

# U.S. NRC

UNITED STATES NUCLEAR REGULATORY COMMISSION

*Protecting People and the Environment*

**NOTE TO FILE: Regarding Attachments Document Date**

**DATE:** October 16, 2009

**Name :** Priya Yadav, Project Manager /RA/  
**Department:** Materials Decommissions Branch  
**Division:** DWMEP

**Summary:** Following documents should be added to ADAMS with a date of October 16, 2009.

ADAMS Package No.: ML092890284  
License No.:

Mail Control:  
Docket No.:

## Walker-Smith, Antoinette

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**From:** Dirk A Dunning [dirk.a.dunning@state.or.us]  
**Sent:** Thursday, August 20, 2009 2:40 PM  
**To:** Pinkston, Karen  
**Subject:** Re: NRC to Hold Public Workshops in Maryland and Utah on Safe Disposal of Depleted Uranium and Other

Hi Karen,

My supervisor has asked me to participate in the Salt Lake City meeting. Please add me to the list. It would be helpful as early as possible to have a draft agenda, meeting location, etc...

Some issues that could/should be addressed include:

Mobility of uranium in various soils and how the regulations will deal with that

- In the presence of carbonate, and in oxidizing conditions uranium is highly mobile as oxo-complexed species

Chemistry of uranium and how that affects mobility

- Oxo-ion complexation (e.g. carbonate, hydroxide, others...)
- Colloid formation (Soderholm and Burns ...)
- Redeposition in riverine environments as carbonate levels fall and as redox conditions change (directly and indirectly with biological activity)

Recognition and handling of uranium's dual hazard (chemical and radiological)

- At very low U-235 content levels, the chemical hazard may exceed the radiological hazard
- At some enrichment levels, the risk from DU is additive (chemical toxicity plus radiological)

Ecological risks as distinct from human risks

Inclusion of CERCLA's natural resource damage provisions and early mitigation of harms (not claims of irreversible and irretrievable impacts which can be avoided)

Tribal treaty reserved rights and distinct risk scenarios related to their different use of foods and the land

Environmental Justices issues apart from Tribal issues

Duration of the hazard (peak risk/dose) and regulating to and beyond the peak

Need for validated models if risk is to be used as a basis

Need for concentration standards to limit risk to acceptable levels if risk is not to be calculated on an individual site basis

Preferential transport in the vadose zone/subsurface

- Matrix transport
- Finger flow
- Funnel flow
- Capillary flow (horizontal and vertical)
- other preferential transport flows

Need for validated conceptual models and numeric simulation codes that faithfully emulate those concepts

Cap and Barrier failure (requirement to use validated performance estimation)

- bypassing (flow of water under the barriers via preferential pathway flow, e.g. layered/structured soils)
- natural forces (vegetative degradation, animal intrusion, natural force damage - water, wind, tornado, seismic, mass area flow such as landslides ...)
- man made forces (accidental intrusion - e.g. wells, excavation, exploration; intentional intrusion - excavation, exploration; exploitation - industrial construction, road construction, terrorism, etc...)

How to deal with uncertainty in the analysis (not just sensitivity analysis of parameter inputs, or selecting output values; but more importantly recognizing the inherent uncertainties in the actions, the future, and the results and assuring the safety of future generations). This might include a need for multi-model analysis (a la the Jupiter suite of codes created by USGS, Poeter et.al.)

## Waste form durability and testing requirements

Dirk Dunning, P.E.  
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Nuclear Safety and Energy Siting Division  
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Salem, Oregon 97301-3737

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Dirk.A.Dunning@state.or.us

>>> "opa administrators" <[opa@nrc.gov](mailto:opa@nrc.gov)> Thursday, August 20, 2009 8:01 AM >>>

NRC NEWS  
U.S. NUCLEAR REGULATORY COMMISSION  
Office of Public Affairs Telephone: 301/415-8200  
Washington, D.C. 20555-0001  
E-mail: [opa.resource@nrc.gov](mailto:opa.resource@nrc.gov)  
Site: <http://www.nrc.gov>

No. 09-138  
August 20, 2009

### NRC TO HOLD PUBLIC WORKSHOPS IN MARYLAND AND UTAH ON SAFE DISPOSAL OF DEPLETED URANIUM AND OTHER UNIQUE WASTE STREAMS

The Nuclear Regulatory Commission will conduct two public workshops in September to solicit public views on major issues for new regulations on shallow-land disposal of unique radioactive wastes, including significant quantities of depleted uranium.

