear to address the scientific basis for the "Standard" regarding the size limitations for such facilities in 40 C.F.R. §61.252, as well as the construction, operations, and closure standards for such facilities in 40 C.F.R. Subpart D, §192.31. It is our understanding that your Agency entered into a litigation Settlement Agreement in August 2009 in which it committed to a process that was intended to result in a revised and updated Subpart W standard. Since it does not appear that the EPA has adopted such a revised and updated Subpart W standard as provided for in the Settlement Agreement, it would be inappropriate for the EPA to act on the pending Construction Approval until an updated Subpart W standard has been promulgated.

As Colorado is an Agreement State for purposes of Subpart D compliance, it appears that CDPHE may have the regulatory discretion to amend certain aspects of the EPA's Approval under Subpart D, without consulting with, or obtaining approval from, the EPA. Should the EPA proceed to finalize its Construction Approval based upon the current Subpart W standard, we intend to request that the CDPHE review such action under its Subpart D authority.

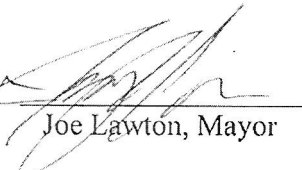
Both the Town and County appreciate the "Approval Provisions" requirements set forth in your Agency's "Background Information for Intent to Approve." In view of CDPHE's dominant role in the uranium mill regulatory process, with limited oversight by the Nuclear Regulatory Commission and the EPA, and given the issuance of the final Colorado Radioactive Materials License Number Colo. 1170-01 on March 7, 2011, by the Radioactive Materials Unit, Hazardous Materials and Waste Management Division, the Town and the BOCC reiterate their position that the EPA should remain actively involved in the Piñon Ridge Uranium Mill licensing process. Consistent with the EPA's regulatory jurisdiction in this matter, the Town and the County consider it imperative that your agency remain actively involved in overseeing the proposed Piñon Ridge Mill facility should it be constructed and become operational. Your attention to this matter is appreciated.

Very truly yours,

SAN MIGUEL COUNTY, COLORADO    TOWN OF TELLURIDE    TOWN OF OPHIR  
BOARD OF COMMISSIONERS

  
Joan May, Chair

  
Stuart Fraser, Mayor

  
Joe Lawton, Mayor

Pc.    CDPHE Radioactive Materials Unit, Hazardous Materials and Waste Management Div.  
Jim Martin, Regional Administrator, EPA Region 8  
Christopher E. Urbina, MD, MPH, CDPHE Executive Director – Chief Medical Officer  
Stuart Fraser, Mayor, Town of Telluride  
Joseph Lawton, Mayor, Town of Ophir  
Montrose County BOCC



## Energy Minerals Law Center

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April 18, 2011

by email (pdf) attachment

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**RE: Comment on Proposed Clean Air Act Approval of Incomplete Plan to Control Hazardous Radon Emissions from Uranium Milling of Ore Mined from Federal Public Lands in Western Colorado's Canyon Country**

**Dear Administrator Jackson, Regional Director Martin, Ms. Lebow-Aal,**

These comments are submitted on behalf of Sheep Mountain Alliance ("SMA") and Colorado Citizens Against ToxicWaste ("CCAT") to address Energy Fuel Resources' ("Energy Fuels") request that the Environmental Protection Agency ("EPA") approve its plans to construct and operate a uranium tailings pile at the proposed uranium mill in the Paradox Valley of western Colorado. Careful attention and leadership by EPA is requested to ensure that the inadequate regulation of uranium tailings that has plagued the 70 year existence of the uranium mining and milling industry is not again repeated in Colorado.



## 1. Introduction and Summary

These comments address the first new conventional uranium mill that has been reviewed by EPA since the 1980s. Unfortunately, the review and proposed approval is being conducted by EPA Region 8 staff under Clean Air Act regulations (“NESHAP”) that were promulgated in 1989. 40 C.F.R. Part 61. Despite the requirements of the Clean Air Act Amendments of 1990 that the NESHAP regulations be modernized, the 1989 regulations that concern operating uranium mills (“Subpart W”) still contemplate that uranium tailings be dumped without protections provided by numeric emissions limits, monitoring requirements, or state-of-the art technologies that could minimize the radon emissions from the tailings piles. 40 C.F.R. 61.20 *et seq.* Despite the settlement of a lawsuit in 2009, the relevant regulations have not been subjected to review for compliance with the Clean Air Act and no technical inquiries have been made by EPA despite the 2009 settlement. *See* Exh 1 Rulemaking website, <http://www.epa.gov/radiation/neshaps/subpartw/rulemaking-activity.html>.

Although the informal public comment period is appreciated for EPA’s proposed action on the Energy Fuels Application, EPA’s Air and Radiation Division recommended approval is made under the erroneous conclusion that federal law prevents the preparation of a National Environmental Policy Act (“NEPA”) analysis of the uranium mill. *See* EPA-PINR013 (“However, we will not be conducting a NEPA review, since EPA has no authority to conduct a review given that there is no federal action that would trigger requirements.”). Yet, there is no indication that any other division of EPA with experience implementing interdisciplinary and public participation requirements of NEPA was consulted recently, despite longstanding problems with implementation of Subpart W by the Air and Radiation Division. Exh. 2 (Email string of November 2007).

To the contrary, EPA is not faced with any prohibition against conducting a NEPA process. Instead, EPA has power and authority to initiate a NEPA analysis to assist its decisionmaking.

Agencies may prepare an environmental assessment on any action at any time in order to assist agency planning and decisionmaking.

40 C.F.R. § 1501.3(b). Whether or not the multiple levels of federal involvement and approvals in the uranium mining and milling complex in the Uravan Mineral Belt *requires* a NEPA process is addressed below. However, as a practical matter, even Energy Fuels consultants’ recognize the benefit of a NEPA analysis when relying on NEPA documents as a source of information for their application. Golder Associates Report at 9 *citing* ((NRC) NUREG-0706 “Final Generic EIS on Uranium Milling” (NRC, 1980; Table 5.3)). It is notable that Energy Fuels’ consultants rely on studies conducted in the early 1980s that are limited to pre-Three Mile Island science, monitoring capabilities, emissions control technologies. *See also* Exh 1 [Subpart W Rulemaking Website](#) (links to EPA-prepared EIS’s prepared in 1989 to assess risks associated with uranium tailings). Also, much could be gained by using the NEPA process to examine lessons still being learned at the nearby DOE-maintained uranium tailings cells (esp. Naturita, Montecello, Slickrock, Durita), the still-licensed tailings facilities at Uravan and Cañon City, Colorado, and the Utah-licensed tailings facility some eighty miles to the southwest near White Mesa, Utah.

