

December 8, 2009

DRC BOARD MEETING

**Department of
Environmental Quality**

168 N 1950 W

DEQ BLDG #2

Conference Room 101

SALT LAKE CITY, UT

84114-4850

3:00 p.m. – 5:00 p.m.

DIVISION OF RADIATION CONTROL

BOARD MEETING

December 8, 2009

**ADDITIONAL
SUPPLEMENTS**

DRC BOARD FILE

RADIATION CONTROL BOARD
Department of Environmental Quality (Bldg #2),
Conference Room 101, 168 North 1950 West, Salt Lake City, Utah
3:00 – 5:00 P.M., December 8, 2009

FINAL AGENDA

- I. Minutes (**Board Action Item**)
 - a. Approval of the Minutes from the November 10, 2009 Board Meeting

- II. Rules
No Items

- III. Radioactive Materials Licensing/Inspection
No Items

- IV. X-Ray Registration/Inspection
No Items

- V. Radioactive Waste Disposal
 - a. Update: Amendment to EnergySolutions License – License Condition 35.
(**Board Information Item**)

 - b. Consideration of Rule for Depleted Uranium Disposal
(**Board Action Item**)

- VI. Uranium Mill Licensing and Inspection
No Items

- VII. Other Division Issues
No Items

- VIII. Public Comment

- IX. **The Next Scheduled Board Meeting: January 12, 2009 (Tuesday)**, DEQ Bldg #2, Conference Room 101, 168 North 1950 West, Salt Lake City, Utah 3:00 – 5:00 P.M.

For those individuals needing special assistance in accordance with the Americans with Disabilities Act, please contact Brooke Baker at the Utah Department of Environmental Quality, at 168 North 1950 West, Salt Lake City, UT 84116, Office of Human Resources at (801) 536-4412, TDD (801) 536-4414, or by email at: bbaker@utah.gov.

UTAH RADIATION BOARD

BOARD MEMBERS - SIGN-IN SHEET

MEETING DATE: December 8, 2009

Peter A. Jenkins, M.S., CHP, Chair ✓ off here (did not sign-in)

Elizabeth Goryunova, M.S., Vice Chair [Signature]

Amanda Smith, DEQ Executive Director here, attended zpn

Dane L. Finerfrock, Exec. Sec. here attended zpn

Scott Bird [Signature]

Patrick D. Cone [Signature]

Frank D. DeRosso, MSPH, CIH [Signature]

Christian K. Gardner [Signature]

Colleen Johnson absent

Edd Johnson absent

Douglas S. Kimball, DMD [Signature]

Joseph K. Miner, M.D., MSPH [Signature]

John W. Thomson, M.D. [Signature]

David A. Tripp, PH.D. [Signature]

OTHER STAFF ATTENDING

Public Attendance Sheet
Utah Radiation Control
Board Meeting
 DEQ Bldg. #2, Conf. Room 101
 168 N 1950 W, Salt Lake City, UT 84114-4850
 3:00 - 5:00 p.m.
 December 8, 2009
Please Print

NAME (Please Print)	Organization/Affiliation Phone Number and Email Address:	Speak: Yes or No? If Yes, which Agenda Item would you like to Address, List Item No.:
1. Dan Shrum	Energy Solutions	No
2. THOMAS MAGETTE	ENERGY SOLUTIONS	
3. James O'Neal	private citizen	yes V b and VIII
4. Laura Lockhart	Atty Gen	
5. BPA Thomas	Private Citizen	No
6. Amy Oringhe	Desert News	no
7. KRISTA BOWERS	<u>Concerned</u> citizen	NO
8. Christopher Thomas	HEAL Utah	Yes V. 9. + b
9. JILL SWEET	Gamma West	—
10. ARTHUR MORRIS	Heal Utah	NOPE
11. Eric Spreng	Heal Utah	No
12. Sandra Hays	private citizen	No
13. Luke Mease	private citizen/UCTD	NO
14. Michael Cowley	citizen	Yes
15. CRAIG GALLI	Hollandt Hart	probably not
16. Romaine Marshall	" "	No
17. Ed Firmage	self	Yes
18. David Esser	DRC	No
19. Charles Judd	self	Yes VB

— Tom Magette Energy Solutions

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20. THOMAS MAGNETTE	ENERGY SOLUTIONS	Y
21. CANDICE FITCHES	STUDENT/UIT	N
22. SECORTH	self	N
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21. CANDICE FICHES	STUDENT/UT	N
22. SICCATH	SELF	N
23.		
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VII. OTHER DIVISION ISSUES

- b. Department Letter Response to Frank Marcinowski, Department of Energy (DOE) Regarding Status of License Condition 35. and Proposed Rule**

**Amanda Smith, DEQ Executive Director
- Copy of Letter-**



State of Utah

GARY R. HERBERT
Governor

GREG BELL
Lieutenant Governor

Department of
Environmental Quality

Amanda Smith
Executive Director

William J. Sinclair
Deputy Director

December 1, 2009

Frank Marcinowski
Deputy Assistant Secretary for Regulatory Compliance
U.S. Department of Energy
EM-10/ Forrestal Building
1000 Independence Ave., S.W.
Washington, D.C. 20585

Dear Mr. Marcinowski:

This letter is in response to your request for clarification on the status of EnergySolutions, LLC, low-level radioactive waste disposal site at Clive, Utah and its plan to dispose of highly concentrated Depleted Uranium (DU). The State of Utah is an Agreement State with the U.S. Nuclear Regulatory Commission (NRC), meaning that, NRC authority to regulate radioactive materials in Utah has been relinquished. The authority to regulate radioactive materials was granted by the Utah Legislature in the Radiation Control Act to the Department of Environmental Quality, Division of Radiation Control (Division). The Division has issued the radioactive material license (RML) that EnergySolutions must comply with during operations of its Clive site.

Currently, EnergySolutions is authorized to dispose of low-level radioactive waste (LLRW) that is classified in Utah Radiation Control rules as Class A. Any isotope of uranium, in any amount, is defined as Class A waste and may be disposed of if it has been found safe to do so in accordance with the Utah Radiation Control Rules.

EnergySolutions has been disposing of LLRW with relatively low concentrations of DU since 1991 and recently disposed of highly concentrated drums of DU from the Savannah River site. The EnergySolutions disposal site is in compliance with the terms of its radioactive materials license and the Utah Radiation Control Rules.

Overseeing the regulatory activities of Division of Radiation Control is the Utah Radiation Control Board (Board). The Board was created by the Radiation Control Act. Recently, the Board initiated two actions regarding DU disposal.

168 North 1950 West • Salt Lake City, UT
Mailing Address: P.O. Box 144810 • Salt Lake City, UT 84114-4810
Telephone (801) 536-4402 • Fax (801) 536-0061 • T.D.D. (801) 536-4414

www.deq.utah.gov

Printed on 100% recycled paper

- 1) The Board directed the Division to amend the EnergySolutions RML to incorporate certain provision related to DU disposal, most importantly, including requirements for recovery and remediation of disposed and planned DU disposal and funding the costs of any recovery and remediation. Attached is a copy of the License Condition which has been distributed for a 30-day public comment period.

Because the extent or nature of comments which may be received is not known, I cannot project a date when the EnergySolutions RML will be amended. Also, it is important to understand that after the amendment process has been completed, the amendment is subject to legal challenge.

- 2) The Board directed the Division to promulgate a rule which would require EnergySolutions to provide, for Division review and approval, a revised "performance assessment" for DU disposal prior to receiving any further DU LLRW for disposal. The Board considered the rule to be necessary because the Nuclear Regulatory Commission has initiated a rule making process to deal with inadequacies it has identified in the current rules for DU disposal. It is expected that a site-specific performance assessment will be required in the NRC regulations.

A draft rule has been written and will be presented to the Board for consideration in December. Similar to the license amendment process described earlier, the proposed rule will be accorded a public comment/public participation process. Generally, if the proposed rule is not controversial, it takes 90-120 days for the process to be completed; however, the final rule is subject to legal challenge.

Please contact me or Dane Finerfrock, if there is other information you need to support your decision-making process for DU disposal.

Best Regards,



Amanda Smith
Executive Director



State of Utah

GARY R. HERBERT
Governor

GREG BELL
Lieutenant Governor

Department of
Environmental Quality

Amanda Smith
Executive Director

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Please contact me or Dane Finerfrock, if there is other information you need to support your decision-making process for DU disposal.

Best Regards,



Amanda Smith
Executive Director

- V. **Radioactive Waste Disposal**
 - b. **Consideration of Rule for Depleted Uranium Disposal (Board Action Item)**

**Patrick D. Cone – Handout to Board members
Entitled: Pleistocene Glacial Timeline and Great
Salt Lake, Lake Levels**

Pleistocene Glacial Timeline and Great Salt Lake Lake Levels

Submitted
By Pat Cone

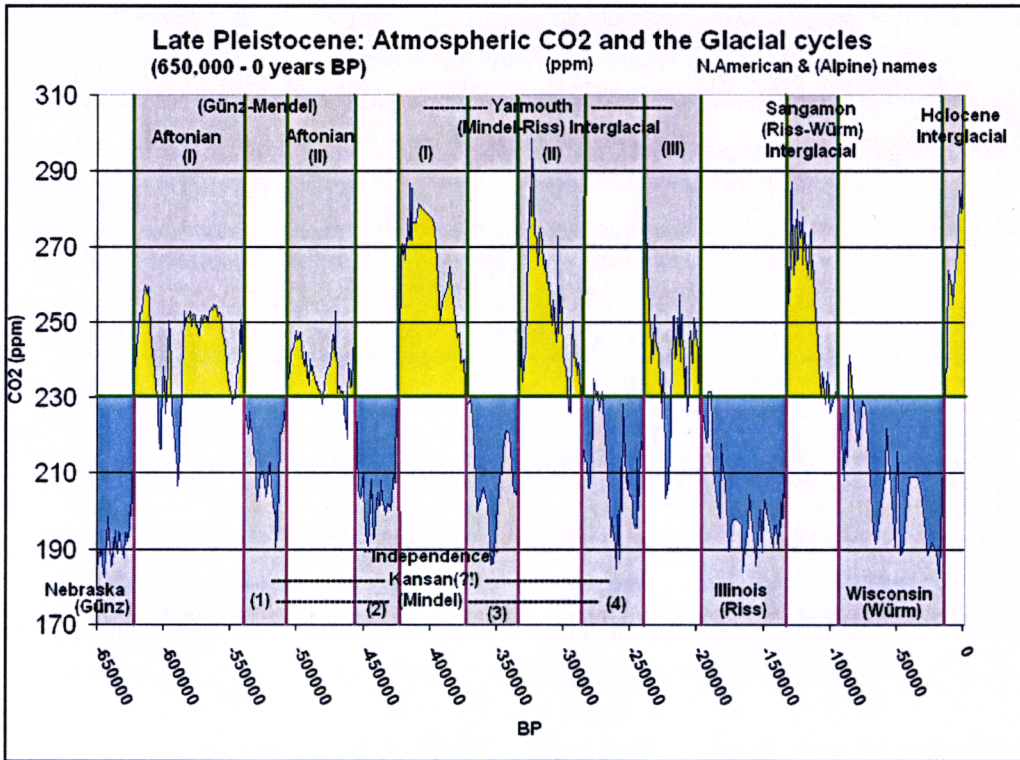


Figure 1

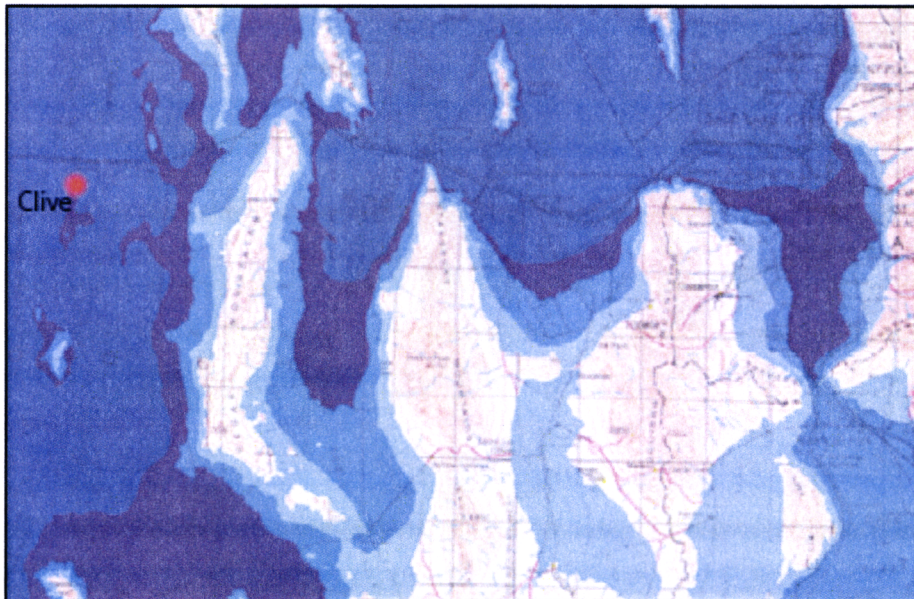


Figure 2

Bonneville	16,000-14,500 years ago	5090'	[light blue]
Provo Level	14,500-13,500 years ago	4740'	[dark blue]
Stansbury	23,000-20,000 years ago	4500'	[dark purple]
Gilbert Lake phase	11,000-10,000 years ago	4275'	[light purple]
Clive disposal site base desert floor mean		4275'	
Clive disposal site cell height mean		4317'	

Submitted
By Pat Cone

DRC Board Mtg
Tues. 12/08/09

1 Law Dome: 1006 A.D.-1978 A.D

<http://cdiac.esd.ornl.gov/ftp/trends/co2/lawdome.combined.dat>

Vostok ice core: 417,160 - 2,342 years BP

<http://cdiac.esd.ornl.gov/trends/co2/vostok.html>

Dome C ice core: 650,000 - 415,000 BP-(or 648th millennium BC to 413th millennium BC)

ftp://ftp.ncdc.noaa.gov/pub/data/paleo/icecore/antarctica/epica_domec/edc-co2-650k-390k.xls

2 Currey, Atwood, Mabey. "Major Levels of Great Salt Lake and Lake Bonneville." *Utah Geological Survey*

May 1984

Pleistocene Glacial Timeline and Great Salt Lake Lake Levels

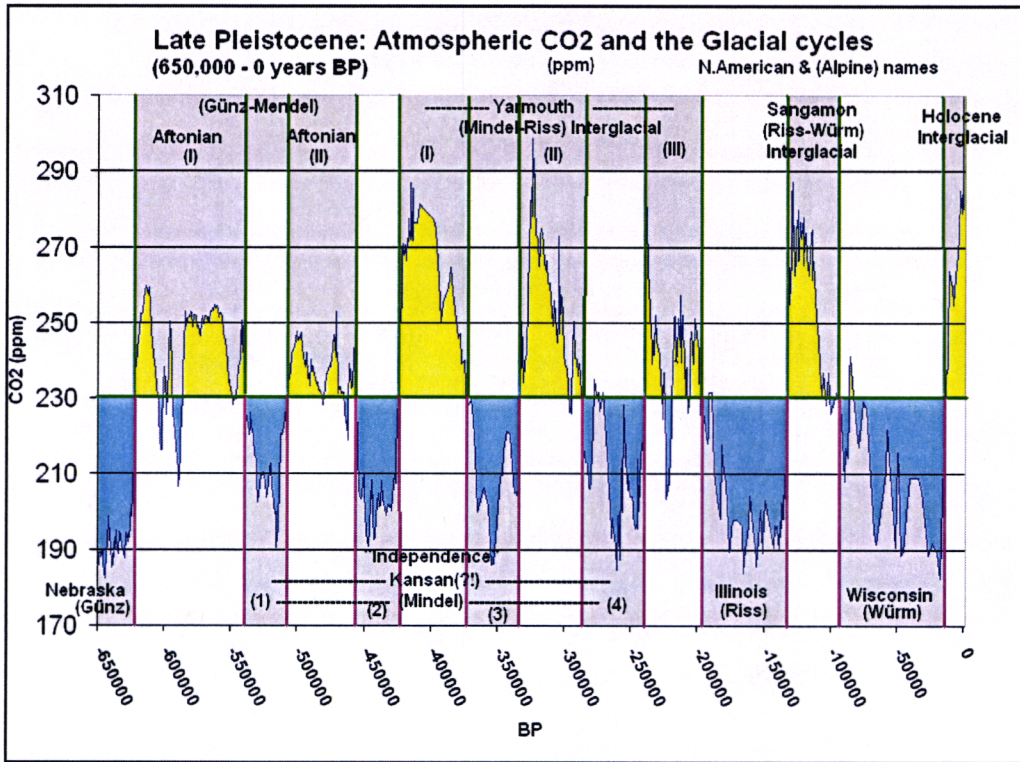


Figure 1

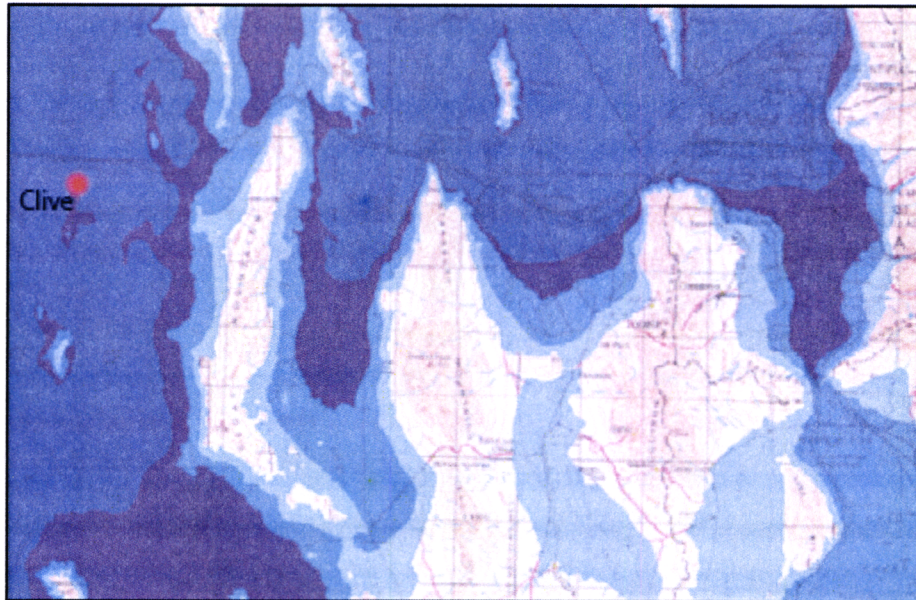


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Submitted by Pat Cone

DRC Board Mtg - 12/10/09

- I. Minutes (Board Action Item)**
 - a. Approval of the Minutes from the
December 8, 2009 Board Meeting**

**Public Attendance List
December 8, 2009**

- I. Minutes (Board Action Item)**
 - a. Approval of the Minutes from the November 10, 2009 Board Meeting**

Replace Page 1

Title Correction for:

Amanda Smith, DEQ Executive Director

MINUTES
OF
THE UTAH RADIATION CONTROL BOARD
November 10, 2009
Department of Environmental Quality, DEQ Building #2
Conference Room 101
168 N 1950 W
Salt Lake City, Utah 84114-4850

BOARD MEMBERS PRESENT

Peter A. Jenkins, M.S., CHP, Chair
Elizabeth Goryunova, M.S., Vice Chair
Dane L. Finerfrock, Executive Secretary
Scott Bird
Patrick D. Cone (Attended by Conf. Call)
Frank D. DeRosso, MSPH, CIH
Christian K. Gardner
Colleen Johnson
Edd Johnson
Douglas S. Kimball, DMD
David A. Tripp, Ph.D.