The first workshop will be held Sept. 2-3 at the Hyatt Regency Bethesda, One Bethesda Metro Center, 7400 Wisconsin Ave., Bethesda, Md. The second workshop will be held Sept. 23-24 in Salt Lake City, Utah, at the Salt Lake City Marriott University Park, 480 Wakara Way. Both workshops will run from 8 a.m. to 5 p.m. each day.

The Commission directed the agency staff March 18 to initiate a rulemaking to specify a requirement for a site-specific analysis for the disposal of large quantities of depleted uranium, and other unique waste streams, such as reprocessing wastes and the technical requirements for such an analysis. The Commission also directed the staff to develop a guidance document for public comment that outlines the parameters and assumptions to be used in the site-specific analyses. The Commission said the staff should conduct a public workshop to discuss issues associated with disposal of depleted uranium and other unique waste streams, potential issues to be considered in rulemaking, and technical parameters of concern in the analysis so that informed decisions can be made in the interim before the rulemaking is final.

Earlier this summer, the NRC requested public comment on topics to be addressed at the workshops and the subsequent rulemaking. The agendas for the workshops are available on the NRC Web site at this address: , or Karen Pinkston, at (301) 415-3650, or by e-mail using docket ID NRC-2009-0257.

###



# NRC PUBLIC MEETING FEEDBACK

Category  
3

Meeting Date: 09/23/2009 Meeting Title: Public Workshop Unique Waste Streams - Including Depleted Uranium

In order to better serve the public, we need to hear from the meeting participants. Please take a few minutes to fill out this feedback form and return it to NRC.

1. How did you hear about this meeting?

- NRC Web Page
- NRC Mailing List
- Newspaper
- Radio/TV
- Other \_\_\_\_\_

- |                                                                                  | <u>Yes</u>                          | <u>No</u><br>(Please explain below) | <u>Somewhat</u>          |
|----------------------------------------------------------------------------------|-------------------------------------|-------------------------------------|--------------------------|
| 2. Were you able to find supporting information prior to the meeting?            | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/> |
| 3. Did the meeting achieve its stated purpose?                                   | <input type="checkbox"/>            | <u>not really</u>                   | <input type="checkbox"/> |
| 4. Has this meeting helped you with your understanding of the topic?             | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/> |
| 5. Were the meeting starting time, duration, and location reasonably convenient? | <input type="checkbox"/>            | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| 6. Were you given sufficient opportunity to ask questions or express your views? | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/> |
| 7. Are you satisfied overall with the NRC staff who participated in the meeting? | <input type="checkbox"/>            | <u>Sm</u>                           | <input type="checkbox"/> |

**COMMENTS OR SUGGESTIONS:**

Thank you for answering these questions.

*I know they are looking at this problem -  
I want them to look deep.  
This is for thousands of years.  
Please, please take time and think this  
out, don't rush.*

Continue Comments on the reverse. ↩

**OPTIONAL**

Name Kristen Seales Organization Public

Telephone No. 801-595-6631 E-Mail \_\_\_\_\_

evening

Check here if you would like a member of NRC staff to contact you.

OMB NO. 3150-0197

Expires: 06/30/2009

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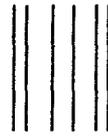
Please fold on the dotted lines with Business Reply side out, tape the bottom, and mail back to the NRC.

COMMENTS OR SUGGESTIONS: (Continued)

This is a complicated problem -  
but it is long lasting  
Can we do an evening Work Shop and  
Public hearings?  
or meetings?  
I think sometimes we as the public think  
the government thinks for us instead of  
asking and using our thoughts in the  
decision process.