There is no question that EPA has the ability and legal power to take a leadership role in conducting an open, inclusive, and interdisciplinary NEPA analysis of the impacts to the human environment that emanate from constructing a mill with the sole purpose of milling uranium into yellowcake from mines operated on federal public lands. Based on the segmented, outdated, and incomplete NEPA analyses that has been prepared to date, EPA should not approve the Energy Fuels request until a single NEPA document has been prepared to identify environmental impacts and the cumulative effects of reviving the federal uranium complex in the Uravan Mineral Belt. Such an EIS would be done in conjunction with the Bureau of Land Management and Department of Energy, since both have ongoing jurisdiction and control over the mines that would feed the mill. Importantly, the Department of Energy has potential jurisdiction and control as the eventual recipient of title to the uranium mill tailings for perpetual control. Also, the Nuclear Regulatory Commission retains jurisdiction to address radiological emergencies at the mill, including potential terrorist threats involving yellowcake. Despite the deep involvement of multiple federal agencies, to date, the impacts of this uranium mill has not been revealed in accordance with the “hard look” and public participation mandates of NEPA. EPA should exercise its environmental leadership role and remedy this ongoing problem.

As part of a settlement agreement between CCAT and EPA concerning the failure to update the Subpart W regulations in accordance with the Clean Air Act Amendments of 1990, EPA has hired a consultant to review emissions technologies cost estimates, both of which have changed since 1989. *See* Exh. 1 [Subpart W Rulemaking Website](#), Work Plan for Risk Assessments. Due to the recognized lack of current information on health risks, control technologies, and costs in the work plan, EPA action on the Energy Fuels application is premature until EPA has satisfied the 1990 Congressional mandate to review and conform the 1989 NESHAP regulations to the Clean Air Act standards applicable to hazardous air pollutants.

Although the EPA’s administrative record does not contain the type of information and detail necessary to support a decision to approve the construction of the first conventional uranium mill in the post-Three Mile Island era, these comments will focus on publicly available information, the need to require current information and analysis, and the need to update existing regulations to address the hazardous air pollution, particularly radon, that will be emitted from the uranium tailings pile and uranium mines during all phases of operations, closure, and perpetual care.

## **2. Background**

SMA is a grassroots citizen organization dedicated to the preservation of the natural environment in the Telluride Region and Southwest Colorado, including the remote West End of Montrose County. The uranium mill and tailings facility that is proposed for the Paradox Valley is located at the far end of Montrose County and equal driving distance (approximately 70 miles) from the towns Telluride and Montrose. The Facility is sited 7 miles upgradient from the town of Bedrock, Colorado and the Dolores River, which runs across the Paradox Valley. Many of SMA’s members live downwind of the proposed facility.

SMA works in a variety of local, state, and federal forums to promote and protect the health of regional ecosystems, wildlife habitats, watersheds, a sense of community, quality of life, and a diverse and sustainable local economy. SMA members live and own property in the Paradox

Valley and SMA actively engages regulatory processes on behalf of its members, whose property interests, interests in avoiding impacts of toxic and radioactive emissions, and interest in the existing agricultural character of the Paradox Valley have been adversely impacted and will be adversely impacted by uranium milling and tailings disposal.

CCAT is a Cañon City, Colorado-based local volunteer grass roots organization formed in 2002 in response to ongoing and substantial radioactive and heavy metal groundwater and surface contamination caused by the Cotter Corporation Cañon City, Colorado uranium milling facility. The organization is a diverse volunteer group of educators, business professionals, health care workers, business owners, county and state employees, retirees, homemakers, students and others.

Among other activities, CCAT works to ensure laws and regulations at the local, state, and federal level are adopted and implemented in a manner that ensures the problems in Cañon City are not repeated at other communities. The EPA is currently reviewing its regulatory program due to the successful settlement of a lawsuit brought by CCAT in 2008 concerning emissions of radon – a hazardous air pollutant – from uranium mill tailings piles. CCAT and its members live and recreate near both the Cotter Mill in Cañon City and the proposed Energy Fuels mill in the Paradox Valley.

The WISE Uranium website, which is relied upon heavily as the scientific basis for Energy Fuels application and EPA's approval, provides a readable overview of the type of tailings that would be produced by the proposed Energy Fuels uranium mill.

The amount of sludge produced is nearly the same as that of the ore milled. At a grade of 0.1% uranium, 99.9% of the material is left over. Apart from the portion of the uranium removed, the sludge contains all the constituents of the ore. As long lived decay products such as thorium-230 and radium-226 are not removed, the sludge contains 85% of the initial radioactivity of the ore. Due to technical limitations, all of the uranium present in the ore can not be extracted. Therefore, the sludge also contains 5% to 10% of the uranium initially present in the ore.

In addition, the sludge contains heavy metals and other contaminants such as arsenic, as well as chemical reagents used during the milling process.

Mining and milling removes hazardous constituents in the ore from their relatively safe underground location and converts them to a fine sand, then sludge, whereby the hazardous materials become more susceptible to dispersion in the environment. Moreover, the constituents inside the tailings pile are in a geochemical disequilibrium that results in various reactions causing additional hazards to the environment. For example, in dry areas, salts containing contaminants can migrate to the surface of the pile, where they are subject to erosion. If the ore contains the mineral pyrite ( $\text{FeS}_2$ ), then sulfuric acid forms inside the deposit when accessed by precipitation and oxygen. This acid causes a continuous automatic leaching of contaminants.