PUBLIC

Attached List of Public Attendance

BOARD MEMBERS ABSENT/EXCUSED

Joseph K. Miner, M.D., MSPH
Amanda Smith, DEQ Executive Director
John W. Thomson, M.D.

DRC STAFF/OTHER DEQ MEMBERS

PRESENT

Phil Goble, DRC Staff
John Hultquist, DRC Section Manager
Craig Jones, DRC Section Manager
Laura Lockhart, Attorney, Atty General's Office
Yoli Necochea, DRC Staff
Fred Nelson, Attorney, Atty General's Office
Loren Morton, DRC Section Manager
Bill Sinclair, Deputy Director for DEQ
Brad Johnson, Director Division of ERR
Donna Spangler, PIO, DEQ – PPA Staff

RADIATION CONTROL BOARD

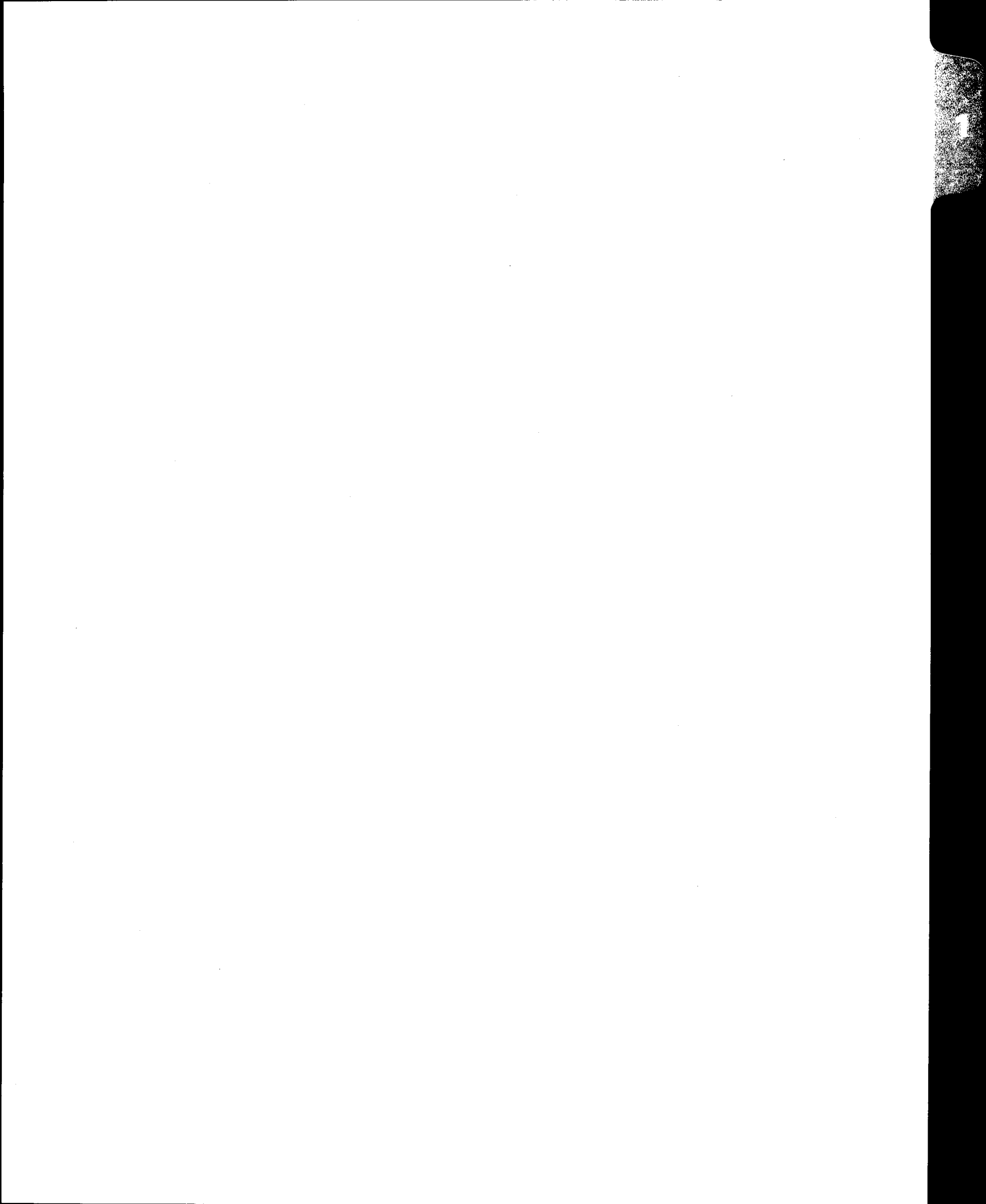
Department of Environmental Quality (Bldg #2),
Conference Room 101, 168 North 1950 West, Salt Lake City, Utah
3:00 – 5:00 P.M., December 8, 2009

TENTATIVE AGENDA

- I. Minutes (**Board Action Item**)
 - a. Approval of the Minutes from the November 10, 2009 Board Meeting
- II. Rules
No Items
- III. Radioactive Materials Licensing/Inspection
No Items
- IV. X-Ray Registration/Inspection
No Items
- V. Radioactive Waste Disposal
 - a. Update: Amendment to EnergySolutions License – License Condition 35.
(**Board Information Item**)
 - b. Consideration of Rule for Depleted Uranium Disposal
(**Board Action Item**)
- VI. Uranium Mill Licensing and Inspection
No Items
- VII. Other Division Issues
No Items
- VIII. Public Comment
- IX. **The Next Scheduled Board Meeting: January 12, 2009 (Tuesday)**, DEQ Bldg #2, Conference Room 101, 168 North 1950 West, Salt Lake City, Utah 3:00 – 5:00 P.M.

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1	<p>I. Minutes (Board Action Item)</p> <p>a. Approval of the Minutes from the November 10, 2009 Board Meeting</p>
2	<p>II. Rules</p> <p>No Items</p>
3	<p>III. Radioactive Materials Licensing/ Inspection</p> <p>No Items</p>
4	<p>IV. X-Ray Registration/Inspection</p> <p>No Items</p>
5	<p>V. Radioactive Waste Disposal</p> <p>a. Update: Amendment to EnergySolutions License – License Condition 35. (Board Info Item)</p> <p>b. Consideration of Rule for Depleted Uranium Disposal (Board Action Item)</p>
6	<p>VI. Uranium Mill Licensing and Inspection</p> <p>No Items</p>
7	<p>VII. Other Division Issues (Board Info Item)</p> <p>a. Division Activities Report</p> <p>VIII. Public Comment</p>
8	<p>IX. Other Issues:</p> <p>The Next Scheduled Board Meeting: January 12, 2010 (Tuesday), DEQ Bldg #2, Conference Room 101, 168 North 1950 West, Salt Lake City, Utah, 3:00 – 5:00 P.M.</p>



- I. Minutes (Board Action Item)**
 - a. Approval of the Minutes from the November 10, 2009 Board Meeting**

*Corrected
minutes*

MINUTES

OF

THE UTAH RADIATION CONTROL BOARD

November 10, 2009

Department of Environmental Quality, DEQ Building #2

Conference Room 101

168 N 1950 W

Salt Lake City, Utah 84114-4850

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Attachment: Public Attendance List

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Fred Nelson, Attorney, Atty General's Office
Loren Morton, DRC Section Manager
Bill Sinclair, Deputy Director for DEQ
Brad Johnson, Director Division of ERR
Donna Spangler, PIO, DEQ – PPA Staff

GREETINGS/MEETING CALLED TO ORDER

Peter A. Jenkins, Chairman, called the board meeting to order at 3:02 p.m. and welcomed the board members and the public. He indicated that if the public wished to address any items on the agenda, they should sign the public sign-in sheet. Those desiring to comment would be given an opportunity to address their concerns during the comment period.

I. APPROVAL OF MINUTES (Board Action Item)

a. Approval of the Minutes from the October 13, 2009 Board Meeting

Peter A. Jenkins, Chair, asked the board members if they had any corrections to the minutes from October 13, 2009.

David A. Tripp requested the following correction to the minutes:

1. Page 4., Item V. a., under subtitle which reads: Pumpkins and Tray with Beans /Representing: (2) Second Pumpkin – Government Contracts will bring in 10 million cubic feet of waste or about .3 **million** Change to read: . . . or about **.3 million tons**

Edd Johnson requested the following correction to the minutes:

2. Page 7, Item V. b., under the list of Board's final changes to the license condition 35, Number 3, Condition 35. C. which reads:

Condition 35. C. Performance assessment (as submitted): A performance assessment, in general conformance with the approach used by the Nuclear Regulatory Commission (NRC) in SECY- 08-0147, shall be submitted for Executive Secretary review and **approved no later than December 31, 2010**. The performance assess shall be revised as needed to reflect ongoing guidance and rulemaking from NRC.

Corrected to Read: Condition 35. C. Performance assessment: A performance assessment, in general conformance with the approach used by the Nuclear Regulatory Commission (NRC) in SECY- 08-0147, shall be submitted for Executive Secretary review and **be approved prior to receipt of significant quantities (more than 1 metric ton) of DU waste**. The performance assessment shall be revised as needed to reflect ongoing guidance and rulemaking from NRC.

MOTION MADE BY SCOTT BIRD TO APPROVE THE MINUTES OF OCTOBER 13, 21009 WITH THE REQUESTED CORRECTIONS

MOTION SECONDED BY DAVID A. TRIPP

MOTION CARRIED AND PASSED UNANIMOUSLY

II. RULES
No Items

III. RADIOACTIVE MATERIALS LICENSING/INSPECTION
No Items

IV. X-RAY REGISTRATION/INSPECTION
No Items

V. Radioactive Waste Disposal

a. **Request from EnergySolutions to Address the Board: Proposal Regarding Condition No. 35**

Peter A. Jenkins, Chairman, informed the Board that HEAL-Utah requested to address the Board. Representatives from EnergySolutions would address the Board first. After EnergySolutions' presentation the representatives from HEAL-Utah would make their presentation. Finally, there would be a short rebuttal time from both parties.

Craig Gallie, representing EnergySolutions made the following presentation to the Board (see attached presentation).

Mr. Gallie said that EnergySolutions was surprised by the outcome of the October 2009 board meeting. The proposed substitute license amendment "Condition No. 35" was not on the Board's agenda--unlike today's proposed action item that is on the agenda. EnergySolutions was not entirely prepared to address the revised amendment "license condition no. 35." Mr. Galli said that looking back at what happened last month, the Board did not give EnergySolutions full consideration of all of the legal and public-policy implications of the October Action. EnergySolutions respectfully-requested that the Board reconsider the October 2009 Action Item.

Mr. Gallie said that the current license allows for the disposal of Depleted Uranium (DU). He said that DU has been accepted and disposed of at the Clive facility for over 18 years. From NRC's recent presentations to this Board there appears to be no technical basis to justify a DU moratorium. DU does not pose an immediate public health and safety concern during the pendency of NRC's rulemaking--which as you know has already commenced. Based on some of these considerations and other considerations in the September 2009 board meeting, the Board rejected a "moratorium by rulemaking" by a vote of 8 to 3.

Chairman Jenkins called Christopher Thomas, Policy Director for HEAL-Utah, to come forward and make his presentation to the Board (see attached presentation).

Christopher Thomas, HEAL-Utah:

Mr. Thomas said that Janelle Eurich, Attorney for HEAL-Utah, would be helping him give the presentation to the Board. Mr. Thomas gave the Board two handouts. Mr. Thomas said he thought it was really important to look back and not ask the question, what are the Executive Secretary's powers, but rather what are the Board's powers. If board members focus on that question, he believed they would arrive at a very different answer.

Peter A. Jenkins, Chairman, asked both parties for a short rebuttal. Craig Gallie, Attorney for EnergySolutions, came forward and made his final comments to the Board. Then Janelle Eurich, Attorney, HEAL-Utah, gave her final rebuttal. Both parties referred to rules and regulations on who had "final authority" to approve a license, license amendment and conditions on a license. Both parties referred to the presentations they had presented to the Board. EnergySolutions argued that the Executive Secretary had the final approval, and HEAL-Utah argued that the Board had final authority.

b. Consideration of Closing Meeting for Discussion of Depleted Uranium Issue

Peter A. Jenkins, Chairman, thanked representatives from HEAL-Utah and EnergySolutions for their time. Chairman Jenkins said that, as posted on the agenda, there would be a possibility that the Board might enter into an Executive Meeting, and the Board could discuss legal issues with their attorneys (it would be closed to the public). He asked the Board, if they had a desire to motion for a closed meeting.

MOTION MADE BY DAVID A. TRIPP THAT THE UTAH RADIATION CONTROL BOARD CONDUCT A CLOSED EXECUTIVE SESSION

Chairman Jenkins asked Fred Nelson, Attorney for the Board, to summarize the reasons that the Board could conduct a Closed Executive Session.

Fred Nelson went over reasons for which the Board could conduct a closed meeting. The reasons included a discussion of matters involving pending litigation. Litigation has been asserted by the parties involved in this matter. Also, because this is an adjudicative proceeding, the meeting could be closed for adjudicative deliberation pursuant to a Utah Supreme Court decision. Mr. Nelson stated that to close a meeting requires a 2/3rd

vote, a record must be kept, and that the closed meeting could only be for purposes of discussion, and any decision must be made in an open meeting.

After Mr. Nelson's comments, Chairman Jenkins asked David A. Tripp if he would like to amend his motion.

MOTION AMENDED BY DAVID A. TRIPP THAT THE BOARD CLOSE THE MEETING FOR "SOME PERIOD OF TIME:" BASED ON THE REASONS STATED BY MR. NELSON; FOR DISCUSSION ON LEGAL ISSUES ON THE LICENSE AMENDMENT; AND REGULATION OF DEPLETED URANIUM

SECONDED BY PATRICK D. CONE

Peter A. Jenkins asked the board members, if they would like to have a discussion on this issue. David A. Tripp asked whether the Board wished to reopen the meeting after their Executive Session; and thereafter, make a decision.

Chairman Jenkins explained that after the Board finished the Closed Executive Session, the Board would invite the public to come back, and the Board would re-enter into a normal or regular board meeting. At this point, the Board would discuss any further actions; take public comments; and then, possibly, take an action.

Scott Bird asked whether in the closed meeting, if the lawyers for the Board would be there to provide advice to the Board, or whether just the Board could be in attendance.

Fred Nelson responded that this was up to the Board whether they wanted to include legal counsel. He explained that legal counsel, in this case, included himself and Ms. Laura Lockhart. He said that the Executive Secretary and any of the parties involved would not be in the closed meeting. After Mr. Nelson explained the procedure, David A. Tripp amended his motion that the closed meeting would include legal counsel.

MOTION AMENDED BY DAVID A. TRIPP THAT THE BOARD INCLUDE THEIR LEGAL COUNSEL IN THE CLOSED SESSION.

SECONDED BY PATRICK D. CONE

Representatives of the Deseret News and the Salt Lake Tribune registered objections to closing the meeting. Mr. Nelson responded that EnergySolutions had indicated a distinct possibility of litigation. He said

based on the fact that it is an adjudicative proceeding and deliberation is allowed, the session could be closed.

The Board Members voted on this action as follows:

Scott Bird – Yes
Patrick D. Cone – Yes
Frank DeRosso – Yes
Christian K. Gardner – Yes
Peter A. Jenkins - Abstention
Elizabeth Goryunova – Yes
Colleen Johnson – Yes
Edd Johnson – Yes
Douglas S. Kimball – Yes
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Vote: 9 Yes, and 1 Abstention

MOTION CARRIED AND PASSED

The board meeting went into closed session at 4:06 p.m. After the Board finished with the closed-meeting discussion, the Board opened the meeting again at 5:13 p.m. and invited the public to come back in. After the public returned, consideration of actions on the issue of license provisions and regulation of Depleted Uranium resumed.

Peter A. Jenkins, Chairman, said that he would like the Board to discuss the issues that they had heard today, and move toward a motion of how to respond to EnergySolutions' request and address the proposal regarding license condition 35. Chairman Jenkins said that before proceeding on this item, the Board would, first, hear comments from the public. The following public comments were made to the Board on this issue.

PUBLIC COMMENTS

- (1) Brad R. Thomas, Concerned Citizen, said he would like to “yield his time-over” to Christopher Thomas, Heal Utah. He spoke in favor of the site compatibility study for DU disposal in Utah and in favor of the Board’s October 2009 Motion.

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- (3) Teresa Tate, Tooele County Resident, said DU disposal will affect her children, her grandchildren, and some day her great grandchildren. She said the State may “stand to make some money from this;” but as a mother and a grandmother, there is no amount of money--absolutely no amount of money in the world that is worth sacrificing the health, the safety and the lives of her children and her grandchildren and everybody else’s.” EnergySolutions has attorneys representing them. The citizens of Utah have only the State Officials to represent and protect them.

Ms. Tate spoke in favor of the site compatibility study for DU disposal in Utah and in favor of the Board’s October 2009 Motion.

- (4) Ed Firmage, Jr., Concerned Citizen, said EnergySolutions had resorted to using fear, uncertainty, doubt and legal “saber rattling” against the board members. He said the Board did not agree to a moratorium at the last board meeting. Yet, EnergySolutions continues to use the word moratorium--to cast fear, uncertainty and doubt over the DU waste issue.”

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HEAL-Utah's and EnergySolutions' "Final Comments:"

Christopher Thomas, HEAL-Utah, thanked the Board for their attention to the matter of depleted uranium (DU). He said that there were compelling reasons to move forward, as the Board had wisely decided to do in October 2009. The Board "proposed a license condition," and it is currently receiving comment on it--and will have an opportunity to review it. This process should continue "as motioned" by the Board last month.

In conclusion, the Board had not responded to the whole idea of an Administrative Law Judge being involved in Deposition and Agency Action. He said that he did not interpret Agency Action or Deposition the

same way as *EnergySolutions*.

The NRC said a lot of things when they were in Utah hosting Depleted Uranium (DU) Workshops, and *EnergySolutions* made it sound like the NRC told the Board “hey, the State of Utah could face sanctions from the NRC, if they do not accept disposal of DU at Utah’s waste site.” Mr. Thomas said that Larry Camper, NRC’s representative, informed him that the NRC did not say they would place sanctions on Utah as an “Agreement State.”

In the slides that *EnergySolutions* printed out, one of the things the NRC did say was that the NRC would work with Utah to resolve any issues that could affect compatibility and Agreement Status. Another compelling reason to move forward with public comment on site suitability is that the NRC could also submit public comment. Mr. Thomas asked the Board to move forward with license condition number 35, as contemplated at the October 2009 board meeting.

Craig Galli, *EnergySolutions*’ Attorney, said the October 21, 2009 Decision Document issued by the Board (the “Notice of Agency Action”) considered the proposed license condition number 35. The Decision Document also states that this proceeding will be conducted using a formal adjudicated proceeding. By way of clarification, *EnergySolutions* is not saying that the Board does not have the discretion, the authority, and the responsibility to review the DU issue. The problem with the process (that has been embarked on by this Board in October 2009) is that we are circumventing the normal review process that the Executive Secretary undertakes--the process that requires hours of technical evaluation by the Division staff. All that *EnergySolutions* is asking is that the Board follow its own rules.

Peter A. Jenkins, Chairman, said that *EnergySolutions* had made a request to the Board and the Board needed to respond. He asked board members, if they would entertain a motion for further discussion on the issue of DU or if there would be a motion and a response to *EnergySolutions*’ request.