Thank you Kristen Seale

UNITED STATES  
NUCLEAR REGULATORY  
COMMISSION  
WASHINGTON DC 20555-0001

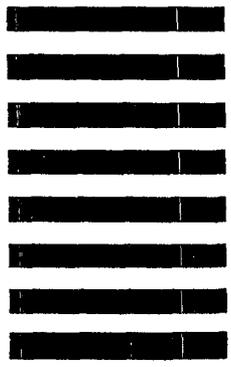


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- Radio/TV
- Other Coworker

	<u>Yes</u>	<u>No</u>	<u>Somewhat</u>
		(Please explain below)	
2. Were you able to find supporting information prior to the meeting?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3. Did the meeting achieve its stated purpose?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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6. Were you given sufficient opportunity to ask questions or express your views?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
7. Are you satisfied overall with the NRC staff who participated in the meeting?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

COMMENTS OR SUGGESTIONS:

Thank you for answering these questions.

*Both days (9/23 & 9/24) involved a great discussion among the stakeholders present. The format of the meeting was conducive to open discussion by both the panel and the general public. I like that handouts of all presentations were made available. All topics discussed were relevant and of interest. I have learned a lot the last 2 days. Chip is a great facilitator and ensured that everyone was heard and that all questions were either addressed or noted for later discussion.*

Continue Comments on the reverse. ↩

OPTIONAL

Name Dr. Angelique Diaz Organization U.S. Env. Protection Agency Region 8

Telephone No. 303.312.6344 E-Mail diaz.angelique@epa.gov  Check here if you would like a member of NRC staff to contact you.

Please fold on the dotted lines with Business Reply side out, tape the bottom, and mail back to the NRC.

All uranium is depleted uranium except that uranium made for bombs and fuel rods. All of the uranium in nature has been depleted of the bomb making isotope over the years. This process is still going on even in the uranium that has been depleted even more by man made processes. This is the depleted uranium that is the subject of these meetings.

Of all of the known dangers to human life, any uranium of any kind is extremely low on the list unless used in a military way. Just driving or even walking to this meeting is statistically far more dangerous.

Most antinuclear material activists do not tell people that they and all plants and animals have always had built in nuclear radiation. They also do not tell you that all balanced farm, lawn and garden fertilizers, even organic ones, must have built in radio-activity. Some of them do not even know this. Some do not even want to learn this.

The activists also do not talk much about the radio-activity that comes from space or the fact that radon is delivered with your clean natural gas, but it also comes right out of the ground in most places in Utah and elsewhere.

Those who smoke or drink alcohol or ride motorcycles or allow the sale of smoking materials have no reason to attempt to control the far far lessor dangers of depleted uranium storage. Depleted uranium is not waste. There are nuclear reactors in operation that use it. And others have been invented that can use it.

The new processes that more efficiently extract the short lived isotopes will be able to use it to produce fuel for any existing reactor.

Robert F. Bennion BSEE UofU



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1. How did you hear about this meeting?

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	<u>Yes</u>	<u>No</u> <small>(Please explain below)</small>	<u>Somewhat</u>
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7. Are you satisfied overall with the NRC staff who participated in the meeting?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

**COMMENTS OR SUGGESTIONS:**

Thank you for answering these questions.

*provide refreshments at breaks*  
*provide notification when minutes are available*

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Continue Comments on the reverse. ↪

**OPTIONAL**

Name \_\_\_\_\_ Organization \_\_\_\_\_

Telephone No. \_\_\_\_\_ E-Mail \_\_\_\_\_  Check here if you would like a member of NRC staff to contact you.

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Continue Comments on the reverse. ↪

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Name \_\_\_\_\_ Organization \_\_\_\_\_

Telephone No. \_\_\_\_\_ E-Mail \_\_\_\_\_  Check here if you would like a member of NRC staff to contact you.

OMB NO. 3150-0197 Expires: 06/30/2009

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