Radon-222 gas emanates from tailings piles and has a half life of 3.8 days. This may seem short, but due to the continuous production of radon from the decay of radium-226,

which has a half life of 1600 years, radon presents a longterm hazard. Further, because the parent product of radium-226, thorium-230 (with a half life of 80,000 years) is also present, there is continuous production of radium-226. (view Uranium decay series)

After about 1 million years, the radioactivity of the tailings and thus its radon emanation will have decreased so that it is only limited by the residual uranium contents, which continuously produces new thorium-230.

EPA's own published documents recognize the serious human threats to human health and the environment posed by uranium tailings. *Technologically Enhanced Naturally Occurring Radioactive Materials From Uranium Mining Volume 1: Mining and Reclamation Background (PDF)* [EPA 402-R-08-005] April 2008 (*esp.* Chap 4). This EPA report confirms that "Radium-226, thorium-230, and radon-222 (gas), and their decay products are the radionuclides present in uranium mill tailings that are of principal concern to human health and the environment." *Id.* at 4-14. It also confirms EPA's ongoing roles and responsibilities are not limited to radon emissions.

EPA has the responsibility to establish standards for exposure of the public to radioactive materials originating from mill tailings and for cleanup and control standards for inactive uranium tailings sites and associated vicinity areas, as well as operating sites. EPA's regulations in 40 C.F.R. 192 apply to remediation of such properties and address emissions of radon, as well as radionuclides, metals, and other contaminants into surface and groundwater.

*Id.* The 2008 EPA report recognizes that the impacts from mining and milling are so interdependent that they are usually considered together as linked sources of contamination. *Id.*

At the time these comments were submitted, multiple violations of the Clean Air Act reporting requirements for radon emissions can be identified at mines near the proposed mill should EPA provide necessary support and resources to its enforcement division. For example, Cotter Corporation has suspended radon flux monitoring and reporting at the Cañon City mill, despite ongoing disposal of 11e2 byproduct material into the tailings impoundments during demolition activities. As recently as April 5, 2011, the Mine Safety Health Administration executed a spot inspection at Energy Fuels' Whirlwind Mine and issued violations under 30 C.F.R. § 57.5040(b) involving requirement to "calculate and record complete individual exposures to concentrations of radon daughters." By contrast, EPA has not taken any steps to regulate radon emissions from the Energy Fuels mines or other federal uranium mines that would supply the mill, despite the approval and monitoring requirements involving NESHAP Subpart B.

The EPA has the opportunity and regulatory power to prevent the problems with government secrecy, unabated violations, and inadequate regulation from being brought forward into the purported revival of uranium mining connected to the Energy Fuels proposal. Uranium milling is an inherently dangerous activity involving the hazardous air pollutant radon, which is regulated by EPA at both the mill under NESHAP Subpart W and the adjacent and nearby mines under NESHAP Subpart B.

In sum, EPA has considerable authority and regulatory duties to implement the necessary standards and procedures to address and halt the repeated cycle of tragedy and unabated pollution that has plagued the uranium mining and milling industry.

### **3. The Subpart W Regulation of Radon Emissions from Uranium Mills, As Applied, Does Not meet the Clean Air Act Mandates and Standards**

Radon emissions from uranium mill tailings has been identified as type of air pollution which is reasonably anticipated to result in an increase in mortality or an increase in serious irreversible, or incapacitating reversible, illness. 42 U.S.C. § 7412 (a) (1) (1982) *see also* 54 Fed. Reg. 9612 (March 7, 1989). Recognizing both the hazards and the inadequacy of existing regulations, the Clean Air Act Amendments of 1990 required EPA to review the old regulations to ensure that the standards for controlling radon achieves the maximum degree of reduction in emissions of the hazardous air pollutants. As the Senate Committee Report stated in 1989,

The [air toxics] law has worked poorly. In 18 years, EPA has regulated only some sources of only seven chemicals. ...The legislation reported by the Committee would entirely restructure the existing law, so that toxics might be adequately regulated by the Federal Government.

S. REP. NO. 101-228, at 128 (1989).

The 1989 regulations applicable to radon emissions are known as NESHAP Subpart W. 40 C.F.R. §61.250 *et seq.* Similar regulation of radon emissions of the nearby uranium mines is known as NESHAP Subpart B. 40 C.F.R. §61.20 *et seq.* Technical amendments to the regulation of radon emissions from uranium mine were made in 2000, without subjecting the regulation itself to the full review required by the 1990 CAA Amendments. 54 FR 51694, Dec. 15, 1989, *as amended* at 65 FR 62151, Oct. 17, 2000. Despite litigation and a settlement agreement in 2009, the Clean Air Act regulations applicable to the uranium complex in western Colorado remains outmoded. *CCAT v. Jackson*, 08cv1787 (Colorado Federal District Court). As a result, the same NESHAP regulations that Congress deemed to have “worked poorly” remain unchanged in the face of increased interest in mining and processing federal uranium ore into privately held yellowcake.

Now, more than 20 years later, instead of dedicating resources to diligently comply with the Congressional mandate, EPA Region 8 recommends approval of the construction of a uranium tailings facility on the basis of the 1989 regulatory scheme deemed inadequate by Congress. Boiled down, the recommendation requires bare reliance on this outdated regulation without actually examining whether the size limitation actually reduces radon emissions in a manner that meets applicable Clean Air Act standards.

The Subpart W regulations have been under review for two years based on a 2009 settlement of the Subpart W lawsuit based, in part, on the ongoing impacts to the residents of Cañon City, Colorado living near the uranium mill in Cañon City, Colorado . However, review of whether the outmoded regulations meet the statutory criteria is ongoing with no recent technical information released for public review. Exh. 1 Subpart W Regulation Website. The EPA review of the Energy Fuels proposal cannot ignore whether or not the Energy Fuels proposal achieves “the

maximum degree of reduction in emissions of the hazardous air pollutants” or any other standard that is mandated by the Clean Air Act, as amended in 1990, or as it existed before the 1990 Amendments. In short, reliance on the work-practice standard in the defunct 1989 regulations does not provide a lawful basis to conduct a review or approval of whether or not the Clean Air Act requirements applicable to hazardous air pollutants have been met by the Energy Fuels proposal.

Without support of lawful regulations, making a site-specific determination for the Energy Fuels project may seem like an attractive alternative. However, an *ad hoc* approach to hazardous air pollution limits would be neither wise nor appropriate as 42 USCS § 7412 has been long understood to prohibit regulation of hazardous emissions on case-by-case basis.