Mr. Cone said that the Board not only had the reasons, and rule and the statues behind them to move forward, but that they also had a moral obligation. Mr. Cone said that he asked in the July 14, 2009 board meeting, Thomas Magete, from *EnergySolutions*, whether there were any pending or signed contracts to bring in DU. He responded that there were none at that point, but three-days later they had signed a contract with Cavanaugh Services. A few weeks ago, Mr. Christensen was in front of a congressional committee, and said that he had “signed contracts in place for foreign waste”—he had to clarify this statement the next day. Mr. Cone said that he felt “duped” and had felt the Board had a little bit of

breathing room to discuss this. He felt “working towards a moratorium” was a problem.

MOTION MADE BY PATRICK D. CONE TO RESCIND THE OCTOBER 2009 BOARD DECISION ON THE LICENSE AMENDMENT AND REPLACE IT WITH A MOTION TO BEGIN RULEMAKING WHERE THE BOARD WOULD PUT A PLAN IN PLACE BEFORE ALLOWING MATERIAL TO COME INTO THE ENERGYSOLUTIONS’ SITE

Peter A. Jenkins, Chairman, allowed EnergySolutions’ representatives to address their concerns. The Board had further discussion, and Mr. Cone revised his motion.

MOTION MADE BY PATRICK D. CONE THAT THE BOARD RESCIND THE OCTOBER 2009 DECISION ON THE LICENSE AMENDMENT AND INSTIGATE A RULE-MAKING PROCESS REQUIREING A SITE-SPECIFIC ANALYSIS ON DEPLETED URANIUM (DU), BEFORE ACCEPTANCE AND PLACEMENT OF DU MATERIAL AT THE CLIVE SITE BY ENERGYSOLUTIONS

Chairman Jenkins said that in October 2009 the Board had a Draft license amendment. Chairman Jenkins asked Mr. Cone whether his motion would include adoption of that amendment or if the motion would completely remove license condition 35. He asked Mr. Cone if he were amending his motion; whether the Board had a second on Mr. Cone’s motion; or whether there would be a friendly amendment.

MOTION MADE BY PATRICK D. CONE TO RESCIND THE OCTOBER 2009 AMENDMENT TO LICENSE CONDITION 35; AND TO ADOPT THE ORIGINAL WORDING AS IT WAS SUBMITTED TO THE BOARD IN SEPTEMBER 2009; AND THEN MOVE TO A RULEMAKING ON ACCEPTANCE OF DEPLETED URANIUM AND DIRECT THE EXECUTIVE SECRETARY AND DRC STAFF TO PRODUCE SUCH A RULE BY THE NEXT MEETING

SECONDED BY FRANK D. DEROSSO

There was further discussion among the board members and Mr. Cone’s motion was amended.

MOTION AMENDED TO RESCIND THE ACTION OF THE BOARD IN OCTOBER 2009; AND ACCEPT THE LICENSE CONDITION 35 AS WAS SUBMITTED TO THE BOARD IN

SEPTEMBER 2009'S WORDING; AND ENTER A RULEMAKING PROCEDURE TO ADOPT THOSE CHANGES MADE DURING THE OCTOBER 2009 BOARD MEETING WITH A DRAFT DOCUMENT FOR THE BOARD'S DECEMBER 2009 MEETING

Chairman Jenkins clarified that at the December 2009 board meeting the Board would have draft wording that could be issued for public comment. He said that after this motion, the Board should discuss whether or not the Board would like to be involved in this process.

The Board Members voted on this action as follows:

Scott Bird – Yes
Patrick D. Cone – Yes
Frank DeRosso – Yes
Christian K. Gardner – Yes
Peter A. Jenkins - Abstention
Elizabeth Goryunova – Yes
Colleen Johnson – Yes
Edd Johnson – Yes
Douglas S. Kimball – Yes
David A. Tripp - Yes

Vote: 9 Yes's; and 1 Abstention

MOTION CARRIED AND PASSED

There was discussion on the rule by board members. David A. Tripp, suggested that maybe a subcommittee of board members could assist the Executive Secretary and DRC staff in drafting the rule. Chairman Jenkins asked for volunteers for the subcommittee, they were:

(1) Elizabeth Goryunova, (2) Douglas S. Kimball, (3) David A. Tripp, (4) Patrick D. Cone and (5) Christian K. Gardner

A member of the public asked whether EnergySolutions could currently accept DU, and if the ruling allowed them a "window" to accept DU.

Fred Nelson, Board Attorney, and Chairman Jenkins responded that currently the regulatory environment had not changed for EnergySolutions. DU disposal restrictions were not in place under EnergySolutions' current license.

VI. URANIUM MILL LICENSING AND INSPECTION

No Items

MINUTES
OF
THE UTAH RADIATION CONTROL BOARD

November 10, 2009

Department of Environmental Quality, DEQ Building #2

Conference Room 101

168 N 1950 W

Salt Lake City, Utah 84114-4850

BOARD MEMBERS PRESENT

Peter A. Jenkins, M.S., CHP, Chair
Elizabeth Goryunova, M.S., Vice Chair
Dane L. Finerfrock, Executive Secretary
Scott Bird
Patrick D. Cone (Attended by Conf. Call)
Frank D. DeRosso, MSPH, CIH
Christian K. Gardner
Colleen Johnson
Edd Johnson
Douglas S. Kimball, DMD
David A. Tripp, Ph.D.

PUBLIC

Attachment: Public Attendance List

*corrections needed
to page 4 & page 11*

BOARD MEMBERS ABSENT/EXCUSED

Joseph K. Miner, M.D., MSPH
Amanda Smith, Acting DEQ Executive Director
John W. Thomson, M.D.

DRC STAFF/OTHER DEQ MEMBERS

PRESENT

Phil Goble, DRC Staff
John Hultquist, DRC Section Manager
Craig Jones, DRC Section Manager
Laura Lockhart, Attorney, Atty General's Office
Yoli Necochea, DRC Staff
Fred Nelson, Attorney, Atty General's Office
Loren Morton, DRC Section Manager
Bill Sinclair, Deputy Director for DEQ
Brad Johnson, Director Division of ERR
Donna Spangler, PIO, DEQ – PPA Staff

GREETINGS/MEETING CALLED TO ORDER

Peter A. Jenkins, Chairman, called the board meeting to order at 3:02 p.m. and welcomed the board members and the public. He indicated that if the public wished to address any items on the agenda, they should sign the public sign-in sheet. Those desiring to comment would be given an opportunity to address their concerns during the comment period.

I. APPROVAL OF MINUTES (Board Action Item)

a. Approval of the Minutes from the October 13, 2009 Board Meeting

Peter A. Jenkins, Chair, asked the board members if they had any corrections to the minutes from October 13, 2009.

David A. Tripp requested the following correction to the minutes:

1. Page 4., Item V. a., under subtitle which reads: Pumpkins and Tray with Beans /Representing: (2) Second Pumpkin – Government Contracts will bring in 10 million cubic feet of waste or about .3 **million** Change to read: . . . or about **.3 million tons**

Edd Johnson requested the following correction to the minutes:

2. Page 7, Item V. b., under the list of Board's final changes to the license condition 35, Number 3, Condition 35. C. which reads:

Condition 35. C. Performance assessment (as submitted): A performance assessment, in general conformance with the approach used by the Nuclear Regulatory Commission (NRC) in SECY- 08-0147, shall be submitted for Executive Secretary review and **approved no later than December 31, 2010**. The performance **assess** shall be revised as needed to reflect ongoing guidance and rulemaking from NRC.

Corrected to Read: Condition 35. C. Performance assessment: A performance assessment, in general conformance with the approach used by the Nuclear Regulatory Commission (NRC) in SECY- 08-0147, shall be submitted for Executive Secretary review and **be approved prior to receipt of significant quantities (more than 1 metric ton) of DU waste**. The performance **assessment** shall be revised as needed to reflect ongoing guidance and rulemaking from NRC.

MOTION MADE BY SCOTT BIRD TO APPROVE THE MINUTES OF OCTOBER 13, 21009 WITH THE REQUESTED CORRECTIONS

MOTION SECONDED BY DAVID A. TRIPP

MOTION CARRIED AND PASSED UNANIMOUSLY

II. RULES
No Items

III. RADIOACTIVE MATERIALS LICENSING/INSPECTION
No Items

IV. X-RAY REGISTRATION/INSPECTION
No Items

V. Radioactive Waste Disposal

a. **Request from EnergySolutions to Address the Board: Proposal Regarding Condition No. 35**

Peter A. Jenkins, Chairman, informed the Board that HEAL-Utah requested to address the Board. Representatives from EnergySolutions would address the Board first. After EnergySolutions' presentation the representatives from HEAL-Utah would make their presentation. Finally, there would be a short rebuttal time from both parties.

Craig Galli, representing EnergySolutions made the following presentation to the Board (see attached presentation).

Mr. Galli said that EnergySolutions was surprised by the outcome of the October 2009 board meeting. The proposed substitute license amendment "Condition No. 35" was not on the Board's agenda--unlike today's proposed action item that is on the agenda. EnergySolutions was not entirely prepared to address the revised amendment "license condition no. 35." Mr. Galli said that looking back at what happened last month, the Board did not give EnergySolutions full consideration of all of the legal and public-policy implications of the October Action. EnergySolutions respectfully-requested that the Board reconsider the October 2009 Action Item.

Mr. Galli said that the current license allows for the disposal of Depleted Uranium (DU). He said that DU has been accepted and disposed of at the Clive facility for over 18 years. From NRC's recent presentations to this Board there appears to be no technical basis to justify a DU moratorium. DU does not pose an immediate public health and safety concern during the pendency of NRC's rulemaking--which as you know has already commenced. Based on some of these considerations and other considerations in the September 2009 board meeting, the Board rejected a "moratorium by rulemaking" by a vote of 8 to 3.

Chairman Jenkins called Christopher Thomas, Policy Director for HEAL-Utah, to come forward and make his presentation to the Board (see attached presentation).

Christopher Thomas, HEAL-Utah:

Mr. Thomas said that Janelle Eurich, Attorney for HEAL-Utah, would be helping him give the presentation to the Board. Mr. Thomas gave the Board two handouts. Mr. Thomas said he thought it was really important to look back and not ask the question, what are the Executive Secretary's powers, but rather what are the Board's powers. If board members focus on that question, he believed they would arrive at a very different answer.

Peter A. Jenkins, Chairman, asked both parties for a short rebuttal. Craig Galli, Attorney for *EnergySolutions*, came forward and made his final comments to the Board. Then Janelle Eurich, Attorney, HEAL-Utah, gave her final rebuttal. Both parties referred to rules and regulations on who had "final authority" to approve a license, license amendment and conditions on a license. Both parties referred to the presentations they had presented to the Board. *EnergySolutions* argued that the Executive Secretary had the final approval, and HEAL-Utah argued that the Board had final authority.

b. Consideration of Closing Meeting for Discussion of Depleted Uranium Issue

Peter A. Jenkins, Chairman, thanked representatives from HEAL-Utah and *EnergySolutions* for their time. Chairman Jenkins said that, as posted on the agenda, there would be a possibility that the Board might enter into an Executive Meeting, and the Board could discuss legal issues with their attorneys (it would be closed to the public). He asked the Board, if they had a desire to motion for a closed meeting.

MOTION MADE BY DAVID A. TRIPP THAT THE UTAH RADIATION CONTROL BOARD CONDUCT A CLOSED EXECUTIVE SESSION

Chairman Jenkins asked Fred Nelson, Attorney for the Board, to summarize the reasons that the Board could conduct a Closed Executive Session.

Fred Nelson went over reasons for which the Board could conduct a closed meeting. The reasons included a discussion of matters involving pending litigation. Litigation has been asserted by the parties involved in this matter. Also, because this is an adjudicative proceeding, the meeting could be closed for adjudicative deliberation pursuant to a Utah Supreme Court decision. Mr. Nelson stated that to close a meeting requires a 2/3rd

vote, a record must be kept, and that the closed meeting could only be for purposes of discussion, and any decision must be made in an open meeting.

After Mr. Nelson's comments, Chairman Jenkins asked David A. Tripp if he would like to amend his motion.

MOTION AMENDED BY DAVID A. TRIPP THAT THE BOARD CLOSE THE MEETING FOR "SOME PERIOD OF TIME;" BASED ON THE REASONS STATED BY MR. NELSON; FOR DISCUSSION ON LEGAL ISSUES ON THE LICENSE AMENDMENT; AND REGULATION OF DEPLETED URANIUM

SECONDED BY PATRICK D. CONE

Peter A. Jenkins asked the board members, if they would like to have a discussion on this issue. David A. Tripp asked whether the Board wished to reopen the meeting after their Executive Session; and thereafter, make a decision.

Chairman Jenkins explained that after the Board finished the Closed Executive Session, the Board would invite the public to come back, and the Board would re-enter into a normal or regular board meeting. At this point, the Board would discuss any further actions; take public comments; and then, possibly, take an action.

Scott Bird asked whether in the closed meeting, if the lawyers for the Board would be there to provide advice to the Board, or whether just the Board could be in attendance.

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OCTOBER 2009 BOARD DECISION ON THE LICENSE**

AMENDMENT AND REPLACE IT WITH A MOTION TO BEGIN RULEMAKING WHERE THE BOARD WOULD PUT A PLAN IN PLACE BEFORE ALLOWING MATERIAL TO COME INTO THE ENERGYSOLUTIONS' SITE

Peter A. Jenkins, Chairman, allowed EnergySolutions' representatives to address their concerns. The Board had further discussion, and Mr. Cone revised his motion.

MOTION MADE BY PATRICK D. CONE THAT THE BOARD RESCIND THE OCTOBER 2009 DECISION ON THE LICENSE AMENDMENT AND INSTIGATE A RULE-MAKING PROCESS REQUIRING A SITE-SPECIFIC ANALYSIS ON DEPLETED URANIUM (DU), BEFORE ACCEPTANCE AND PLACEMENT OF DU MATERIAL AT THE CLIVE SITE BY ENERGYSOLUTIONS

Chairman Jenkins said that in October 2009 the Board had a Draft license amendment. Chairman Jenkins asked Mr. Cone whether his motion would include adoption of that amendment or if the motion would completely remove license condition 35. He asked Mr. Cone if he were amending his motion; whether the Board had a second on Mr. Cone's motion; or whether there would be a friendly amendment.

MOTION MADE BY PATRICK D. CONE TO RESCIND THE OCTOBER 2009 AMENDMENT TO LICENSE CONDITION 35; AND TO ADOPT THE ORIGINAL WORDING AS IT WAS SUBMITTED TO THE BOARD IN SEPTEMBER 2009; AND THEN MOVE TO A RULEMAKING ON ACCEPTANCE OF DEPLETED URANIUM AND DIRECT THE EXECUTIVE SECRETARY AND DRC STAFF TO PRODUCE SUCH A RULE BY THE NEXT MEETING

SECONDED BY FRANK D. DEROSSO

There was further discussion among the board members and Mr. Cone's motion was amended.

MOTION AMENDED TO RESCIND THE ACTION OF THE BOARD IN OCTOBER 2009; AND ACCEPT THE LICENSE CONDITION 35 AS WAS SUBMITTED TO THE BOARD IN SEPTEMBER 2009'S WORDING; AND ENTER A RULEMAKING PROCEDURE TO ADOPT THOSE CHANGES MADE DURING THE OCTOBER 2009 BOARD MEETING WITH A DRAFT DOCUMENT FOR THE BOARD'S DECEMBER 2009 MEETING

Chairman Jenkins clarified that at the December 2009 board meeting the Board would have draft wording that could be issued for public comment. He said that after this motion, the Board should discuss whether or not the Board would like to be involved in this process.

The Board Members voted on this action as follows:

Scott Bird – Yes
Patrick D. Cone – Yes
Frank DeRosso – Yes
Christian K. Gardner – Yes
Peter A. Jenkins - Abstention
Elizabeth Goryunova – Yes
Colleen Johnson – Yes
Edd Johnson – Yes
Douglas S. Kimball – Yes
David A. Tripp - Yes

Vote: 9 Yes's; and 1 Abstention

MOTION CARRIED AND PASSED

There was discussion on the rule by board members. David A. Tripp, suggested that maybe a subcommittee of board members could assist the Executive Secretary and DRC staff in drafting the rule. Chairman Jenkins asked for volunteers for the subcommittee, they were:

- (1) Elizabeth Goryunovo, (2) Douglas S. Kimball, (3) David A. Tripp, (4) Patrick D. Cone and (5) Christian K. Gardner

A member of the public asked whether EnergySolutions could currently accept DU, and if the ruling allowed them a “window” to accept DU.

Fred Nelson, Board Attorney, and Chairman Jenkins responded that currently the regulatory environment had not changed for EnergySolutions. DU disposal restrictions were not in place under EnergySolutions’ current license.

VI. URANIUM MILL LICENSING AND INSPECTION

No Items

VII. OTHER DIVISION ISSUES

No Items

VIII. PUBLIC COMMENT

Please refer to Item V. b.

IX. The Next Scheduled Board Meeting: November 10, 2009 (Tuesday), DEQ Bldg #2, Conference Room 101, 168 North 1950 West, Salt Lake City, Utah 3:00 – 5:00 P.M. THE BOARD MEETING ADJOURNED AT 6:06 P.M.

- I. Minutes (Board Action Item)**
 - a. Approval of the Minutes from the November 10, 2009 Board Meeting**
Public Attendance List

Public Attendance Sheet
Utah Radiation Control
Board Meeting
 DEQ Bldg. #2, Conf. Room 101
 168 N 1950 W, Salt Lake City, UT 84114-4850
 3:00 - 5:00 p.m.
 November 10, 2009
Please Print

NAME (Please Print)	Organization/Affiliation Phone Number and Email Address:	Speak: Yes or No? If Yes, which Agenda Item would you like to Address, List Item No.:
1. Jeri Roos	roosjhr@aol.com 801-292-1460	no
2. BRAD R. Thomas	icaknow@yahoo.com 801-870-3116	no yes v.a.
3. Dan Shrum	Energy Solutions 801-649-2000	No
4. THOMAS MAGETTE	ENERGY SOLUTIONS	No
5. Eric Spreng	HEAL Utah	No
6. Romaine Marshall	Holland & Hart	No
7. Sean McCandless	Energy Solutions	No
8. Mark Ledoux	Energy Solutions	No
9. Christopher Thomas	HEAL Utah	Yes V.a.
10. Janelle Enrick	HEAL Utah RQN	Yes V.a.
11. KRISTA BOWERS	concerned citizen	Yes I.a.
12. Vanessa Pierce	HEAL Utah 801-344-5110 vanessa@health.utah.gov	NO
13. Naomi Franklin	franklin@biopgy.utah.edu?	
14. Teresa Tate	Tate County resident	yes V.A.
15. Ed Firmago Jr.	self	Yes
16.		
17.		
18.		
19.		

yield

yield

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11

Public Attendance Sheet
Utah Radiation Control
Board Meeting
 DEQ Bldg. #2, Conf. Room 101
 168 N 1950 W, Salt Lake City, UT 84114-4850
 3:00 - 5:00 p.m.
 November 10, 2009
Please Print

NAME (Please Print)	Organization/Affiliation: Phone Number and Email Address:	Speak: Yes or No? If Yes, which Agenda Item would you like to Address, List Item No.:
20. Robert Baird	URS/WD	No
21. Michael Cowley	myself	Yes
22. James O'Neal	citizen	yes V
23. David Esser	DRC	No
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Public Attendance Sheet
Utah Radiation Control
Board Meeting
 DEQ Bldg. #2, Conf. Room 101
 168 N 1950 W, Salt Lake City, UT 84114-4850
 3:00 – 5:00 p.m.
 November 10, 2009
Please Print

NAME (Please Print)	Organization/Affiliation Phone Number and Email Address:	Speak: Yes or No? If Yes, which Agenda Item would you like to Address, List Item No.:
39. Charles Judd	self	Yes v ✓
40. Steve Nelson	self	yes ✓
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Public Attendance Sheet

Utah Radiation Control

Board Meeting

DEQ Bldg. #2, Conf. Room 101

168 N 1950 W, Salt Lake City, UT 84114-4850

3:00 - 5:00 p.m.