While expressing no view whether or not Energy Fuels may have legal remedies against the delay resulting from EPA’s failure to exercise utmost diligence in updating the Subpart W regulations, any delays suffered by Energy Fuels in 2011 cannot outweigh the EPA mandate to provide protections required by the NESHAP provisions of the Clean Air Act Amendments of 1990. EPA’s decision to give a low priority to the promulgation of effective NESHAP regulations has been recently rejected by the federal courts in a similar context: "It is emphatically not within an agency's authority to set regulatory priorities that clearly conflict with those established by Congress." *Sierra Club v. Jackson*, 2011 U.S. Dist. LEXIS 5316, 30-32 (D.D.C. 2011). The margin of safety required by the Clean Air Act must be prioritized and satisfied by adopting regulations before the EPA may take action to approve Energy Fuels’ inadequate and incomplete application

#### **4. The Tailings Cell Design is Incomplete and Inadequate**

EPA Region 8 has based its review on a tailings cell design based on an August 2010, that was harshly criticized as incomplete and deficient by the Colorado Department of Public Health and Environment. During the Colorado radioactive materials licensing proceeding, which did not allow meaningful public participation, no consideration was given to the handling of heavy metals at the tailing cells, even though the varied heavy metals pose a difficult, and sometimes divergent, set of challenges than is posed by handling the radioactive constituents, including radon. Other shortcomings were identified by the CDPHE after August 2010 that are not reflected in the EPA’s administrative record. *See* Exh. 3 (Screenshot)

<http://www.cdph.state.co.us/hm/rad/rml/energyfuels/postap/10docs/index.htm>

The application segments the EPA review into a single 30.5 acre tailings pile (“Cell A”) with a capacity of holding approximately 2.54 million tons of tailings. This cell is sufficient to contain between 7 and 13 years of tailings production of the estimated 40 year operating life, depending on whether the mill is operated at the currently-approved 500 tons per day, the intended production rate of 1000 tons of ore per day, or the actual capacity of the 1500 ton per day SAG mill. The application ignores Cells B and C, except to say that excavated materials from these cells will be necessary for the reclamation and closure of Cell A. The 11e2 Byproduct Material (tailings) in the evaporation ponds similarly mentioned, but detailed design, engineering, operations, and monitoring plans are not provided in the EPA administrative record. Instead, the materials rely heavily on conceptual plans that do not provide a rational basis for EPA review or approval.

For example, the August 2010 application talks about a delivery system, but the delivery apparatus that would transport the tailings from the mill to placement in the open tailings cell had not been designed even in November 2010.

*Comment 10 – What is the wall thickness of each of the proposed pipelines?*

The tailings pipeline wall thickness will be determined during detailed design. The final design engineering firm will undertake a study to determine the best tailings pipeline design based on capital cost, operating cost, pipeline wear, and transitioning from Tailings Cell A to B and then from Cell B to C. The tailings pipeline system will operate at the lowest pipeline system pressure when Cell A is filling and at the highest pipeline system pressure when Cell C is filling. The study will determine the difference in pressure between the initial and final operating conditions and recommend a piping system that is constructed for Cell C operating conditions or one that is modified as the tailings cells fill from A to B to C.

Exh. 4 CDPHE Website at November 3 Response to Request for Additional Information Number 3 Attachment 4 Part 2.

Even then, the applicant asserts that this conceptual plan would reduce its radon emissions below that measured during actual operations at other sites based on the assumption that fine tails and limes would not be exposed via “beaching” due to the design and operation requirements . *Uranium Mill Tailings Radon Flux Calculations by Golder Associates Inc. (“Golder Report”)* at 9. In short, Energy Fuels has asked EPA to approve an as-yet-undersigned and not-yet-engineered tailings facility, while touting radon reductions that could be gained by available technologies not contained in detailed design, outmoded regulations, or EPA’s approval.

Importantly, the various consultant’s reports and CDPHE “determinations” that support the Energy Fuels application were provided as part of a license approval process that affirmatively rejected the notion that Colorado’s radiation program must comply with federal laws and standards and that the determinations of the Department are immune from public and judicial scrutiny. *See SMA v. CDPHE*, 2011CV861 (District Court City and County of Denver) .

The deficiencies identified by CDPHE were not remedied before the License was issued, allowing an undetermined amount of time to prepare and approve critical features. For example, although the December 21, 2010 letter from CDPHE (EPA-PINR006 purportedly relied on a Quality Assessment/Quality Control Plan, the License issued on March 7, 2011 requires preparation of the QA/QC as a future condition that must be satisfied before construction begins. <http://www.cdphe.state.co.us/hm/rad/rml/energyfuels/decision/110307license.pdf> (“License”) at ¶21.C. (preconstruction approval of Quality Assurance and Quality Control Plans that conform with EPA Guidance in EPA/600/R-93/182), 21.F.i (detailed QA/QC plan required “for all aspects of on site construction”). The CDPHE’s use of license conditions delay the difficult questions for future consideration and provide no basis for the CDPHE’s December 21, 2010 assertion that Energy Fuels has conformed with EPA’s regulatory standards.

In short, the repackaged set of documents submitted to EPA in August 2010 during the Colorado licensing proceedings does not provide a credible procedural or substantive basis on which the EPA can rest its Clean Air Act hazardous air pollution determinations. The conceptual plans deemed inadequate by CDPHE but later approved by CDPHE based on conditions requiring Energy Fuels to deliver compliant plans at some time in the future fall far short of the rigorous regulatory scrutiny that the Clean Air Act requires EPA to apply to hazards posed by radon emissions from tailings cells.