November 10, 2009

Please Print

NAME (Please Print)	Organization/Affiliation Phone Number and Email Address:	Speak: Yes or No? If Yes, which Agenda Item would you like to Address, List Item No.:
58. ELLEN AARTZ	HEAL Utah	NO
59. MARI IN JEDLIKA	5325 OLD RANLY RD SUNDAVILLE	Yes <i>absent</i>
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Public Attendance Sheet
Utah Radiation Control
Board Meeting
 DEQ Bldg. #2, Conf. Room 101
 168 N 1950 W, Salt Lake City, UT 84114-4850
 3:00 - 5:00 p.m.
 November 10, 2009
Please Print

NAME (Please Print)	Organization/Affiliation Phone Number and Email Address:	Speak: Yes or No? If Yes, which Agenda Item would you like to Address, List Item No.:
96. Jim Sweet	General West	—
97. Clare Guilmore	HEAL	—
98. Jeb Berg	Cavanagh Services	
99. David Brown	PRIVATE CITIZEN	
100. Ruth Brown	" "	
101. Claire Medley	" "	yes ✓
102. James Holtkamp	Holland & Hart	No
103. Craig Galli	Holland & Hart	yes
104. Michael File	Private Citizen	no
105. Amy Conners	Deseret News	no
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114.		

Public Attendance Sheet

Utah Radiation Control

Board Meeting

DEQ Bldg. #2, Conf. Room 101

168 N 1950 W, Salt Lake City, UT 84114-4850

3:00 – 5:00 p.m.

November 10, 2009

Please Print

NAME (Please Print)	Organization/Affiliation Phone Number and Email Address:	Speak: Yes or No? If Yes, which Agenda Item would you like to Address, List Item No.:
77. Cherry Wong	Women Concerned	no
78. Sue Cortis	self	no
79. Carolyn Rutan	concerned citizen	No
80. Rob DeJurek	HEAL UTAH	no
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- V. **Radioactive Waste Disposal (Board Action Item)**
 - a. **Request from EnergySolutions to Address the Board:
Proposal Regarding Condition No. 35**

HEAL - Utah Additional Handout at the Board Meeting

Overview

HEAL Utah and Janelle Eurick of Ray, Quinney, Nebeker, have prepared this memo to spell out the broad powers conferred on the Radiation Control Board by Utah statute and rule. Based on the evidence presented in this memo, we believe the Board has the authority to issue an order that amends EnergySolutions' license to incorporate Condition 35 as currently proposed.

We believe that imposing a license condition in the manner proposed, i.e. through a formal adjudicative proceeding whereby the Board issues an order to amend EnergySolutions' license, may be the best way to proceed.

The Board Has the Expertise and Authority to Protect the Utah Public and Environment from Radiation By Amending a License

Authorities under the Utah Radiation Control Act

The Utah Radiation Control Act ("Act") creates the Radiation Control Board ("Board"), specifies its composition, and delineates its authority.

The Act creates a Board of diverse expertise, comprised of members who are "knowledgeable about radiation protection," including, among others: a physician, a dentist, a health physicist, and a representative of a local health department. *See Utah Code Ann. § 19-3-103(3)*.

Furthermore, the Act authorizes the Board to do various things, including: "require submittal of specifications or other information relating to licensing applications" and "issue orders necessary to enforce the provisions of this part" *See Utah Code Ann. § 19-3-103.5(1)(b)*. An "order" is broadly defined under the Utah Administrative Rulemaking Act to mean:

Utah Code Ann. § 63G-3-102. Definitions.

(11) "Order" means an agency action that determines the legal rights, duties, privileges, immunities, or other interests of one or more specific persons, but not a class of persons.

In other words, the Act authorizes the Board to issue orders that determine peoples' legal rights in order to enforce the Act's provisions. A Board order to amend a license to ensure that disposal of depleted uranium meets State and Federal performance objectives would appear to fit this definition.

The ability to issue orders is only one of many Board powers defined in the Act. Besides these explicitly defined powers, the Act also gives other broad authority to the Board to use whatever other powers it may need in order to protect public health and the environment: "The Board may ... (i) exercise all incidental powers necessary to carry out the purposes of this part." *See Utah Code Ann. § 19-3-103.5(1)(i)*.

Authorities Under Utah Administrative Code

The Radiation Control Act (“Act”) is implemented primarily by **Utah Rule 313 Radiation Control (“Rules”)**, “to ensure the maximum protection of the public health and safety to all persons at, or in the vicinity of, the place of use, storage, or disposal” of radioactive materials. *See Utah Administrative Code R313-12-2. Purpose and Scope.*

Similar to the Act, the Rules also confer broad authority on the Board to issue orders and impose requirements—even those not explicitly defined in the Rules—to protect Utah’s public health and environment:

R313-12-54. Additional Requirements.

The Board may, by rule, or order, impose upon a licensee or registrant requirements in addition to those established in these rules that it deems appropriate or necessary to minimize any danger to public health and safety or the environment.

And despite EnergySolutions’ claim that only the Executive Secretary can amend a license, other language exists that explicitly shows the license may be amended by Orders issued in accordance with the Act more broadly:

R313-25-12. Conditions of Licenses.

The terms and conditions of the license are subject to amendment, revision, or modification, by reason of amendments to, or by reason of rules, and orders issued in accordance with the terms of the Act and these rules.

License Condition 35, as currently written, appears to be entirely consistent with the above Rule R313-12-54, in that License Condition 35 is an additional requirement imposed by the Board on a licensee in order to minimize danger to public health and the environment.

The Rules also clearly contemplate that the Board can initiate its own formal adjudicative proceedings independent of the Executive Secretary:

R313-17-6. Commencing a Formal Adjudicative Proceeding.

(1) Except as otherwise permitted by emergency orders as described in Section 63G-4-502, all adjudicative proceedings shall be commenced by either:

(a) a Notice of Agency Action in accordance with Section 63G-4-201, if proceedings are commenced by the Board;

...

Given the preceding evidence, we firmly believe that Utah Law and Rules both clearly articulate the Board’s authority to 1) initiate a formal adjudicative proceeding and 2) issue an order that 3) amends EnergySolutions’ license with additional requirements, consistent with protecting Utah’s public health and environment, as contemplated with proposed license condition 35.

EnergySolutions Fails to Demonstrate that the Board Cannot Amend a License

ES Fails to Demonstrate Limitations on Board's authority

EnergySolutions argues in papers filed with the Radiation Control Board that the Board does not have the authority to amend EnergySolutions' license and that only the Executive Secretary does. As evidence to support this argument, EnergySolutions refers to the following Utah laws and rules:

Utah Code Ann. § 19-3-108(2)(c).

The executive secretary may, as authorized by the board: (i) issue licenses, registrations, and certifications, (ii) review and approve plans.

R313-19-61. Modification, Revocation, and Termination of Licenses.

The terms and conditions of all licenses shall be subject to amendment, revision, or modification or the license may be suspended or revoked by reason of amendments to the Act, or by reason of rules, and orders issued by the Executive Secretary.

R313-25-12. Conditions of Licenses.

...

(7) The Executive Secretary may incorporate, by rule or order, into licenses at the time of issuance or thereafter, additional requirements and conditions with respect to the licensee's receipt, possession, and disposal of waste as the Executive Secretary deems appropriate or necessary in order to: (a) protect health or to minimize danger to life or property;

None of the above references says that only the Executive Secretary can amend a license, as asserted by EnergySolutions. Each spells out aspects of the Executive Secretary's powers, but none limits the Board's powers. As discussed earlier in this memo, state statute explicitly grants the Board all incidental (or "subordinate") powers--meaning that any power belonging to the Executive Secretary also belongs to the Board.

EnergySolutions further argues that the Radiation Control Board must follow its own rules and that to do otherwise would constitute "arbitrary and capricious" conduct. We agree. In the present case, the Rules clearly state that the Board can impose additional requirements on licensees, as cited earlier:

R313-12-54. Additional Requirements.

The Board may, by rule, or order, impose upon a licensee or registrant requirements in addition to those established in these rules that it deems appropriate or necessary to minimize any danger to public health and safety or the environment.

This R313-12-54 appears to be a more general and sweeping version of the Executive Secretary's power articulated in R313-25-12 referenced above. Thus, the Board would clearly be following its own rules by issuing an order to amend EnergySolutions' license as currently contemplated by proposed license condition 35.

EnergySolutions' Conduct Actually Supports Board Authority to Amend the License

Perhaps unwittingly, one of EnergySolutions' "proposed pathways" actually supports the Board's authority to amend EnergySolutions' license:

PATHWAY NO.1 (preferred by EnergySolutions): Under Pathway No.1, the Board would withdraw the Notice and approve the September Condition No. 35.

If, under EnergySolutions' legal theory, the Board does not have the ability to amend a license, then the Board would not have the authority to "approve" the license condition under this pathway—especially given that no party has formally appealed the license condition to the Board.

Furthermore, if EnergySolutions truly believed that the Board did not have the authority to approve a change to its license, then it should have challenged the Board's authority earlier. The agenda for the October 13, 2009 Radiation Control Board meeting lists the following under Item V.b: "Consideration of License Amendment for Depleted Uranium disposal at EnergySolutions (Board Action Item)."

If what EnergySolutions now asserts--that the Board cannot approve a change to the license--were true, then a "Board Action Item" to consider a "License Amendment" would have been a meaningless exercise to begin with. After all, according to EnergySolutions' present argument, only the Executive Secretary can approve a change to the license.

Other Issues

Moratorium vs. Approval Conditioned On Acceptable Results of Studies

EnergySolutions may call the proposed license condition 35 a "moratorium" but the condition as currently written still allows EnergySolutions to dispose of depleted uranium upon a showing that such disposal will be protective of Utah's public health and environment.

Administrative Law Judge

While the Act does appear to contemplate Board interaction with an administrative law judge on a "dispositive action," the present proceeding concerning proposed License Condition 35 is not a dispositive action according to the definition:

19-1-301. Adjudicative proceedings.

- (1) As used in this section, "dispositive action" is a final agency action that:
 - (a) a board takes following an adjudicative proceeding on a request for agency action; and
 - (b) is subject to judicial review under Section 63G-4-403.

Because the current proceeding did not arise from a "request for agency action," proposed license condition 35 does not appear to require the use of an administrative law judge.

Rulemaking

We believe that the Board should proceed with the proposed license condition 35. An order to amend the license in this way is appropriate to deal with the unique case of a party (EnergySolutions) who asserts that it already has authorization to accept significant quantities of DU for disposal. No other party is making such a claim.

But the Board may also consider initiating a rulemaking to deal with all people who may wish to dispose of significant quantities of DU in the future.

EnergySolutions asserts that rulemaking regarding DU "is legal but appears infeasible" because of Utah state law that requires a "stringency test" when there is a corresponding Federal Regulation:

Utah Code Ann. § 19-3-104. Registration and licensing of radiation sources by department -- Assessment of fees -- Rulemaking authority and procedure -- Siting criteria.

...

(8) (a) Except as provided in Subsection (9), the board may not adopt rules, for the purpose of the state assuming responsibilities from the United States Nuclear Regulatory Commission with respect to regulation of sources of ionizing radiation, that are more stringent than the corresponding federal regulations which address the same circumstances.

(9) (a) The board may adopt rules more stringent than corresponding federal regulations for the purpose described in Subsection (8) only if it makes a written finding after public comment and hearing and based on evidence in the record that corresponding federal regulations are not adequate to protect public health and the environment of the state.

With regard to disposal of significant quantities of DU, we strongly dispute that there are "corresponding federal regulations which address the same circumstances" as those that would be addressed by a state of Utah rulemaking on this issue. The NRC has admitted in a Federal Register notice that in developing the low-level waste classification system, the impacts of significant quantities of DU were not analyzed:

NUCLEAR REGULATORY COMMISSION [NRC-2009-0257]

Notice of Public Workshop on a Potential Rulemaking for Safe Disposal of Unique Waste Streams Including Significant Quantities of Depleted Uranium

...

The original development of 10 CFR 61.55 did not explicitly consider the impacts resulting from the disposal of significant quantities of depleted uranium from the operation of a commercial uranium enrichment facility

Clearly, a gap exists in federal regulations and that gap is the subject of an ongoing federal rulemaking to address significant quantities of DU and other "unique" waste streams not covered under the original waste classification system.

Therefore, because no corresponding federal regulations exist “which address the same circumstances,” a Utah rulemaking on depleted uranium would not have to meet the stringency test.

Agreement State Status

We assert that the state of Utah has the authority to protect public health and the environment under Utah’s agreement with the NRC, by requiring a performance assessment of sufficient length to capture the peak hazard of waste stream.

The state of Texas requires a performance assessment that captures “peak dose” in order to demonstrate that the public will be protected:

Texas Rule §336.709 Technical and Environmental Analyses

...
A minimum period of 1,000 years after closure or the period where peak dose occurs, whichever is longer, is required as the period of analysis to capture the peak dose from the more mobile long-lived radionuclides and to demonstrate the relationship of site suitability to the performance objective in this section to the performance objective in §336.724 of this title.

This Texas rule was vetted by the NRC without comment. Texas is still an agreement state in good standing with the NRC. If the NRC wishes to comment on the proposed license condition, it may do so during the open comment period.

Conclusion

The Radiation Control Act and associated Administrative Rules together confer broad authority on the Board to impose additional requirements on licensees, in order to protect Utah’s public health and environment. We believe a license condition may be the best way to deal with the unique situation of EnergySolutions, who is the only party claiming it already has permission to dispose of significant quantities of DU.

EnergySolutions fails to demonstrate that only the Executive Secretary can amend a license, and paradoxically appears to be asking the Board to “approve” a prior version of the license condition; this apparently contradicts EnergySolutions’ fundamental claim that the Board does not have authority to amend a license.

Radiation Control Board Authority to Amend a License

A review of the Radiation Control Act
and Radiation Control Rules

November 10, 2009

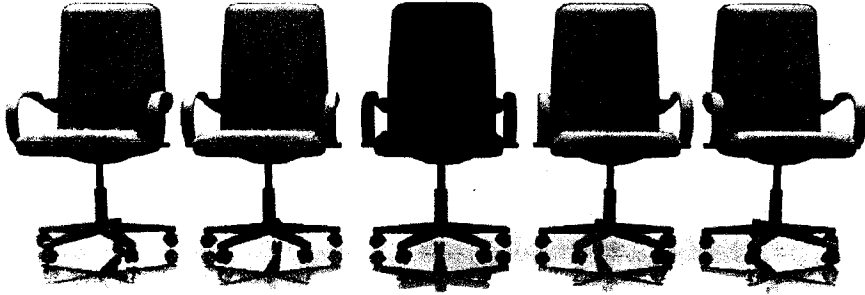
EnergySolutions: Only the Executive Secretary Can Amend the License



R313-19-61. Modification, Revocation, and Termination of Licenses.

The terms and conditions of all licenses shall be subject to amendment, revision, or modification or the license may be suspended or revoked by reason of amendments to the Act, or by reason of rules, and orders issued by the Executive Secretary.

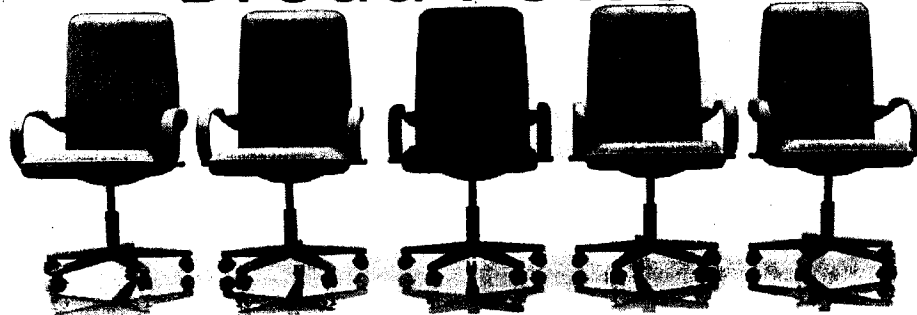
Executive Secretary Issues Licenses As Authorized by the Board



Utah Code Ann. § 19-3-108(2)(c).
The executive secretary may, as authorized
by the board: (i) issue licenses ...



Utah Law and Rule Give the Board Broad Powers



19-3-103.5. Board authority and duties.

(1) The board may:

- (a) require submittal of specifications or other information relating to licensing applications for radioactive materials
- (b) issue orders necessary to enforce the provisions of this part
- (i) exercise all incidental powers necessary to carry out the purposes of this part

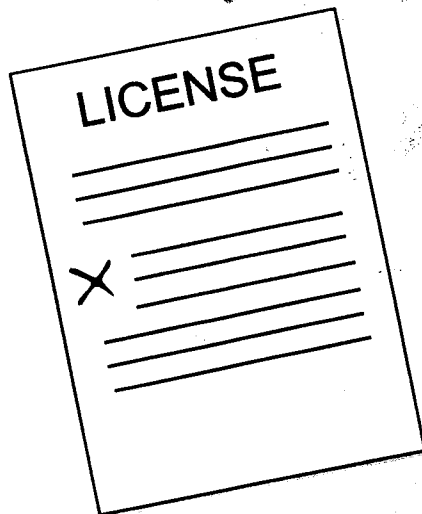
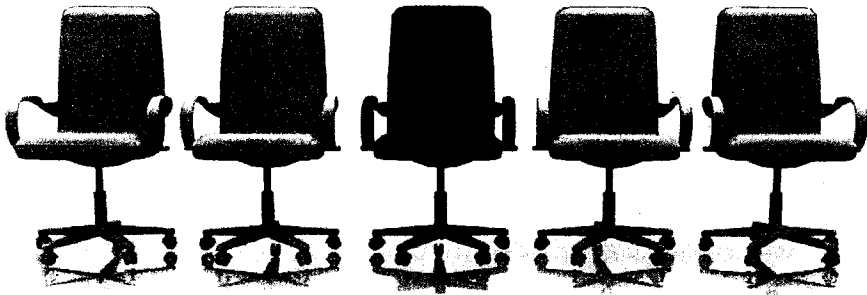
R313-25-12. Conditions of Licenses.

The terms and conditions of the license are subject to amendment, revision, or modification, by reason of amendments to, or by reason of rules, and orders issued in accordance with the terms of the Act and these rules.

R313-12-54. Additional Requirements.

The Board may, by rule, or order, impose upon a licensee or registrant requirements in addition to those established in these rules that it deems appropriate or necessary to minimize any danger to public health and safety or the environment.

“impose upon a licensee ... requirements in addition to those established in these rules”



R313-12-54. Additional Requirements.

The Board may, by rule, or order, impose upon a licensee or registrant requirements in addition to those established in these rules that it deems appropriate or necessary to minimize any danger to public health and safety or the environment

R313-25-12. Conditions of Licenses.

The terms and conditions of the license are subject to amendment, revision, or modification, by reason of amendments to, or by reason of rules, and orders issued in accordance with the terms of the Act and these rules.

State v. Jeffries, 2009 UT 57, P9

[S]tatute[s] should be construed . . . so that no part [or provision] will be inoperative or superfluous, void or insignificant, and so that one section will not destroy another.

EnergySolutions is Asking for the Board to Approve its Own License Condition

From EnergySolutions' Board submission...