## **5. The Golder Associates Report Attempts to Set a Case-by-Case Emissions Limit**

Perhaps recognizing that the outmoded Clean Air Act NESHAP regulations contains no actual control technologies or monitoring requirements to satisfy statutory standards, Energy Fuels provided EPA with a report by Golder Associates that attempts to calculate anticipated radon flux emissions based on a public domain calculator provide by WISE Uranium website. The Golder Report seems to suggest that Subpart W regulation is not even necessary since Energy Fuels “plans to reduce radon flux levels to “As Low As Reasonably Achievable” (ALARA) levels, as defined in the Colorado Department of Public Health and Environment (CDPHE) and U.S. Nuclear Regulatory Commission (NRC) regulations.” Golder Report at 1. However, no radon emission control technologies are found in the CDPHE License, where such ALARA determinations have been delayed until operational phase based on CDPHE’s purported implementation of ALARA on a “case-by-case-basis.” See Exh 4 *CDPHE Mot. to Dismiss* at 12, Exh. 5 *SMA Am. Complaint*; Exh. 6 *SMA Response Brief*.

There is no information in EPA’s administrative record that indicates that radon emissions would be regulated in a manner that meets Clean Air Act standards. Though the Golder Report relies on a series of unsupported technical and operational assumptions that minimize the density of radium and other radioactive materials tailings, the radon flux produced by the WISE model still estimates to approach or exceed the 20 pCi/m<sup>2</sup>s standard in the 1989 Subpart W regulations. All estimates in the Golder Report far exceed the 2 pCi/m<sup>2</sup>/s emissions rate identified as protective of public health by the Nuclear Regulatory Commission in 1987.

The WISE Uranium website clearly states the calculator is not for project use by companies seeking to gain regulatory approvals:

Though designed for educational purposes, they are believed to be scientifically correct - to the degree achievable with limited resources.

<http://www.wise-uranium.org/calc.html> . It makes no difference that Energy Fuels and EPA may seek to apply limited resources to this matter, the calculator is not designed to support regulatory approvals. The website also contains a Copyright notice:

Unless otherwise noted, all material on this site is free for non-commercial use, provided that the source 'WISE Uranium Project' is mentioned. Any other use requires prior approval. Mirroring and hotlinking is not permitted.

<http://www.wise-uranium.org/impress.html>. No mention of prior approval is indicated in the Golder Report. Although it is widely reported that Energy Fuels is attempting to gain approvals



with limited resources, reliance on the WISE Uranium calculator for either commercial or regulatory purposes is not the type of rigorous protection of public health required by the Clean Air Act's hazardous air pollution provisions.

Instead of providing credible scientific support and analysis to support model inputs or the model itself, much of the Golder Report simply copies and makes minor paraphrases to the help page of the WISE Uranium site, giving the reader the misleading impression the Golder report is based on its own expert analysis. Compare <http://www.wise-uranium.org/ctbh.html#INPTAILGEN> with Golder Report at Section 3.2.1, 3.2.2..

Where explanation is provided, it is to explain why the inputs deviate from the typical inputs in a manner that would reduce the radon emissions estimate. For example, in Section 3.2.2.2, Golder explains that it anticipates a tailings density of 1.27 g/cm<sup>3</sup> but does not explain why that deviates from the presumed default density of 2.7 g/cm<sup>3</sup> used by WISE Uranium. Further, the results of Golder's inputs into the online calculator are skewed by the unsupportable assertion that tailings at some undefined depth "will have substantially higher densities" but that these uranium and radium bearing tailings will not contribute to radon emissions. Only in isolated instances does Golder set the pore volumes input at a higher number than the assumptions on the WISE help page, and in such circumstances such a departure touted as a "conservative" estimate that results in higher radon emissions than the model assumptions. Contrary disclaimers where inputs may downplay radon emissions are not provided. Similar departures are made regarding the 200 mesh inputs based on Golder's experience at the Moab Disposal Site near Moab (Atlas). Although Golder's Atlas Reports may provide for inexpensive and readily obtainable data sets, Golder's experiences at the ongoing clean-up of the Moab Disposal Site do not provide a good match since ore from different mineralization were processed.

Because data is readily available, instead of relying on educational models, EPA must require Energy Fuels to present its proposal based on actual data from the proposed mines and processing circuit as well as the values, results, and actual measurements made at the still-licensed tailings cells in Uruvan and Cañon City, both of which processed ore from the same Salt Wash mines that would purportedly supply the Energy Fuels mill.

## **6. Approval Cannot be Given Until a Groundwater Monitoring Plan has Been Provided, Reviewed and Approved**

As is correctly identified in the February 24, 2011 Memo provided by Steven A. Burkett, Director of EPA Hazardous Waste Program, EPA approval Subpart W proposals under Subpart A requires consideration of impacts to groundwater, including monitoring plans. EPA-PINR009. This requirement comes from the presumed use of saturated tailings and water covers to control radon emissions that emerged from the 1989 regulations. EPA's Air and Radiation Program appears poised to issue its approval despite this recognized deficiency, by requiring that the omitted water monitoring plans be submitted post-approval. The Air and Radiation Program's *approve-now-review-later* approach violates the reasoned decisionmaking requirements of the Administrative Procedure Act by allowing the applicant to demonstrate compliance after EPA grants its approval.

The groundwater and surface water components of the Energy Fuels proposal are not ancillary to radon control. Instead, EPA recognized in the 1989 EIS that the impacts on groundwater are an impact integral to the regulation of radon emissions from tailings by saturation and water cover. Likewise, the NRC's 1980 Generic EIS on Uranium Mills recognized the tradeoffs between likely groundwater contamination and reductions in radon emissions using saturation and water cover as "control technologies." *See also* Exh 7 Comments of Stratus Consulting to CDPHE.

To the extent EPA intends to rely on curt letters from the CDPHE asserting Part 192 compliance, this approach also does not satisfy either the Clean Air Act or the Administrative Procedure Act. Further, any EPA reliance on CDPHE licensing activities for compliance with the federal regulations, including those at 40 C.F.R. §192, is not appropriate where Colorado has aggressively denied that it is bound or otherwise subject to federal laws when carrying out the Agreement State Program. Exh. 4, CDPHE Motion to Dismiss at 3 ("Colorado is not bound by federal regulations or standards pertaining to uranium mills; Colorado applies its own regulations and standards."). EPA makes no attempt, nor should it, to determine whether it can rely on the CDPHE regulations to satisfy EPA's duty to ensure Part 192 requirements are met. Instead, EPA should withdraw its proposed approval and conduct its own thorough, independent analysis of the tailings management and disposal plans, once they are actually designed and engineered.

The well-known groundwater pollution v. radon emissions tradeoffs in regulating tailings cells may be avoided by EPA withholding its approval until it has adopted a modern Clean Air Act regulatory regime that adopts Subpart W standards with protective technologies and methods such as dry placement and continuous cover of all tailings. The era of open dumping with future cover has come to an end for nearly every type of waste regulated by EPA, whether solid, hazardous, or radioactive. The EPA should not allow open dumping of toxic and radioactive uranium tailings to continue based on future groundwater plans and outmoded regulations.

## **7. NEPA Analysis is Required by Multiple Federal Actions**

Energy Fuels' milling proposal is part of a mine/mill project that involves mining of uranium on adjacent and nearby federal lands. However, no NEPA analysis has been conducted that would address the cumulative impact of radon emissions from the federal uranium mining/milling complex in the Uravan Mineral Belt.

Moreover, there has been no attempt by any federal agency to analyze the cumulative impacts of the mine mill complex. The segmented NEPA analysis of the Whirlwind, Energy Queen, and other federal mines was conducted by Bureau of Land Management in a series of Environmental Assessments that did not consider cumulative impacts each of the other 1872 Mining Law mines or the Energy Fuels' proposal to operate uranium mines on federal public lands under a unique Department of Energy ("DOE") uranium leasing program.

Litigation is pending on the DOE's 2007 preparation of an Environmental Assessment/Finding of No Significant Impact that did not consider impacts from radon emissions from the proposed mill or the federal mines. *CEC, et al. v. OLM et al.* 08-cv-01624 (Dist. Colorado). In addition to the direct NEPA responsibility for the mining, the DOE has asserted that its uranium leasing program is meant to support the broader federal role in implementing the Energy Policy Act of 2005 (Public Law 109-58), which emphasizes the reestablishment of nuclear power. Recent

testimony to Congress by DOE Secretary Chu has reinforced the deep federal involvement in all aspects of the uranium mining and milling complex, including an ongoing price support program that is reminiscent of the Atomic Energy Act buying program of the 1950s.

<http://www.energy.gov/news/10157.htm> . When preparing the NEPA analysis in 2007 the DOE did not know EPA had direct implementation authority and therefore did not seek EPA involvement in its NEPA analysis regarding radon emissions or cumulative impacts of mining/milling. Exh. 2.

Further, DOE plays a direct role in the mill. Because the Atomic Energy Act and Colorado's Radiation Control Act both prohibit Energy Fuels from owing tailings after mill is closed, the DOE is the most likely recipient of the tailings facility. *See* 10 C.F.R. Part 40 . Despite multiple delays in transferring the Maybell, Durita, and Uravan sites in Colorado, transfer to DOE remains the active policy at the Colorado-licensed facilities. The design and operations of the tailings cells will have a direct bearing on whether or not the DOE is able to take title, particularly in light of difficulties encountered with groundwater contamination and monitoring at Uravan, Durita, and Cañon City sites. If not, the title would transfer to the State of Colorado for long term care and maintenance.

Also, the CDPHE did not ensure that the informed decisionmaking and public participation purposes of NEPA was fulfilled at the earliest stages of the licensing process. *See Calvert Cliffs' Coordinating Comm. v. U.S. Atomic Energy Comm'n*, 449 F.2d 1109, 1114 (D.C. Cir. 1971)(the NEPA process is the means by which Congress has chosen to ensure that "the most intelligent, optimally beneficial decision will ultimately be made."). The CDPHE actively refused requests that the agency data and conclusions be presented to the public at the earliest stages of the decisionmaking process to ensure that NEPA's procedural requirements result in open, honest, interdisciplinary and public discussion "in the service of sound decisionmaking." *Id.* at 1143.

In sum, a series of federal actions and implementation of federal programs has taken place with the uranium mill at the center of numerous federal actions. However a single NEPA analysis has not been prepared to analyze the impacts that flow from the federal involvement and control of BLM, DOE, NRC, and EPA in the Uravan Mineral Belt. EPA should consult and cooperate with DOE and BLM with EPA taking the lead agency role to meet the unfulfilled NEPA duties by preparing an Environmental Impact Statement that addresses the federal uranium program in the Uravan Mineral Belt, of which the Energy Fuels mill and mines are a central component.

## **8. Consultation with US Fish and Wildlife Service is Necessary**

Similar to the NEPA requirements, consultation with the U.S. Fish and Wildlife Service is required before EPA can issue an approval of the Energy Fuels Proposal. Consultation regarding both the Endangered Species Act and the Migratory Bird Treaty Act are required . The open water cover that is proposed as a radon "control technology" has been documented as an attractive threat to waterfowl. The burrowing owls that currently occupy the site are listed under the Migratory Bird Treaty Act. The cumulative impacts to water quantity and quality from the mine/mill complex pose further, poorly understood threats to the Colorado River fish that are subject to the Endangered Species Act and the upper Colorado River Endangered Fishes Recovery Program (RIP).

Recent USGS studies have confirmed that biological pathways and ecotoxicity of radon and other hazardous emissions from uranium mining and milling are not well documented or understood. Hinck et. al, Biological Pathways of Exposure and Ecotoxicity Values for Uranium and Associated Radionuclides, USGS Scientific Investigations Report 2010-5025. As the USGS recognizes, “radon dissolves in water and may be transported through permeable and fractured rocks for long distances, where the gas may be released where groundwater reaches the surface.” *Id* at 326. Although the effect on wildlife ranges from growths to reproductive damage to mortality, no attempt has been made by EPA or Energy Fuels to consult with the Fish and Wildlife Service regarding the effects of the tailings cells subject to Subpart W or the nearby feeder mines where radon emissions are regulated by EPA under NESHAP Subpart B.