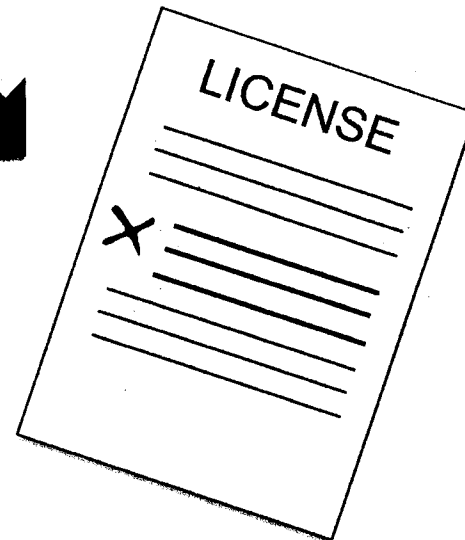
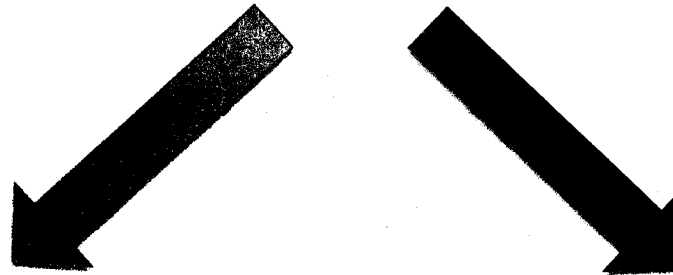
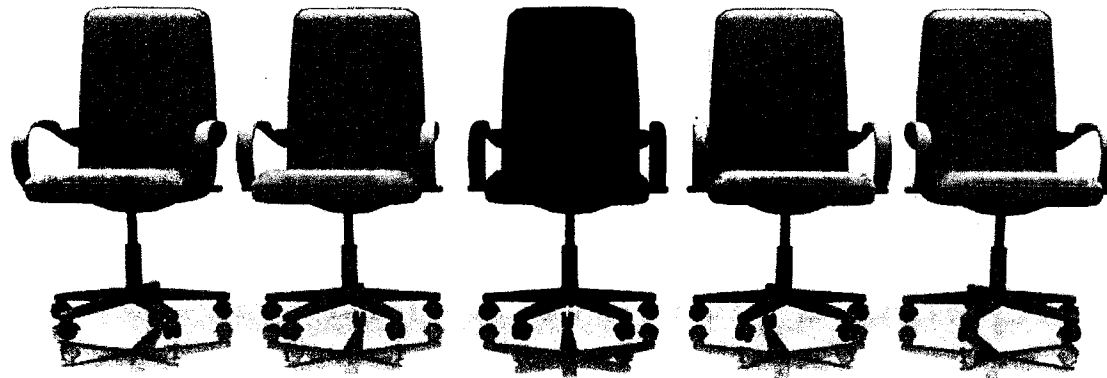
PATHWAY NO. 1 (preferred by EnergySolutions): Under Pathway No. 1, the Board would withdraw the Notice and approve the September Condition No. 35.

From the October 13, 2009 Board meeting agenda...

V. Radioactive Waste Disposal

- b. Consideration of a License Amendment for Depleted Uranium disposal at EnergySolutions (Board Action Item)

EnergySolutions is Asking for the Board to Approve its Own License Condition



A Threat to Agreement State Status?

License Condition 35 is Not a Moratorium

- License condition 35 as proposed does not say Depleted Uranium cannot come to Utah
- It does require a performance assessment to ensure that depleted uranium disposal is safe as the hazard grows over time
- Under license condition 35, EnergySolutions could import depleted uranium if disposal is demonstrated to be safe

A Threat to Agreement State Status? See Texas Example



Texas Rule §336.709 - Technical and Environmental Analyses.

...The analyses shall clearly demonstrate that there is reasonable assurance that the exposures to humans from the release of radioactivity will not exceed the limits specified in §336.724 of this title ...

A minimum period of 1,000 years after closure or the period where peak dose occurs, whichever is longer, is required as the period of analysis to capture the peak dose ...

Conclusions

- Utah Law and Rule give the Board broad power to issue an order to impose additional requirements on a licensee
- Nowhere does it say that only the Executive Secretary can amend a license
- License condition 35 is not a moratorium—it simply requires that disposal would be demonstrated to be safe first

- V. Radioactive Waste Disposal (**Board Action Item**)
 - a. Request from EnergySolutions to Address the Board:
Proposal Regarding Condition No. 35

EnergySolutions Presentation to the Board

Radiation Control Board Authority to Amend a License

A review of the Radiation Control Act
and Radiation Control Rules

November 10, 2009

EnergySolutions: Only the Executive Secretary Can Amend the License

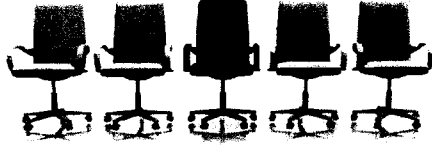


R313-19-61. Modification, Revocation, and Termination of Licenses.

The terms and conditions of all licenses shall be subject to amendment, revision, or modification or the license may be suspended or revoked by reason of amendments to the Act, or by reason of rules, and orders issued by the Executive Secretary.

EnergySolutions claims that **ONLY** the Executive Secretary can amend the license. And while it's true that the rules do say that a license is subject to revision by the Executive Secretary, nothing in the language cited by EnergySolutions says that is the Executive Secretary **AND HE ALONE** who can amend a license.

Executive Secretary Issues Licenses As Authorized by the Board

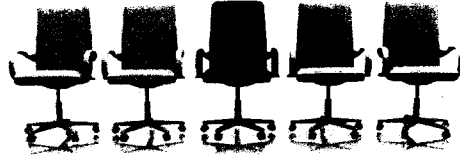


Utah Code Ann. § 19-3-108(2)(c).
The executive secretary may, as authorized
by the board: (i) issue licenses ...



In fact, if you take a closer look at one of the Rules cited by EnergySolutions, it's clear that the Executive Secretary's power to issue licenses is actually secondary to the Board's authority to issue licenses.

Utah Law and Rule Give the Board Broad Powers



19-3-103.5. Board authority and duties.

(1) The board may:

- (a) require submittal of specifications or other information relating to licensing applications for radioactive materials
- (b) issue orders necessary to enforce the provisions of this part
- (i) exercise all incidental powers necessary to carry out the purposes of this part

R313-25-12. Conditions of Licenses.

The terms and conditions of the license are subject to amendment, revision, or modification, by reason of amendments to, or by reason of rules, and orders issued in accordance with the terms of the Act and these rules.

R313-12-54. Additional Requirements.

The Board may, by rule, or order, impose upon a licensee or registrant requirements in addition to those established in these rules that it deems appropriate or necessary to minimize any danger to public health and safety or the environment.

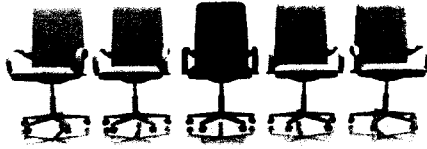
You will notice that EnergySolutions said almost nothing about the powers of the Board; they only looked at the powers of the Executive Secretary. In fact, if you start out by asking the question, "What are the Board's powers?" you will quickly see that Utah statute and Rule confer broad powers on the Board.

First of all, statute empowers the Board to require the submittal of information related to license applications, issue orders, and exercise all incidental powers necessary to carry out the purposes of radiation control Act.

Second, although EnergySolutions suggests that conditions of license are only subject to amendment by the Executive Secretary, the second rule clearly states that licenses are subject to "orders issued in accordance" with the Act and Rules -- So not just orders by the Executive Secretary, but more broadly, Orders issued in Accordance with the Act and Rules.

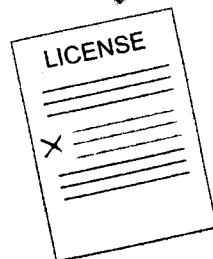
And third, the Rules clearly state that the Board may issue orders that impose additional requirements on licensees to minimize danger to public health and the environment. So both the Act and the Rules specifically say the Board may issue Orders.

“impose upon a licensee ... requirements in addition to those established in these rules”



R313-12-54. Additional Requirements.

The Board may, by rule, or order, impose upon a licensee or registrant requirements in addition to those established in these rules that it deems appropriate or necessary to minimize any danger to public health and safety or the environment



R313-25-12. Conditions of Licenses.

The terms and conditions of the license are subject to amendment, revision, or modification, by reason of amendments to, or by reason of rules, and orders issued in accordance with the terms of the Act and these rules.

State v. Jeffries, 2009 UT 57, P9

[S]tatute[s] should be construed . . . so that no part [or provision] will be inoperative or superfluous, void or insignificant, and so that one section will not destroy another.

EnergySolutions said that the Board must comply with its own rules. You can, because Utah Rules explicitly say that the Board can impose additional requirements on a licensee. Take a moment to read the rule. As I read the plain language, issuing an order to amend EnergySolutions' license with proposed condition 35 appears to be entirely within the Board's authority ... as long as the purpose is to "minimize any danger to public health and safety of the environment." Also notice that the Rule does not refer to "imminent danger" to public health and the environment, but simply "danger."

Also, you can see that R313-25-12 clearly says that a license is subject to amendment by any order issued in accordance with the Act and Rules.

Case law tells us that statutory language needs to be read to have a distinct meaning. (Utah 2009, citing Brickyard Homeowners' Ass'n Mgmt. Comm. v. Gibbons Realty Co., 668 P.2d 535, 538 (Utah 1983)(quoting 2A Sutherland Statutory Construction, § 46.06 (1973)). Therefore, to the extent that conflict exists or arises within statutory language, our duty is to interpret the language, affording each provision a meaningful purpose and separating convoluted statutes with a meaningful distinction. Id.

EnergySolutions is Asking for the Board to Approve its Own License Condition

From EnergySolutions' Board submission...

PATHWAY NO. 1 (preferred by EnergySolutions): Under Pathway No. 1, the Board would withdraw the Notice and approve the September Condition No. 35.

From the October 13, 2009 Board meeting agenda...

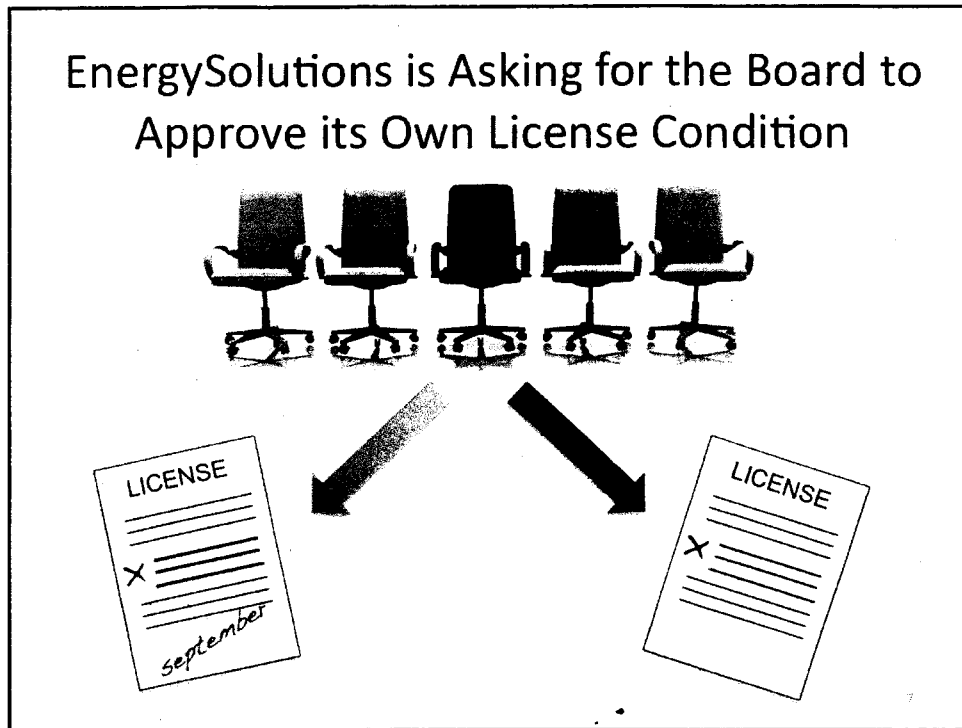
V. Radioactive Waste Disposal

- b. Consideration of a License Amendment for Depleted Uranium disposal at EnergySolutions (Board Action Item)

When you think about it, it's strange that EnergySolutions would be here today asking this Board to approve their own version of license condition 35. You can clearly see above that under their Pathway No. 1, they are asking the Board to approve the September Condition number 35. But in the same breath, EnergySolutions says the Board DOES NOT have the authority to amend a license.

Similarly, it seems strange that EnergySolutions attorneys would not have been bothered by the October 13 meeting agenda, which clearly said the Board intended to take action on whether to approve a license amendment regarding Depleted Uranium Disposal at EnergySolutions. If EnergySolutions is correct, and the Board cannot amend a license, then a Board action item on a license amendment would be a meaningless activity.

EnergySolutions is Asking for the Board to Approve its Own License Condition



When you think about it, it's almost as if EnergySolutions believes the Board DOES have authority to approve a license condition that EnergySolutions likes, but believes the Board DOES NOT have the authority to approve a license condition EnergySolutions does not like.

A Threat to Agreement State Status? License Condition 35 is Not a Moratorium

- License condition 35 as proposed does not say Depleted Uranium cannot come to Utah
- It does require a performance assessment to ensure that depleted uranium disposal is safe as the hazard grows over time
- Under license condition 35, EnergySolutions could import depleted uranium if disposal is demonstrated to be safe

Finally, EnergySolutions argues that what the Board is doing with Condition 35 is essentially a moratorium and consequently, Utah's Agreement State Status is now in jeopardy. However, we do not read license condition 35 as a moratorium. It simply states that depleted uranium disposal needs to be demonstrated as safe before additional significant quantities are allowed for disposal in the state. In other words, it is not a blanket refusal of depleted uranium – it clearly articulates that depleted uranium will be allowed for disposal upon a showing that it is safe.

A Threat to Agreement State Status? See Texas Example



Texas Rule §336.709 - Technical and Environmental Analyses.

...The analyses shall clearly demonstrate that there is reasonable assurance that the exposures to humans from the release of radioactivity will not exceed the limits specified in §336.724 of this title ...

A minimum period of 1,000 years after closure or the period where peak dose occurs, whichever is longer, is required as the period of analysis to capture the peak dose ...

The license condition is phrased similarly to a rule implemented by Texas in 2003. The Texas rule simply says that the period of performance will be 1,000 years or until peak dose, whichever is greater. License Condition 35 says 10,000 year and 1 million years. The idea in both is the same – waste streams that present a long-term hazard must be demonstrated to be safe in the long-term before disposal is allowed. Texas is also an agreement state and the NRC reviewed this rule between 2003 and 2004 and expressed no concern about this language. Texas is still an agreement state in good standing with the NRC.

Conclusions

- Utah Law and Rule give the Board broad power to issue an order to impose additional requirements on a licensee
- Nowhere does it say that only the Executive Secretary can amend a license
- License condition 35 is not a moratorium—it simply requires that disposal would be demonstrated to be safe first

10

- V. **Radioactive Waste Disposal (Board Action Item)**
 - b. **Consideration of Closing Meeting for Discussion of Depleted Uranium**

Public Comments

Ge chapman – email comments on DU

From: ge chapman <gechapman2@yahoo.com>
To: <dfinerfrock@utah.gov>
Date: 11/9/2009 7:32 PM
Subject: comments on EnergySolutions for Radiation Control Board

It's in the best interest of EnergySolutions and the citizens of Utah to show that the Clive facility is safe for a long time. To that end ES should provide increased funding to you and your staff to assure the citizens of Utah that the Clive facility is safe. Safe not just now but for a thousand years in the future. Providing proper reasonable funded oversight with reasonable detection and standards relying on buried with depleted uranium containers, monitoring and detection systems. This is not just a desert. It is a salt desert. We should be able to monitor the effect of salt and other materials on the stainless steel barrels that contain the uranium hexafluoride. In addition we should be cognizant of potential weather effects on the mounds - how much water is penetrating them. The biggest near term threat is the financial viability of EnergySolutions followed closely by large weather swings that could result in significantly more rain and water in the area, for instance from a super el nino. In summary, the Radiation Control Board should be asking for significantly more funding by ES and they should require real time independent monitoring of barrel mounds and standard containers and they should require that ES prepare contingency plans for implementation if storage containers appear to be threatened.

- V. Radioactive Waste Disposal**
 - b. Consideration of Rule for Depleted Uranium Disposal (Board Action Item)**

Statement of Basis for Administrative Rulemaking for Disposal of Depleted
Uranium and Proposed Rule

**UTAH RADIATION CONTROL BOARD
STATEMENT OF BASIS FOR ADMINISTRATIVE RULEMAKING
REGARDING DISPOSAL OF SIGNIFICANT QUANTITIES OF DEPLETED URANIUM**

December 1, 2009

This Statement of Basis for Administrative Rulemaking Regarding Disposal of Significant Quantities of Depleted Uranium (Statement of Basis) has been prepared to support the proposed rule in Part VI of this Statement of Basis. If the Radiation Control Board votes to begin rulemaking on this matter, information about how and when to comment on the rule, including information about a public hearing, will be posted at <http://www.radiationcontrol.utah.gov/>.

I. REGULATORY AND FACTUAL BACKGROUND

Following is background information and descriptions of some of the most significant among many actions taken by the regulatory agencies discussed below regarding depleted uranium.¹

A. What is depleted uranium and how is it similar to and different from other wastes?

“Depleted uranium oxide contains approximately 85 percent uranium by mass. In comparison, a low-grade uranium ore common in the United States may contain 0.1 percent uranium by mass.”

...

“For mill tailings, a significant portion of the total activity at the time of disposal is associated with radium, therefore disposal or management decisions can focus on the radiological inventory at the time of disposal. For example, a barrier to attenuate the emanation of radon from mill tailings can be designed based on the concentration of the material at the time of disposal. On the other hand, DU is essentially depleted in the daughter radionuclides but concentrated (compared to natural ore or mill tailings) in the parent radionuclides. Over long periods of time, the uranium parent radionuclides have the potential to produce quantities of daughter radionuclides significantly in excess of natural ores or mill tailings because the DU source has much higher concentrations of uranium. For example, mill tailings commonly have from 0.004 to 0.02 wt percent U3O8, 26 to 400 pCi/g 226Ra, and 70 to 600 pCi/g 230Th at the time of disposal (Robinson, 2004). Depleted uranium (in oxide form) would have approximately 99.9 percent uranium oxide at the time of disposal and greater than 300,000 pCi/g 226Ra and 230Th approximately 1 million years after disposal (values cited were calculated with a simple decay/in-growth calculation).”

...

“Whereas the activity in a commercial LLW facility decreases to a few percent of the initial value over a few hundred years, the activity in a facility for DU would be expected to remain relatively constant initially, but begin increasing at around 1,000 years. Peak activity, assuming no release from the source, would not be attained until after 1 million years after disposal.”