Failure to consult with U.S.F.W.S. regarding impacts to listed species in the region, including locally resident burrowing owls, endangered Colorado river fish, and migratory waterfowl that would be drawn to the water used to control radon emissions, could expose both Energy Fuels and EPA employees to both civil and criminal liabilities. *See Bennet v Spear*, 520 U.S. 154 (1997) citing *Babbitt v. Sweet Home Chapter, Communities for Great Ore.*, 115 S.Ct. 2407, 2418 (1995) (upholding interpretation of the term "take" to include significant habitat degradation). This is particularly important where the bioconcentration and bioaccumulation processes are fatal to fish and wildlife, but “the empirical data detailing the movement and fate of radionuclides are relatively sparse.” Hinck et al at 334. This deficiency may be addressed by EPA taking a leadership role in initiating the necessary NEPA process, which would include consultation and cooperation with the other federal agencies with responsibility and control over the uranium mining/milling program in the Uravan Mineral Belt.

## **9. Energy Fuels Failed to Record Radon Exposures at the Nearby Whirlwind Mines**

The U.S. Mine Safety Health Administration has published violations of radiation safety requirements and communications protocol meant to protect human health at its Whirlwind Mine. It also appears that no monitoring or compliance data has been provided to EPA for the uranium mines in the region, despite the requirements of NESHAP Subpart B. This failure to act to implement the Clean Air Act is an ongoing and serious problem for a region faced with already-elevated exposures due to geology and altitude.

Cumulative release of radon from active and inactive mines and the current/expected ore stockpiles must be analyzed in conjunction with the anticipated radon releases from the uranium milling operations and mill tailings impoundments. In short, the proposed approval takes a myopic approach that must instead be addressed in the comprehensive manner contemplated by both the Clean Air Act and other applicable federal laws, including NEPA.

## **10. Environmental Justice**

Although EPA has pledged to address environmental justice concerns, none are noted or considered in the proposed approval.

An active Native American site is located on the cliffs above the tailings cells. Further, the income level of the persons who would be impacted by the mill, whether as potential employees or impacted residences in the Paradox Valley, have been widely reported as near or below

poverty levels. Little or no attention is given to the disparate impacts that would befall the residents of this rural valley as a result of radon being trapped within regularly occurring inversions. Because the EPA approval would impose no control technologies, monitoring requirements, or emissions limits, the exposure of these local persons would go unabated despite the recognized deficiencies in the 1989 regulations.

In short, the deficiencies in Clean Air Act compliance are magnified by the failure to account for the Environmental Justice aspects of locating radioactive tailings in the Paradox Valley.

## **11. Conclusion**

The uncertainty and inadequate regulation of uranium mills and mines still exists despite the devastating human and environmental impacts caused by uranium milling. It appears that the efforts to understand and control exposures to the hazardous emissions involved with active uranium milling has been nearly as dormant as the uranium industry since the market crashed in 1980. What little work has been done has confirmed that radon and uranium milling remains a serious threat to human health and the environment. Instead of repeating the notorious actions of the past, EPA has the power and responsibility to require a careful, open, and scientifically defensible review of the Energy Fuels proposal.

These comments respectfully request EPA take the lead in ensuring federal law and policies designed to protect the public health and environment are followed to the fullest extent possible. Please feel free to contact me should you have any questions or to discuss these comments in more detail.

Respectfully submitted,  
*s/Travis E. Stills*  
Travis E. Stills  
Managing Attorney

## 40 CFR Part 61 Subpart W Deliverable Dates

### Major Milestones & Intermediate Steps

Quarterly calls with stakeholders per consent agreement	Jan, April, Aug, Dec
Finalize work assignments for next contract period	March 2011
Risk Assessment (finalize)	March, 2011
Economic Analyses (should have limited impact on Subpart W)	June 30, 2011
Begin drafting rule/revisions	Ongoing
Options Selection (6 months before signature)	June, 2011
Develop package for FAR: <ul style="list-style-type: none"> <li>• FAR announcement memo from lead RSC representative</li> <li>• Draft action memorandum</li> <li>• Current workgroup membership list</li> <li>• Draft action</li> <li>• Draft preamble that addresses statues and EOs, if any, and text of the action</li> <li>• Draft Regulatory Impact Analysis (RIA), or other appropriate economic and scientific supporting analysis (if required)</li> <li>• Draft information collection request (if required)</li> <li>• Draft communications strategy</li> </ul>	ASAP
Peer review of economics analyses (not critical for Subpart W)	July, 2011
Distribute FAR package to participating AAs and RAs (no sooner than 15 working days after the FAR package is distributed)	
Final Agency Review	August, 2011
Develop final package for OPEI and OMB: <ul style="list-style-type: none"> <li>• Draft action memorandum (2 copies)</li> <li>• Copy of the preamble and rule</li> <li>• Copy of FAR memos addressing substantive comments and non-concurrences (this will not go to OMB)</li> <li>• Copy of the EO 12866 form (SF 83)</li> <li>• Electronic version of the preamble and rule</li> </ul>	ASAP
Transmit final package to OPEI	September, 2011
OMB Review	September, 2011
Proposed Rule to the Office of Federal Register	December, 2011

EPA-1677

**Reid Rosnick/DC/USEPA/US**

To Beth Miller

07/07/2011 06:25 AM

cc

bcc

Subject Additions to web site

Hi Beth I have a couple of items for the web site that I hope you can do this morning.

- 1.Remove "Draft" from the last minutes of the conference call.
2. Add the attached presentation to "presentations,"

Thanks

Reid



Rosnick NMA Uranium Recovery 2011.pptx

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# ***U.S. EPA NESHAP Subpart W Revisions Update***

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Reid J. Rosnick

Radiation Protection Division

NRC/NMA Uranium Recovery Workshop

May 26, 2011



# Purpose of Presentation

- Provide background and status update on 40 CFR 61, Subpart W (National Emission Standard for Radon Emissions from Operating Mill Tailings under Clean Air Act)



## 40 CFR 61 Subpart W Summary

- Applies to radon emissions from operating uranium mill tailings
  - Radon emissions flux standard: 20 pCi/m<sup>2</sup>-sec
- After 12/15/1989, new impoundments were required to meet one of two new work practices
  - ✓ Phased disposal – Impoundment size(2)  $\leq$  40 acres
  - ✓ Continuous disposal – dewatered tailings with no more than 10 acres uncovered
  - ✓ Both must meet design, construction, ground-water monitoring standards at 40 CFR 192.32(a)
- Work practices were designed to achieve at least equivalent risk reductions as obtained by the numerical standard



# Review of Subpart W

- Review began after receiving Notice of Intent to Sue (NOI) by two Colorado environmental groups
  - ✓ Based on EPA's alleged failure to review & revise regulation within ten years after enactment of Clean Air Act Amendments of 1990 (11/15/2000)
  - ✓ Plaintiffs filed suit against EPA
  - ✓ Settlement agreement reached November 2009
  
- EPA is currently revising Subpart W, projected proposal, late this year



# Subpart W, continued

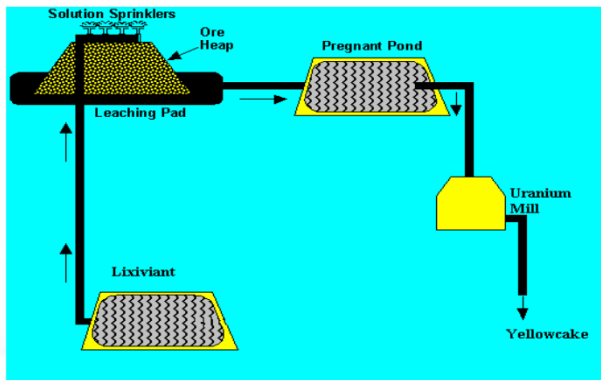
- In Situ Leach/Recovery (ISL/ISR) extraction has become more commonplace since original promulgation and does not generate significant tailings, but wastes containing uranium byproduct material are placed in evaporation ponds/impoundments
- ISL/ISR, conventional mill, heap leach operations expected
- Regulatory Reviews
  - ✓ of the current standard
  - ✓ of the original EPA radon risk assessment



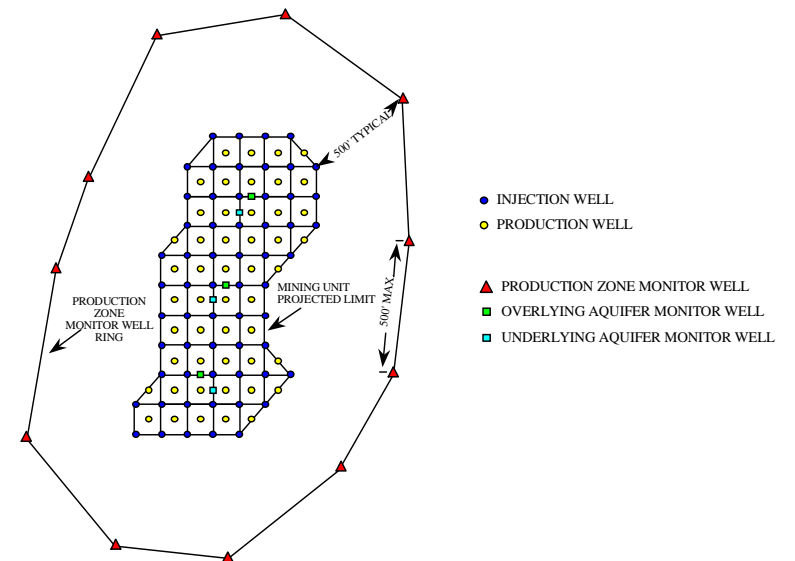
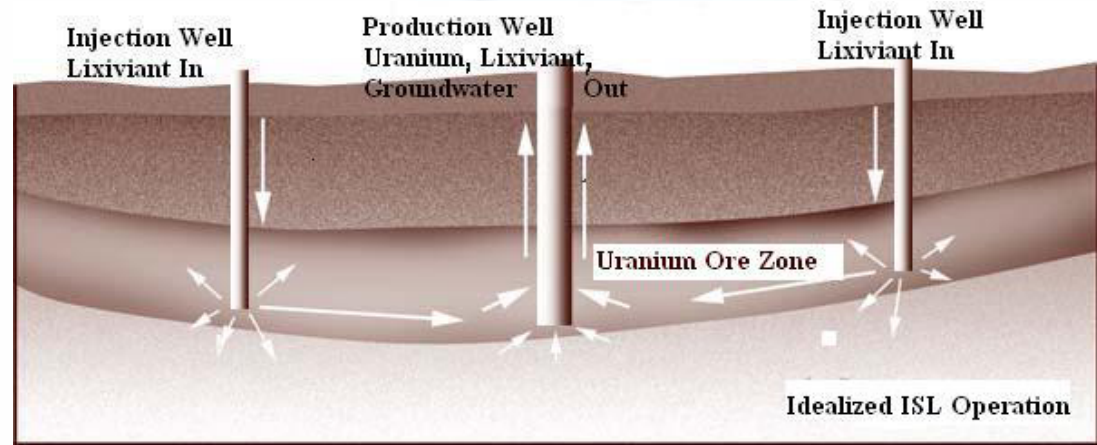
# Background



Conventional Surface mill



Heap leaching



## Subpart W, Scientific Data/Research

- Review and compile a list of existing & proposed U mill tailing facilities & the containment technologies being used, as well as proposed
- Compare & contrast those technologies with the engineering requirements of RCRA Subtitle C land disposal facilities, which are used as the design basis for existing uranium byproduct material impoundments
  - ✓ Review regulatory history of Rad-NESHAPS and Subpart W, Tailings impoundment technologies, and radon measurement method
  - ✓ Comparison of 1989 risk assessment with current risk assessment approaches (adequacy and appropriateness)



# Status of 40 CFR Part 61, Subpart W

- Regulation is under formal review
- Work has reached deliberative phase, EPA workgroup is preparing options for regulation revision to Assistant Administrator.
- AA will provide direction on which options to include in preamble of proposal
- Focus has been:
  - ✓ External -- Public information meetings to address settlement agreement requirements
  - ✓ Internal -- Technical review



# Communications Plan

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





# Outreach

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



# Outreach

- ✓ Quarterly conference calls to answer stakeholder questions
- ✓ Next call – July 7, 2011 – 11:00 AM EDT
- ✓ Call in number is 1-866-299-3188. You will be prompted for a conference code, which will be 2023439563. After entering the conference code press the # key and you will then be placed into the conference call
- ✓ Public participation by e-mail:
  - [subpartw@epa.gov](mailto:subpartw@epa.gov)



# Thank You