U.S. Nuclear Regulatory Commission (NRC) Staff, SECY-08-0147.²

B. U.S. Nuclear Regulatory Commission actions

1. 1981-82: NRC developed its waste classification system and concentration limits for land disposal of radioactive waste, now found in 10 CFR Part 61*, based on modeling that informed what maximum levels of radioactivity would still allow 10 CFR Part 61 performance objectives to be met.³ For this analysis, NRC did not evaluate environmental impacts of land disposal for significant quantities of depleted uranium. See Part II.B.1 of this Statement of Basis.
2. October 2000: NRC issued NUREG-1573, guidance for those conducting site-specific performance assessments for radioactive waste land disposal facilities.⁴
3. October 2005: The NRC Commission asked its staff to consider whether the significant quantities of depleted uranium in the waste stream, which were not anticipated in 1981, warranted reclassification of depleted uranium or other amendments to NRC's regulations.⁵
4. June 2006: Louisiana Energy Services was licensed as a uranium enrichment facility. The facility will create a waste stream with substantial quantities of depleted uranium.⁶ In the course of this proceeding, depleted uranium disposal at EnergySolutions was analyzed. The Commission rejected claims by an intervenor that Envirocare's performance assessment was inadequate and that NRC had previously found that depleted uranium could not be disposed of in a near-surface facility and that NRC could not therefore find that disposal at EnergySolutions was acceptable. While expressing concern that its Staff may not have fully explored the long-term impacts from the disposal of depleted uranium "whose radiological hazard gradually *increases* over time,"⁷ the Commission nevertheless upheld the decision by the Atomic Safety Licensing Board. However, it noted in doing so that its decision on the adequacy of an Environmental Impact Statement was not intended to take the place of a Part 61 compliance review,⁸ and that "[p]rior to a final determination on disposal, we would expect that the pertinent regulatory authority will have considered both the characteristics of the waste and the site-specific features of the disposal site to assure that all radiological dose limits and safety regulations indeed can be met."⁹
5. October 2008: NRC staff, in October 2008 (SECY-08-0147) responded to the Commission's October 2005 order.¹⁰ The staff:
 - (a) Evaluated a generic case to determine whether it was possible to meet 10 CFR Part 61 standards with near-surface disposal of depleted uranium, and concluded that it was.

* There are Utah rules equivalent to 10 CFR Part 61 found in Utah Admin. Code R. 313. As appropriate, references to 10 CFR Part 61 should also be read as referring to the equivalent state rules. See endnote 1 for web access information.

- (b) Prepared several regulatory options, and recommended that the Commission not change classification for depleted uranium, but add language requiring a site-specific performance assessment before significant quantities of depleted uranium are accepted for disposal.
6. October 2008: In the October 2008 SECY-08-0147 and in subsequent statements, NRC staff has also indicated that there are limitations to the generic case study described in Part I.B.5 of this Statement of Basis, and recommended that it should not be relied upon for any site-specific licensing action. *See* Part II.B.2 of this Statement of Basis.
 7. March 2009: NRC agreed with the course of action recommended by the NRC staff in SECY-08-0147. The Commission made determinations:
 - (a) To keep depleted uranium as Class A waste; and
 - (b) To initiate rulemaking proposing enhanced performance assessment requirements for facilities proposing to dispose of significant quantities of depleted uranium.¹¹
 8. August 2009: NRC made a recommendation regarding any proposals to dispose of significant quantities of depleted uranium in the interim period before NRC's depleted uranium rulemaking process is completed.¹² It recommended that, prior to disposal of significant quantities of depleted uranium at a near-surface disposal facility, site-specific performance assessments should be evaluated against criteria developed in the October 2008 SECY-08-0147 staff analysis and in a Federal Register notice at 74 Fed. Reg. 30175 (June 24, 2009). *See* Part II.A. of this Statement of Basis.

C. Utah Division of Radiation Control actions

1. March 1991: Depleted uranium was first approved for disposal at Envirocare, but disposal was limited to volumetric bulky materials or structural debris with a concentration limit of $1.1 \text{ E}5 \text{ pCi/g}$.¹³
2. October 1998: Envirocare's license was amended to approve an increase in the concentration limit to an average concentration per container of $3.7\text{E}5 \text{ pCi/g}$.
3. Approximately 1999: Envirocare submitted a performance assessment for a new proposed land disposal facility for Class A, B, and C wastes. The assessment showed that 10 CFR Part 61 performance standards would be met for very large quantities of depleted uranium based on the assumptions specified in that document. The performance assessment reported results from an analysis of 500 years.
4. October 2000: The Executive Secretary approved a license amendment for a new disposal cell for Class A waste. Disposal of depleted uranium in the new cell was not limited by concentration or quantity. Both diffuse and concentrated depleted uranium have been disposed of pursuant to this amended license; approximately 49,000 metric tons of depleted uranium have been disposed of at EnergySolutions to date.

5. September 2009: The license was changed, at EnergySolutions' request, to require that all wastes with depleted uranium concentrations greater than 5 percent (by weight) be placed a minimum of 10 feet below the top of the cover.

D. Other states' actions

1. Washington: In response to an inquiry in the course of the the NRC's Unique Waste Streams Rulemaking Worskhop held in Salt Lake City in September 2009, Washington State's representative responded as follows to this question:

"Has the NRC or any of the agreement states that have low level waste sites been approached about reviewing the performance assessment of your particular disposal facility under this process?"

"We've talked about it in good detail. I think the prudent thing we've decided is we really need to wait until this kind of works through because we could do a performance assessment that may not meet the criteria that the NRC ends up getting, and you'd end up having to do it twice. So I think from our standpoint we wait."¹⁴

2. Texas: In response to the same inquiry, the representative from Texas said:

"We do not have a new performance assessment to review for the interim in Texas."¹⁵

Texas regulations state, regarding the licensing of radioactive waste land disposal facilities:

"The specific technical and environmental information in the application shall also include the following analyses needed to demonstrate that the performance objectives of this subchapter, referenced in §336.723 of this title (relating to Performance Objectives), will be met:

(1) Pathways analyzed in demonstrating protection of the general population from releases of radioactivity shall include air, soil, groundwater, surface water, plant uptake, and exhumation by animals. The analyses shall clearly identify and differentiate between the roles performed by the natural disposal site characteristics and design features in isolating and segregating the wastes. The analyses shall clearly demonstrate that there is reasonable assurance that the exposures to humans from the release of radioactivity will not exceed the limits specified in §336.724 of this title (relating to Protection of the General Population from Releases of Radioactivity). A minimum period of 1,000 years after closure or the period where peak dose occurs, whichever is longer, is required as the period of analysis to capture the peak dose from the more mobile long-lived radionuclides and to demonstrate the relationship of site suitability to the performance objective in this section to the performance objective in §336.724 of this title."¹⁶

E. Standards governing the Board's rulemaking authority

Utah Code Ann. § 19-3-104(4):

The board may make rules:

- (a) necessary for controlling exposure to sources of radiation that constitute a significant health hazard;
- (b) to meet the requirements of federal law relating to radiation control to ensure the radiation control program under this part is qualified to maintain primacy from the federal government; (c) to establish:
 - (i) board accreditation requirements and procedures for mammography facilities; and
 - (ii) certification procedure and qualifications for persons who survey mammography equipment and oversee quality assurance practices at mammography facilities; and
- (d) as necessary regarding the possession, use, transfer, or delivery of source and byproduct material and the disposal of byproduct material to establish requirements for:
 - (i) the licensing, operation, decontamination, and decommissioning, including financial assurances; and
 - (ii) the reclamation of sites, structures, and equipment used in conjunction with the activities described in this Subsection (4).

II. SUMMARY OF PRELIMINARY BASES FOR ACTIONS

Following is a summary of information particularly pertinent to the Board's proposed rulemaking action, although all of the information provided in this Statement should be considered part of the Board's basis.

A. NRC Recommendation.

1. For this interim period before completion of NRC rulemaking, The NRC has explicitly recommended that agreement states conduct a new review of performance assessments, prior to disposal of significant quantities of depleted uranium.

"What is NRC's position regarding disposal of significant amounts of depleted uranium before the rulemaking is complete?"

...

"If a site wishes to dispose of significant amounts of depleted uranium, it would be prudent for the site operator and State regulator to review the existing performance assessment supporting the site and determine whether the issues that were raised in the technical analyses supporting the Commission decision to initiate this potential rulemaking and in the Federal Register Notice for the NRC public workshops are adequately addressed. If not, it would be prudent to revise the performance assessment to adequately address these issues on a site-specific basis before disposal of significant quantities of depleted uranium."

NRC's Frequently Asked Questions in the Communication Plan.¹⁷

NRC Staff has repeated this advice in other arenas, e.g., its Unique Waste Streams Rulemaking Record.¹⁸

2. The NRC did not define the quantities of depleted uranium that would have to be land disposed before raising concerns, but it did define "small quantities," 1 to 10 metric tons of depleted uranium that could, it concluded, be disposed of at shallow depth.¹⁹

B. Past environmental analysis.

NRC has recognized that there has been no adequate analysis of the health and safety-related impacts of near-surface disposal of depleted uranium.

1. The NRC has acknowledged that at the time the initial classification system for radioactive waste was created it was not anticipated that significant quantities of depleted uranium would be disposed of in near surface facilities. It also acknowledged that environmental studies done did not address the significant quantities that are now expected.

"At the time of development of [10 CFR] Part 61, it was envisioned that [low level radioactive waste regulated in that Part] in a disposal facility would decay, in a maximum of 500 years, to activity levels that would not pose a significant risk to an inadvertent intruder, and that there would not be significant quantities of long-lived isotopes which would pose unacceptable long-term risks to the public from releases from the facility. In developing Part 61, NRC considered longer periods of institutional control in the DEIS (NRC, 1981). Assumptions about the persistence of institutional controls in the international community were considered and a series of public meetings were conducted to get input from stakeholders. The consensus among the stakeholders was that it is not appropriate to assume institutional controls will last for more than a few hundred years. The resultant regulatory framework for commercial LLW disposal assumes material that does require institutional control for much longer than 100 years to demonstrate compliance with the performance objectives would generally be determined to not be suitable for near-surface disposal as LLW."

NRC, SECY-08-0147.²⁰

"When NRC regulations on low-level waste disposal were developed, there were no commercial facilities generating significant quantities of depleted uranium waste. Therefore, the impacts of depleted uranium disposal were not explicitly considered."

NRC Fact Sheet on Depleted Uranium and Other Waste Disposal.²¹

"Large quantities of uranium were not evaluated in the EIS for 10 CFR Part 61

- 17 Ci of 238U (in 1 million m³ of waste)
- 3 Ci of 235U

The quantity of DU [now entering the waste stream] is ~ 470,000 Ci 238U."

NRC's Unique Waste Streams Rulemaking Record, Workshop Presentations.²²

2. NRC staff has advised against using its October 2008 analysis (SECY-08-0147), which was done to support the NRC Staff's rulemaking recommendation, for site-specific licensing purposes.

"The model was developed to evaluate the radiological risk to potential future residents and intruders (acute or chronic exposures) near or on the land overlying a hypothetical disposal facility for DU. The model was designed to provide the user with flexibility to evaluate different waste forms, disposal configurations, performance periods, institutional control periods, pathways, and scenarios. The impact of these variables on projected radiological risk can be significant. Therefore, the model was developed as a first-order assessment tool to risk-inform decision making. Refinement of the model would be necessary if it was to be used for licensing decisions, and rigorous validation would be needed. Because site-specific waste management decisions or other variables can strongly influence whether performance objectives can be met, care should be taken not to take the model results out of the analysis context."

SECY-08-147, Enclosure 1, at page 1.²³

3. NRC has recognized that depleted uranium is not suitable for disposal at a near-surface facility simply because it is classified as a Class A waste.

"That the Commission has determined that DU is Class A waste merely makes that waste *eligible* for near-surface disposal. The final determination rests instead with the question of whether near-surface disposal meets the [10 CFR] Part 61, Subpart C performance objectives."

NRC's Atomic Safety and Licensing Board.²⁴ In addition, NRC staff concluded that it was not beneficial to change the waste classification for depleted uranium, not because it was similar to other Class A waste, but because it would not allow the same amount of disposal flexibility as the site-specific performance assessments preferred by Staff:

"The primary disadvantage of Option 3 [reclassifying depleted uranium] is that the concentration limit developed could be so low for a reference site that it would unnecessarily constrain disposal options at sites with significantly different characteristics (e.g., humid vs. arid). As such, this approach would be prescriptive rather than a risk-informed approach, which would take into account the performance of the waste in a specific disposal environment. Another drawback to Option 3 is that it propagates the existing waste classification system, which was developed using often conservative assumptions based on the environment for LLW at the time the Part 61 FEIS was developed; some of these assumptions are not necessarily applicable in today's environment of limited disposal options and improved performance assessment capabilities."

NRC, SECY-08-0147, at page 9.²⁵

C. Adequacy of current federal regulations.

1. As described elsewhere in this Statement of Basis, NRC has concluded both that its regulations should be changed, and that until its regulations are changed, additional analysis should be conducted on a site-specific basis before depleted uranium is accepted. These decisions constitute a recognition by NRC of the inadequacy of its current regulations.

2. NRC comment:

“Why is it necessary to update the regulations?”

“The licensing of new uranium enrichment facilities in the United States has raised depleted uranium to the forefront of low-level radioactive waste disposal issues. The depleted uranium waste stream is unique amongst LLRW streams; the relatively high concentrations and large quantities of depleted uranium that are generated by enrichment facilities were not considered in the Final Environmental Impact Statement (NUREG-0945) supporting the development of 10 CFR Part 61, "Licensing Requirements for Land Disposal of Radioactive Waste." When NUREG-0945 was issued in 1982, there were no commercial facilities generating significant amounts of depleted uranium waste streams, therefore, NUREG-0945 considered only types of uranium-bearing waste streams being typically disposed of by U.S. Nuclear Regulatory Commission (NRC) licensees at that time.”

“With the existing U.S. Department of Energy enrichment facilities, and the recent NRC licensing of commercial enrichment facilities, more than one million metric tons of depleted uranium will require a disposition path. Existing disposal facilities such as the EnergySolutions' facility in Clive, Utah and the Waste Control Specialists' facility in Andrews County, Texas, have expressed interest to their Agreement State regulators in disposing of depleted uranium at their sites.”

“The NRC recognizes that the analysis supporting regulations in 10 CFR Part 61 did not address the disposal of significant quantities of depleted uranium, and that there may be a need to place additional restrictions at a specific site or deny such disposal based on unique site characteristics. Therefore, the NRC will update the regulations to specify a requirement for a site-specific analysis that demonstrates unique waste streams, including significant quantities of depleted uranium, can be disposed of safely.”

NRC's Frequently Asked Questions about Land Disposal of Unique Waste Streams.²⁶

3. David Esh, lead modeler for preparation of SECY-08-0147:

“As part of that EIS developmental analyses, they developed a waste classification system, and that was developed by doing intruder and various scenario analyses and basically doing an inverse calculation.

So they did the analyses. They set a dose limit that they were trying to achieve, and then they did a backwards calculation to determine what concentrations would give me those impacts. And that's what you see in the table values that are in the regulations right now.

So where we are now, if we have a waste stream that's a lot different or could be a lot different than what was analyzed. Then you have to say, well, I don't have table values for that. So what do I need to do about it?

And our opinion is we need to change the regulations and insure you could either develop new table values or you could insure that they do the analysis, but somebody has to do the analysis. You can't have an unanalyzed situation basically.²⁷

D. Quantities of depleted uranium.

In the absence of action by the Board, it is very likely that significant quantities of depleted uranium will be disposed of at EnergySolutions before the performance assessment recommended by NRC (as discussed in II.A of this Statement of Basis) is reviewed and approved.

1. Texas and Washington have indicated they are not allowing disposal of significant quantities of depleted uranium until completion of new performance assessments, and those have not been initiated. *See* I.D of this Statement of Basis.
2. Only EnergySolutions and Barnwell will currently accept depleted uranium for disposal. Barnwell is only available for disposal of waste within its compact.²⁸
3. The amounts of depleted uranium awaiting disposal are significant:

“DOE has said they will need to begin disposal shipments for the DUF6 facilities in mid 2010. More than one million metric tons of depleted uranium will need to be disposed of over the next several years.”²⁹

4. Louisiana Energy Services (LES), a uranium enrichment facility licensed in June 2006, has identified a “private near-surface disposal facility” as its preferred method for disposal of the significant quantities of depleted uranium it will create; LES offered an analysis of impacts at EnergySolutions (then Envirocare) in support of its NRC license application.³⁰
5. Department of Energy depleted uranium

DOE's depleted uranium management policy requires disposal of depleted uranium it owns at one of its own disposal facilities or, with a waiver, allows disposal at a non-DOE facility. DOE has issued a waiver with respect to disposal of depleted uranium at EnergySolutions.³¹

6. EnergySolutions has acknowledged before this Board that it is marketing depleted uranium disposal and that it projects receiving significant quantities.

“Tom Magete [*sic* - Magette, with EnergySolutions] responded that EnergySolutions did have contracts with DOE, but they did not have active task orders. EnergySolutions had

the potential of disposing of waste from the Savannah River within the next year (about 10,000 tons). The next five years, he projected 46,000 tons coming from Portsmouth and Paducah.”

Utah Radiation Control Board minutes, July 2009.³²

E. Performance period

NRC makes the following recommendation regarding the time period for performance assessments:

“Considering the technical aspects of the problem, the performance assessment staff recommends a performance period of 10,000 years for the analysis of DU disposal. However, analyses should be performed to peak impact, and if those impacts are significantly larger than the impacts realized within 10,000 years, then the longer term impacts should be included in the site environmental evaluation.”

NRC, SECY-08-0147.³³

III. IMPACTS OF RULEMAKING

The Utah Administrative Rulemaking Act, at Utah Code Ann. § 63G-3-301, requires an agency proposing rules to consider the potential impact of the rule on business and on government.

A. Impacts to business

If the rule is promulgated, one Utah business – EnergySolutions, L.L.C. – will be unable to dispose of depleted uranium until it has submitted a performance assessment and the performance assessment has been approved. The financial impacts on EnergySolutions are potentially substantial, but are difficult for the Board to specify because the impact depends on the following information not known to the Board at this time:

- When the requirement takes effect;
- When EnergySolutions will submit a performance assessment and when it is approved;
- When EnergySolutions would otherwise have received shipments of depleted uranium for disposal; and
- Whether receipts by EnergySolutions would simply be delayed, or whether there are competitors for depleted uranium disposal space such that EnergySolutions could lose receipts altogether.**

** This rulemaking analysis does not consider the impact of any potential inability by EnergySolutions to demonstrate that it meets the requirements of 10 CFR Part 61 and the equivalent Utah rules, since that inability would not be by operation of this rule.

EnergySolutions will also bear the cost of preparing and submitting a performance assessment, but has indicated this is an action it was already taking.

No small business in Utah will be directly impacted. The only potential sources of substantial quantities of depleted uranium for disposal – the United States Department of Energy and privately-held uranium enrichment facilities – are not small businesses and are not located in Utah.

Any affected business is invited to submit information about potential costs of this proposed rule during the public comment period.

B. Impacts on government budget

The State of Utah receives fees from facilities that dispose of depleted uranium at a land disposal facility. Utah Code Ann. § 19-3-104. EnergySolutions has such a land disposal facility and has stated that it would, in the absence of this rule, seek to dispose of depleted uranium. The financial impacts of this on the state's budget are potentially substantial, particularly for FY 2010, but as described above are difficult to specify. The State of Utah receives \$0.15/cubic foot of waste disposed of, plus \$1 per curie.

IV. ADDITIONAL DOCUMENTATION

The documents cited in this Statement of Basis are incorporated in their entirety by this reference. In addition, all documents linked through the NRC's Unique Waste Streams Rulemaking website are incorporated by reference. *See:*

<http://www.nrc.gov/about-nrc/regulatory/rulemaking/potential-rulemaking/uw-streams.html>.

V. STATEMENT REGARDING UTAH CODE ANNOT. § 19-3-104(8) and (9).

The Board intends to issue a determination, after the public comment period, about whether there are "corresponding federal regulations that are not adequate to protect public health and the environment of the state."

The statute states:

(8) (a) Except as provided in Subsection (9), the board may not adopt rules, for the purpose of the state assuming responsibilities from the United States Nuclear Regulatory Commission with respect to regulation of sources of ionizing radiation, that are more stringent than the corresponding federal regulations which address the same circumstances.

(b) In adopting those rules, the board may incorporate corresponding federal regulations by reference.

(9) (a) The board may adopt rules more stringent than corresponding federal regulations for the purpose described in Subsection (8) only if it makes a written finding after public comment and hearing and based on evidence in the record that corresponding federal regulations are not adequate to protect public health and the environment of the state.

(b) Those findings shall be accompanied by an opinion referring to and evaluating the public health and environmental information and studies contained in the record which form the basis for the board's conclusion.

VI. PROPOSED RULE

R313-12-3. Definitions. [No change proposed; included only for context.]

"Depleted uranium" means the source material uranium in which the isotope uranium-235 is less than 0.711 weight percent of the total uranium present. Depleted uranium does not include special nuclear material.

R313-25-8. Technical Analyses.

(1) The specific technical information shall also include the following analyses needed to demonstrate that the performance objectives of R313-25 will be met:

(1)(a) Analyses demonstrating that the general population will be protected from releases of radioactivity shall consider the pathways of air, soil, ground water, surface water, plant uptake, and exhumation by burrowing animals. The analyses shall clearly identify and differentiate between the roles performed by the natural disposal site characteristics and design features in isolating and segregating the wastes. The analyses shall clearly demonstrate a reasonable assurance that the exposures to humans from the release of radioactivity will not exceed the limits set forth in R313-25-19.

(2)(b) Analyses of the protection of inadvertent intruders shall demonstrate a reasonable assurance that the waste classification and segregation requirements will be met and that adequate barriers to inadvertent intrusion will be provided.

(3)(c) Analysis of the protection of individuals during operations shall include assessments of expected exposures due to routine operations and likely accidents during handling, storage, and disposal of waste. The analysis shall provide reasonable assurance that exposures will be controlled to meet the requirements of R313-15.

(4)(d) Analyses of the long-term stability of the disposal site shall be based upon analyses of active natural processes including erosion, mass wasting, slope failure, settlement of wastes and backfill, infiltration through covers over disposal areas and adjacent soils, and surface drainage of the disposal site. The analyses shall provide reasonable assurance that there will not be a need for ongoing active maintenance of the disposal site following closure.

(2)(a) Any facility that proposes to land dispose of significant quantities of depleted uranium (more than one metric ton in total accumulation) after [effective date of rule] shall submit for the Executive Secretary's review and approval a performance assessment that demonstrates that the performance standards specified in 10 CFR Part 61 and corresponding provisions of Utah rules will be met for the total quantities of depleted uranium and other wastes, including wastes already

disposed of and the quantities of depleted uranium the facility now proposes to dispose. Any such performance assessment shall be revised as needed to reflect ongoing guidance and rulemaking from NRC. For purposes of this performance assessment, the compliance period will be a minimum of 10,000 years. Additional simulations will be performed for a qualitative analysis for the period where peak dose occurs.

(b) No facility may dispose of significant quantities of depleted uranium prior to the approval by the Executive Secretary of the performance assessment required in R. 313-25-8(2)(a).

(c) For purposes of this R. 313-25-8(2) only, depleted uranium means waste with depleted uranium concentrations greater than 5 percent by weight.

ENDNOTES

1. The following frequently cited documents in this Statement of Basis may be found at the indicated web locations.

Records

NRC Communication Plan Key Messages (August 19, 2009): <http://www.nrc.gov/about-nrc/regulatory/rulemaking/potential-rulemaking/uw-streams/key-messages.html>

NRC Fact Sheet on Depleted Uranium and Other Waste Disposal (August 26, 2009): <http://www.nrc.gov/reading-rm/doc-collections/fact-sheets/fs-du-other-waste-disposal.html>

NRC's Frequently Asked Questions about Land Disposal of Unique Waste Streams (August 4, 2009): <http://www.nrc.gov/about-nrc/regulatory/rulemaking/potential-rulemaking/uw-streams/faq.html>

NRC Frequently Asked Questions in the Communication Plan (August 19, 2009): <http://www.nrc.gov/about-nrc/regulatory/rulemaking/potential-rulemaking/uw-streams/workshop-faq.html>

NRC Staff Requirements, SECY-08-0147, Response to Commission Order CLI-05-20 Regarding Depleted Uranium (October 7, 2008) (hereinafter SECY-08-0147): <http://www.nrc.gov/reading-rm/doc-collections/commission/secys/2008/secy2008-0147/2008-0147scy.pdf>

NRC's Unique Waste Streams Rulemaking Record, Workshop 1, Day 1 Transcripts (September 2, 2009): <http://www.nrc.gov/about-nrc/regulatory/rulemaking/potential-rulemaking/uw-streams/workshop-1-transcripts-day1.pdf>

NRC's Unique Waste Streams Rulemaking Record, Workshop 2, Day 1 Transcripts (September 23, 2009): <http://www.nrc.gov/about-nrc/regulatory/rulemaking/potential-rulemaking/uw-streams/workshop-2-transcripts-day1.pdf>

NRC's Unique Waste Streams Rulemaking Record, Workshop Presentations (September 2009): <http://www.nrc.gov/about-nrc/regulatory/rulemaking/potential-rulemaking/uw-streams/du-workshop-presentations.pdf>

NRC's Unique Waste Streams Rulemaking Record Website (October 20, 2009): <http://www.nrc.gov/about-nrc/regulatory/rulemaking/potential-rulemaking/uw-streams.html>

Rules and Statutes

NRC Rules, 10 CFR Part 61: <http://www.nrc.gov/reading-rm/doc-collections/cfr/part061/>

DRC Rules, Utah Admin. Code R.313: <http://www.rules.utah.gov/publicat/code/r313/r313.htm>

DRC Statute, Radiation Control Act, Utah Code Ann. Title 19, Chapter 3: http://le.utah.gov/~code/TITLE19/19_03.htm

2. [SECY-08-0147](#), Enclosure 1 at pages 2-3; see also chart at page 3.

The NRC also has descriptions of depleted uranium at a number of other web locations, e.g., "[NRC Fact Sheet on Depleted Uranium and Other Waste Disposal](#)," and "[NRC Frequently Asked Questions in the Communication Plan](#)."

See also NRC's Unique Waste Streams Rulemaking Record, [Workshop Presentations](#), Slide 78 of 115 and comment by David Esh, NRC's lead modeler for SECY-08-0147:

"So we call it depleted uranium because it's depleted in the U-235 isotope, but chemically it's really concentrated uranium because you've made pure uranium out of the process of trying to develop fuel for reactors."

NRC's Unique Waste Streams Rulemaking Record, [Workshop 2, Day 1 Transcript](#) at page 92.

3. U.S. Nuclear Regulatory Commission (NRC). 'Draft Environmental Impact Statement on 10 CFR Part 61 Licensing Requirements for Land Disposal of Radioactive Waste.' NUREG-0782 (1981); NRC, 'Final Environmental Impact Statement on 10 CFR Part 61 Licensing Requirements for Land Disposal of Radioactive Waste,' NUREG-0945 (1982).

Note also NRC's statement that "Waste class concentrations [are] based primarily on inadvertent intruder exposure." NRC's Unique Waste Streams Rulemaking Record, [Workshop Presentations](#), Slide 33 of 115.

4. "A Performance Assessment Methodology for Low-Level Radioactive Waste Disposal Facilities: Recommendations of NRC's Performance Assessment Working Group," NUREG-1573. Note that among the many recommendations made by the authors of this document are a recommendation for a time period of 10,000 years for analyzing performance (*Id.* at 3-13), and a recommendation for "refraining from excessive speculation about the extremely distant future, and . . . limiting evaluations of the natural site's geologic evolution to the next 10,000 years," based, for example, on the assumption that geological changes such as glaciation will result in conditions under which humans will not be living close enough to the waste to be exposed. *Id.* at 3-9 and 3-10.

Web access through: <http://www.nrc.gov/reading-rm/doc-collections/nuregs/pubs/>.

5. In the Matter of Louisiana Energy Services (National Enrichment Facility), 62 NRC 523, CLI-05-20, October 19, 2005.

Web access: <http://www.nrc.gov/reading-rm/doc-collections/commission/orders/2005/2005-20cli.html>.

6. See NRC website, Louisiana Energy Services (LES) Gas Centrifuge Facility.

Web access: <http://www.nrc.gov/materials/fuel-cycle-fac/lesfacility.html>.

7. In the Matter of Louisiana Energy Services (National Enrichment Facility), 63 NRC 687 at 690, CLI-06-15, June 2, 2006.

Web access: <http://www.nrc.gov/reading-rm/doc-collections/commission/orders/2006/2006-15cli.pdf>

8. *Id.*

9. *Id.*, at 699. See also In the Matter of Louisiana Energy Services (National Enrichment Facility), 63 NRC 241, ASLBP 04-826-01-ML, LPB-06-08, March 3, 2006; and In the Matter of Louisiana Energy Services (National Enrichment Facility), 63 NRC 687, CLI-06-15, June 2, 2006 and Environmental Impact Statement for the Proposed National Enrichment Facility in Lea County, New Mexico (NUREG-1790).

Web access for EIS: <http://www.nrc.gov/reading-rm/doc-collections/nuregs/staff/sr1790/>

10. See SECY-08-0147.

11. See Commission Order in Memorandum re: Staff Requirements – SECY-08-0147 – Response to Commission Order CLI-05-20 Regarding Depleted Uranium.

Web access: <http://www.nrc.gov/reading-rm/doc-collections/commission/srm/2008/2008-0147srm.pdf>.

12. See NRC Communication Plan Key Messages, and NRC Frequently Asked Questions in the Communication Plan.

13. All references in this section are to Envirocare and EnergySolutions' license amendments and related submissions for the dates given; license amendments and related submissions are in Division of Radiation Control files. The information in numbers 1 through 3 is also described in an analysis by the U.S. Department of Energy. See Evaluation of the Acceptability of Potential Depleted Uranium Hexafluoride Conversion Products at the Envirocare Disposal Site, ORNL/TM-2000/355, December 2000.

Web access: [http://www.ornl.gov/~webworks/cpr/rpt/109279 .pdf](http://www.ornl.gov/~webworks/cpr/rpt/109279.pdf).

14. NRC's Unique Waste Streams Rulemaking Record, Workshop 2, Day 1 Transcript at page 55.
15. *Id.*
16. Texas Admin. Code, Rule § 336.709.

Web access: [http://info.sos.state.tx.us/pls/pub/readtac\\$ext.TacPage?sl=T&app=2&p_dir=N&p_rloc=106855&p_tloc=&p_ploc=1&pg=41&p_tac=106856&ti=30&pt=1&ch=336&rl=709&z_chk=1072573](http://info.sos.state.tx.us/pls/pub/readtac$ext.TacPage?sl=T&app=2&p_dir=N&p_rloc=106855&p_tloc=&p_ploc=1&pg=41&p_tac=106856&ti=30&pt=1&ch=336&rl=709&z_chk=1072573).

17. NRC's "Frequently Asked Questions in the Communication Plan." *See also* Communication Plan Key Messages.
18. NRC's Unique Waste Streams Rulemaking Record, Workshop 2, Day 1 Transcript at page 40.
19. *See, e.g.,* SECY-08-0147, at page 5.
20. *See* SECY-08-0147, Enclosure 1 at page 4.

See also comment made by David Esh, NRC's lead modeler for SECY-08-0147:

"Basically the large quantities were not evaluated in EIS [the document supporting rulemaking for Part 61]. They did something like 17 Curies of Uranium-238 and three Curies of Uranium 235, and something like a million cubic meters of waste in the analyses, and if you look at the potential waste streams that may be anticipated, you could be looking at something like 470,000 Curies of Uranium-238. So you're really outside of the box from what was done, and we recognize that, and that's why we're here today."

NRC's Unique Waste Streams Rulemaking Record, Workshop 2, Day 1 Transcript at page 90.

21. NRC Fact Sheet on Depleted Uranium and Other Waste Disposal. This has also been acknowledged by NRC in many other documents, e.g., NRC, SECY-08-0147, Enclosure 1 at page 1, and In the Matter of Louisiana Energy Services (National Enrichment Facility), 62 NRC 523, CLI-05-20, October 19, 2005, Part V.

Web access for CLI-05-20: <http://www.nrc.gov/reading-rm/doc-collections/commission/orders/2005/2005-20cli.html>.

22. *See* Workshop Presentations, slide 40 of 115.

Note that risk is a function of quantity and concentration. *Id.* at Slide 58.

23. See SECY-08-147, Enclosure 1, at page 1.

See also Slide 54 of 115 of the “Workshop Presentations” made by NRC at its NRC’s Unique Waste Streams Rulemaking Workshop:

“Analysis not intended to replace site-specific evaluations.”

24. In the Matter of Louisiana Energy Services (National Enrichment Facility), 63 N.R.C. 591, 70-3103-ML, (ASLBP 04-826-01-ML) (May 31, 2006).
25. See SECY-08-147, at page 9.
26. NRC’s Frequently Asked Questions about Land Disposal of Unique Waste Streams.
27. NRC’s Unique Waste Streams Rulemaking Record, Workshop 2, Day 1 Transcript at page 82.
28. See NRC’s Unique Waste Streams Rulemaking Record, “Workshop Presentations,” Slide 12, “Commercial LLW Disposal Sites, and accompanying commentary at Workshop 1, Day 1 at page 32 and Workshop 2, Day 1 Transcript at pages 37-38.
29. NRC’s Unique Waste Streams Rulemaking Record, Workshop 1, Day 1 Transcript (cited in note 1) at p. 25 and Workshop 2, Day 1 Transcript at p. 30.
30. See citations in notes 7 and 9.
31. See “U.S. Department of Energy Manual, Approval of Exemptions for Use of Non-DOE Facilities,” at I-7.

Web access: <https://www.directives.doe.gov/pdfs/doe/doetext/neword/435/m4351-1c1.pdf>.

Representatives of the Board have been unable to locate a copy of DOE’s exemption for disposal of depleted uranium at EnergySolutions or related documentation of DOE’s decision to dispose of its depleted uranium in Utah, but the need for an exemption is also referenced in two pre-decisional documents: “Evaluation of the Acceptability of Potential Depleted Uranium Hexafluoride Conversion Products at the Envirocare Disposal Site,” December 2000; and “Draft Supplement Analysis for Location(s) to Dispose of Depleted Uranium Oxide Conversion Product Generated from DOE’s Inventory of Depleted Uranium Hexafluoride (DOE/EIS-0359-SA1 AND DOE/EIS-0360-SA1), March 2007.”

Web access (respectively): [http://www.oml.gov/~webworks/cpr/rpt/109279 .pdf](http://www.oml.gov/~webworks/cpr/rpt/109279.pdf)

and http://gc.energy.gov/NEPA/nepa_documents/na/EIS-0359-SAI_EIS-0360-SAI.pdf.

32. Web access: <http://www.radiationcontrol.utah.gov/Board/minagd/7142009.pdf>.
33. SECY-08-0147, Enclosure 1 at page 21. *See also* SECY-08-0147, Enclosure 1 at pages 6-8 for a fuller discussion.

VII. Other Division Issues (Board Information Item)
a. Division Activities Report

From: Denise Chancellor
To: Dane Finerfrock
Date: 11/25/2009 2:23 PM
Subject: EnergySolutions v State of Utah, Oral Argument Jan. 14

The 10th Circuit Court of Appeals notified us that it has scheduled oral argument in Utah's and the Compact's appeals from Judge Stewart's decision finding that the Northwest Compact does not have exclusionary authority over waste being disposed of at Clive from outside the Compact region.

Details of oral argument are as follows:

Date: January 14, 2010 (Thursday)
Time: 8:30 a.m.
Place: Federal Courthouse Denver (Courtroom I)

Appellants (Utah, North West Compact and Rocky Mountain Compact) have been allocated 15 minutes to present their oral argument and the Appellee, EnergySolutions has also been allocated 15 minutes. On November 25, 2009, Appellants filed a motion requesting an additional 15 minutes (for a total of 30 minutes) to share in the presentation of their oral argument. EnergySolutions' did not oppose the motion, provided it receives a similar enlargement of time granted to the Appellants.

Denise.

Denise Chancellor
Utah Attorney General's Office
P.O. Box 140873
Salt Lake City, UT 84114-0873
Phone: (801) 366-0286
Fax: (801) 366-0292

FILED
UTAH APPELLATE COURTS
NOV 23 2009

IN THE UTAH COURT OF APPEALS

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Charles A. Judd and Cedar)
Mountain Environmental, Inc.,)
)
Petitioners,)
)
v.)
)
Radiation Control Board,)
)
Respondent, and)
)
Energy Solutions, LLC,)
)
Intervenor Respondent.)

ORDER OF CERTIFICATION

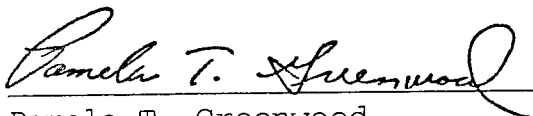
Case No. 20090276-CA

This case is before the court on its own motion to certify the case "for immediate transfer to the Supreme Court for determination." Utah R. App. P. 43(a). Based upon the affirmative vote of at least four judges of the Utah Court of Appeals,

IT IS HEREBY ORDERED that this appeal is certified for immediate transfer to the Utah Supreme Court for determination.

Dated this 23 day of November, 2009.

FOR THE COURT:


Pamela T. Greenwood,
Presiding Judge



CERTIFICATE OF SERVICE

I hereby certify that on November 23, 2009, a true and correct copy of the foregoing ORDER was deposited in the United States mail or placed in Interdepartmental mailing to be delivered to:

LEWIS M FRANCIS
JAMES S LOWRIE
JONES WALDO HOLBROOK & MCDONOUGH
170 S MAIN ST STE 1500
PO BOX 45444
SALT LAKE CITY UT 84145-0444

FRED G. NELSON
LAURA J LOCKHART
ASSISTANT ATTORNEY GENERAL
160 E 300 S 5TH FL BX 0873
PO BOX 140873
SALT LAKE CITY UT 84114-0873

RADIATION CONTROL BOARD
ATTN: DANE FINERFROCK
PO BOX 144850
SALT LAKE CITY UT 84114-4850

Dated this November 23, 2009.

By 
Judicial Assistant

Case No. 20090276
RADIATION CONTROL BOARD, UT 2300249

NRC limit of 25 millirem per year for areas released for unrestricted use, as defined in 10 CFR 20.1402. Specifically, SCE conducted characterization surveys of the areas to be released, during which it identified low concentrations of radioactive cesium, cobalt, and sodium in the sediments of the SONGS-1 CWS. These concentrations result in a calculated dose to the public of less than 1 millirem per year (mrem/yr), which is well below the NRC unrestricted use limit of 25 mrem/yr.

The staff has prepared this EA in support of the proposed license amendment. The NRC has examined the licensee's proposed amendment request and concluded that there are no significant radiological environmental impacts associated with this action, and it will not result in significant non-radiological environmental impacts.

III. Finding of No Significant Impact

On the basis of the EA, NRC has concluded that there are no significant environmental impacts from the proposed amendment, and that preparation of an environmental impact statement is not warranted.

IV. Further Information

Documents related to this action, including the application for amendment and supporting documentation, are available electronically at the NRC's Electronic Reading Room at <http://www.nrc.gov/reading-rm/adams.html>. From this site, you can access the NRC's Agencywide Document Access and Management System (ADAMS), which provides text and image files of NRC's public documents. The ADAMS accession numbers for the documents related to this notice are: (1) The licensee's application, dated December 19, 2007, ML080580468, (2) the EA, ML093010071, and (3) the SER, ML092670125. If you do not have access to ADAMS or if there are problems in accessing the documents located in ADAMS, contact the NRC's Public Document Room (PDR) Reference staff at 1-800-397-4209, 301-415-4737, or by e-mail to pdr@nrc.gov.

These documents may also be viewed electronically on the public computers located at the NRC's PDR, OF-21, One White Flint North, 11555 Rockville Pike, Rockville, MD 20852. The PDR reproduction contractor will copy documents for a fee.

Dated at Rockville, Maryland this 20th day of November 2009.

For the Nuclear Regulatory Commission.

Keith I. McConnell,

Deputy Director, Decommissioning and Uranium Recovery Licensing Directorate, Division of Waste Management and Environmental Protection, Office of Federal and State Materials and Environmental Management Programs.

[FR Doc. E9-28509 Filed 11-27-09; 8:45 am]

BILLING CODE 7590-01-P

NUCLEAR REGULATORY COMMISSION

[NRC-2009-0495; Docket No. 50-005]

Penn State Breazeale Reactor; Notice of Issuance of Renewed Facility Operating License No. R-2

The U.S. Nuclear Regulatory Commission (NRC) has issued renewed Facility Operating License No. R-2, held by the Pennsylvania State University (the licensee), which authorizes continued operation of the Penn State Breazeale Reactor (PSBR), located in University Park, Centre County, Pennsylvania. The PSBR is a pool-type, light-water-moderated-and-cooled research reactor licensed to operate at a steady-state power level of 1 megawatt thermal power and pulse mode operation with a peak pulse power of approximately 2,000 megawatts. Renewed Facility Operating License No. R-2 will expire at midnight 20 years from its date of issuance.

The renewed license complies with the standards and requirements of the Atomic Energy Act of 1954, as amended (the Act), and the Commission's rules and regulations. The Commission has made appropriate findings as required by the Act and the Commission's regulations in Title 10, Chapter 1, "Nuclear Regulatory Commission," of the Code of Federal Regulations (10 CFR), and sets forth those findings in the renewed license. The agency afforded an opportunity for hearing in the Notice of Opportunity for Hearing published in the *Federal Register* on June 8, 2009, at 74 FR 27188. The NRC received no request for a hearing or petition for leave to intervene following the notice.

The NRC staff prepared a safety evaluation report for the renewal of Facility License No. R-2 and concluded, based on that evaluation, that the licensee can continue to operate the facility without endangering the health and safety of the public. The NRC staff also prepared an Environmental Assessment and Finding of No Significant Impact for license renewal, noticed in the *Federal Register* on November 12, 2009, at 74 FR 58319, as

corrected on November 20, 2009, at 74 FR 60301, and concluded that renewal of the license will not have a significant impact on the quality of the human environment.

For details with respect to the application for renewal, see the licensee's letter dated December 6, 2005 (ADAMS Accession No. ML091250487), as supplemented on October 31, 2008 (ADAMS Accession No. ML092650603), and April 2 (ADAMS Accession No. ML093030395), June 11 (ADAMS Accession No. ML092030312), September 1 (ADAMS Accession No. ML092580215), and October 21, 2009 (ADAMS Accession No. ML092990409). Documents may be examined, and/or copied for a fee, at the NRC's Public Document Room (PDR), located at One White Flint North, 11555 Rockville Pike (first floor), Rockville, Maryland. Publicly available records will be accessible electronically from the Agencywide Documents Access and Management System (ADAMS) Public Electronic Reading Room on the NRC Web site, <http://www.nrc.gov/reading-rm/adams.html>. Persons who do not have access to ADAMS or who encounter problems in accessing the documents located in ADAMS should contact the NRC PDR Reference staff at 1-800-397-4209 or 301-415-4737, or send an e-mail to pdr@nrc.gov.

Dated at Rockville, Maryland, this 20th day of November, 2009.

For the Nuclear Regulatory Commission.

Kathryn M. Brock,

Chief, Research and Test Reactors Branch A, Division of Policy and Rulemaking, Office of Nuclear Reactor Regulation.

[FR Doc. E9-28511 Filed 11-27-09; 8:45 am]

BILLING CODE 7590-01-P

NUCLEAR REGULATORY COMMISSION

[NRC-2009-0520]

Notice of Public Meeting and Request for Comment on Blending of Low-Level Radioactive Waste

AGENCY: Nuclear Regulatory Commission.

ACTION: Notice of Public Meeting and a Request for Comment on Issues Related to Blending of Low-Level Radioactive Waste.

SUMMARY: The U.S. Nuclear Regulatory Commission (NRC) plans to conduct a public meeting on January 14, 2010, in Rockville, MD, to solicit input on issues associated with blending of low-level radioactive waste (LLRW). Since the closure of the LLRW disposal facility at



Barnwell, South Carolina on June 30, 2008 to out-of-compact generators, the issue of blending of LLRW has received increased attention from stakeholders, industry, and Agreement States, especially blending that results in a change in the classification of the waste, as defined by the radionuclide concentrations in 10 CFR part 61.55. Blending, as defined here, refers to mixing of LLRW of different concentrations. It does not involve mixing radioactive waste with non-radioactive waste, (i.e., dilution) and concerns only disposal in a licensed facility, not release of radioactivity to the general environment.

Blending is not prohibited or explicitly addressed in NRC regulations. In addition, while NRC staff guidance discourages blending in some circumstances, it also recognizes that some blending—including blending that lowers the classification of a waste—may be appropriate in others. However, the closure of the Barnwell facility to LLRW generators in 36 States means that there is no disposal option for Class B or C LLRW generated in these States; LLRW generators have been storing Class B and C LLRW onsite since the closure of Barnwell. The lack of a disposal pathway for Class B and C LLRW from these generators has increased interest in blending to reduce the radioactivity concentrations of wastes that might otherwise be classified as B or C waste. A disposal pathway exists for Class A waste, which means that Class A waste does not have to be stored at licensees' sites. While some blending of LLRW resulting in reduced waste classification has occurred in the past, the scale of blending being considered since the closure of Barnwell is potentially much larger than current practice.

On October 8, 2009, NRC Chairman Gregory B. Jaczko directed the staff to prepare a vote paper for the Commission to consider issues related to blending of LLRW, including the following:

- Issues related to intentional changes in waste classification due to blending, including safety, security, and policy considerations.
- Protection of the public, the intruder, and the environment.
- Mathematical concentration averaging and homogeneous physical mixing.
- Practical considerations in operating a waste treatment facility, disposal facility, or other facilities, including the appropriate point at which waste should be classified.
- Recommendations for revisions, if necessary, to existing regulations,

requirements, guidance, or oversight related to blending of LLW.

The staff is holding a public meeting to obtain additional information on these and other related issues. Stakeholder views will be presented in the vote paper that the staff prepares for the Commission.

DATES: Members of the public may provide feedback at the transcribed public meeting or may submit written comments on the issues discussed in this notice. Comments on the issues and questions presented in this notice and discussed at the meeting should be postmarked no later than January 29, 2010. Comments received after this date will be considered if it is practical to do so. NRC plans to consider these stakeholder views in the development of a vote paper for the Commission's consideration. Written comments may be sent to the address listed in the **ADDRESSES** Section. Questions about participation in the public workshops should be directed to the facilitator at the address listed in the **ADDRESSES** Section. Members of the public planning to attend the workshops are invited to RSVP at least ten (10) days prior to each workshop. Replies should be directed to the points of contact listed in the **FOR FURTHER INFORMATION CONTACT** section.

The public meeting will be held in Rockville, Maryland on January 14, 2010, from 8 a.m. to 5:30 p.m. at: The Legacy Hotel & Meeting Centre, The Georgetown Room, 1775 Rockville Pike, Rockville, MD 20852, 240-283-1116.

The final agenda for the public meeting will be noticed no fewer than ten (10) days prior to the meeting on the NRC's electronic public workshop schedule at <http://www.nrc.gov/public-involve/public-meetings/index.cfm>. Please refer to the **SUPPLEMENTARY INFORMATION** section for questions that will be discussed at the meeting.

ADDRESSES: You may submit comments by any one of the following methods. Please include Docket ID NRC-2009-0520 in the subject line of your comments. Comments submitted in writing or in electronic form will be posted on the NRC Web site and on the Federal rulemaking Web site [Regulations.gov](http://www.Regulations.gov). Because your comments will not be edited to remove any identifying or contact information, the NRC cautions you against including any information in your submission that you do not want to be publicly disclosed.

The NRC requests that any party soliciting or aggregating comments received from other persons for submission to the NRC inform those

persons that the NRC will not edit their comments to remove any identifying or contact information, and therefore, they should not include any information in their comments that they do not want publicly disclosed.

Federal Rulemaking Web site: Go to <http://www.regulations.gov> and search for documents filed under Docket ID NRC-2009-0520. Address questions about NRC dockets to Carol Gallagher 301-492-3668; e-mail Carol.Gallagher@nrc.gov.

Mail comments to: Michael T. Lesar, Chief, Rulemaking and Directives Branch (RDB), Division of Administrative Services, Office of Administration, Mail Stop: TWB-05-B01M, U.S. Nuclear Regulatory Commission, Washington, DC 20555-0001, or by fax to RDB at (301) 492-3446.

Questions regarding participation in the public meeting should be submitted to the facilitator, Francis Cameron, by mail to Mail Stop O16-E15, U.S. Nuclear Regulatory Commission, Washington, DC 20555-0001, by telephone at 240-205-2091, or by e-mail at fxcameo@gmail.com.

FOR FURTHER INFORMATION CONTACT: Brooke Traynham, Office of Federal and State Materials and Environmental Management Programs, U.S. Nuclear Regulatory Commission, Washington, DC 20555-0001; telephone 404-729-3366; e-mail Brooke.Traynham@nrc.gov.

The public may examine and have copies for a fee, publicly available documents at the Public Document Room, One White Flint North, 11555 Rockville Pike, Rockville, Maryland. Publicly available documents created or received at NRC after November 1, 1999, are available electronically at the NRC's Electronic Reading Room at <http://www.nrc.gov/reading-rm/adams.html>. From this site, the public can gain entry into the NRC's Agencywide Documents Access and Management System (ADAMS), which provides text and image files of NRC's public documents. If you do not have access to ADAMS, contact the Public Document Room at 1-800-397-4209, 301-415-4737, or by e-mail at pdr.resource@nrc.gov.

Existing NRC guidance on blending of LLRW is contained in the NRC's 1995 "Final Branch Technical Position on Concentration Averaging and Encapsulation" (CA BTP), Section 3.1 (ADAMS Accession No. ML033630732). The staff has recently issued several letters that describe NRC's position on blending of LLRW that should also be useful to interested persons. These include letters to EnergySolutions (ADAMS Accession No. ML092170561),

Studsvik (ADAMS Accession No. ML092930251), and Waste Control Specialists (ADAMS Accession No. ML092920426). Multiple meetings are being scheduled for the week of December 14, 2009, to better understand the positions of these three companies on blending of LLRW. Additional information on these meetings will be posted on the NRC public web site in the near future at <http://www.nrc.gov/public-involve/public-meetings/index.cfm>. The public is invited to participate. Chairman Jaczko's October 8, 2009, memorandum to the staff on blending of LLRW can be found in ADAMS (Accession No. ML093070605).

SUPPLEMENTARY INFORMATION:

I. Background

On June 30, 2008, the Barnwell disposal facility closed to most LLRW generators in the U.S. Now, only generators in the Atlantic Compact—the States of South Carolina, Connecticut, and New Jersey—are able to dispose of their waste at that facility, and generators in 36 States must store their Class B/C waste onsite until a new disposal option becomes available.¹ In the meantime, the EnergySolutions' disposal facility in Clive, Utah, remains available for Class A waste disposal by these generators that lost access to the Barnwell facility for their Class B/C wastes.

To help mitigate the impact of Barnwell's closure, industry is exploring the blending of LLRW that would otherwise be Class B and C into a homogeneous Class A mixture that could be disposed of as Class A waste. Such blending would eliminate the need for indefinite onsite storage of these wastes, while furthering the goal of permanent waste disposal. Not all LLRW can be blended into a homogeneous mixture suitable for disposal as Class A waste: irradiated reactor components, reactor pressure vessels, and other types of solid waste are not amenable to blending. Other reactor waste streams, particularly ion exchange resins, which account for about half of the volume of Class B and C waste generated each year, can be blended into a homogeneous mixture with a relatively uniform concentration of radioactivity, and some of these Class B and C resins could be blended with resins having radioactivity concentrations well below the Class A

limits to produce a Class A final mixture.

Blending, as the staff uses the term in this context, is the mixing of LLRW having different concentrations of radionuclides to form a relatively homogeneous mixture for disposal in a licensed facility. The concentration of the resulting mixture is total radioactivity in the mixture divided by its volume or weight.

Blending may be done for a variety of reasons: (1) To consolidate wastes from a number of different sources within a plant for reasons of operational efficiency; (2) to reduce radiation exposures to workers; and (3) to lower the waste classification of some of the waste by averaging its concentration over a larger volume. Because it is more efficient to combine wastes in a single tank in a facility, licensees may also mix certain wastes such as ion exchange resins that are removed from various locations in their plants, rather than characterize and classify individual batches of resins. Blending may also be performed to keep radiation exposures to workers as low as reasonably achievable, since the doses from a mixture of two or more streams of LLRW with different radiation levels may result in a combined mixture that has lower radiation levels. Waste disposal may also be facilitated by blending. For example, if two batches of waste are blended together, they may meet the waste acceptance criteria for a specific disposal facility, but the higher concentration batch by itself would not. With respect to waste class reduction, it may result from mixing for operational reasons or efforts to reduce worker exposures, or could be performed solely for the purposes of reducing the classification to enable prompt disposal, rather than storage.

A particular topic of interest to some stakeholders is blending that reduces the classification of the waste. Waste classification is one of the requirements in NRC's LLRW disposal regulations in 10 CFR part 61. 10 CFR part 61 establishes the procedures, criteria, and terms and conditions for the issuance of licenses for the disposal of LLRW. Four performance objectives, including protection of an inadvertent intruder into the waste disposal site, define the overall level of safety to be achieved by disposal.² Intruder protection is provided in part by the waste classification concentration limits in 10 CFR 61.55, which are designed to

ensure that an inadvertent intruder does not receive an unsafe exposure to radiation. Any blended LLRW must meet the concentration limits in the waste classification tables. If batches of waste were not blended into a relatively homogeneous final mixture, hot spots above the concentration limits for a particular waste class might expose an inadvertent intruder to unacceptable levels of radiation. Any blended waste must also not affect a facility's ability to meet the other performance objectives in 10 CFR part 61.

Waste classification is also addressed in NRC's regulations in 10 CFR part 20 specifying requirements for the preparation of shipping papers for LLRW. 10 CFR part 20, Appendix G, Section III.A allows waste generators to defer classifying waste until the time that waste is ready for disposal and does not require generators to classify waste before it is shipped from a generator to a processor. In practice, generators often classify waste before it is shipped for disposal, even though waste classification need not occur until the waste is ready for disposal. As noted above, the 10 CFR 61.55 waste classification tables are based on protection of an inadvertent intruder into waste at a disposal facility at some future time after the disposal facility is closed. The classification of the waste in accordance with 10 CFR 61.55 is not directly related to the safety of the waste at intermediate points in its management.

While recognizing that some blending is unavoidable and even desirable for efficiency or dose reduction purposes, NRC has historically discouraged blending to lower the waste classification, while acknowledging that it is appropriate in some circumstances. The maxim "dilution is not the solution to pollution" appears to have been a factor in developing agency positions that discourage, but do not prohibit, the mixing of wastes. Dilution can increase the amount of waste by mixing clean and contaminated materials together, and may enable the mixture to be released to the general environment where members of the public will be exposed to the hazard, however small. Blending, as defined in this FRN, involves the mixing of higher and lower concentrations of contaminated materials, not clean materials, and disposal in a licensed disposal site, not release to the general environment. Thus, the undesirable characteristics of dilution are not present in this kind of blending, while safety and efficiency may be improved by selection of appropriate criteria to be applied to such blending. Some LLRW

¹ Generators in the Northwest Compact (WA, ID, MT, HI, AK, OR, WY, and UT) and Rocky Mountain Compact (CO, NM, and NV) can dispose of their LLRW at a commercial disposal facility in Hanford, WA.

² The others are protection of the general population from releases of radioactivity; protection of individuals during the operation of the facility (as opposed to after the facility is closed), and stability of the disposal site.

stakeholders have noted that there may be potential adverse impacts from and issues with blending, particularly large scale blending. For example, blending can be contrary to volume reduction principles.³ Waste with Class B and C concentrations of radionuclides is often processed to reduce its volume. If this waste were instead mixed with Class A wastes, these reductions in volume would not be achieved. Blending may also be viewed by some as equivalent to disposing of Class B or C waste in a Class A disposal facility. The purpose of the public meeting and NRC's solicitation of public comments is for NRC to better understand these impacts and issues.

NRC's 1995 CA BTP recommends limits on blending of LLRW by applying a "factor of 10" rule, whereby the concentrations of batches of LLRW to be mixed must be within a factor of 10 of the average concentration of the final mixture. The safety benefit of the "factor of 10" rule is unclear for final mixtures that are homogeneous, since any concentrated materials that go into a mixture are blended down to lower concentrations that are relatively uniform over the volume of the material. By placing limits on the amount of mixing, however, the "factor of 10" rule furthers the agency's policy that discourages mixing to reduce waste classification. It should be noted that some waste class reduction could occur when waste is mixed in accordance with the "factor of 10" rule, since some of the waste classes of some radionuclides differ by a "factor of 10." The mixing constraint in the CA BTP specifies that batches of greater than a factor of 10 difference in concentration can be mixed. The CA BTP also includes in an appendix with staff responses to public comments received on an earlier draft of the CA BTP. The appendix states that wastes should not be intentionally mixed solely to lower the waste classification. The staff positions in the CA BTP itself do not contain this guidance, however.

The CA BTP allows important exceptions from the "factor of 10" rule when operational efficiency or worker dose reductions can be demonstrated, and one of the current industry blending proposals relies on these exceptions to conduct expanded blending operations. Although not explicitly stated, the CA BTP positions appear to be based on a combination of practical considerations in the operation of a facility, whereby

³ NRC issued a "Policy Statement on Low-Level Waste Volume Reduction" on July 16, 1981, which encourages licensees to reduce the volume of waste for disposal. See July 16, 1981, *Federal Register* Notice, 46 FR 51100.

wastes are routinely combined or mixed for operational efficiency and ALARA reasons, and NRC's general position that discourages mixing for the purposes of reducing the waste class. These two objectives are not fully compatible, but the CA BTP attempts to provide positions that balance them.

NRC guidance for other programs similarly discourages blending, while recognizing that it may be appropriate in some circumstances. In a document for the decommissioning program, "Consolidated Decommissioning Guidance" (NUREG-1757, Volume 1, Revision 2), NRC staff states that mixing of soils to meet the waste acceptance criteria of an offsite disposal facility "should not result in lowering the classification of the waste." As a practical matter, contaminated soils from sites undergoing decommissioning are rarely Class B/C concentrations. At the same time, the guidance allows for blending to reduce the classification of the waste from licensable material that must be disposed of in a licensed disposal facility to exempt material suitable for disposal in landfills. This decommissioning guidance also recognizes that mixing of clean and contaminated soils may be appropriate under certain very limited circumstances to meet the dose standard in 10 CFR part 20, subpart E.

II. Questions Related to Blending of LLRW

This section identifies questions associated with blending of LLRW that results in lower waste classification of components of the mixture. These questions are not meant to be a complete or final list, but are intended to initiate discussion. These questions will help to focus the discussion at the public meetings. All public feedback will be used in developing options for NRC consideration.

1. What safety and security considerations are associated with blending of LLRW, particularly large scale blending that result in a change in waste classification?
2. What are the practical considerations in operating a facility that bear on blending of LLRW?
3. What policy issues are raised by blending of LLRW that lowers the waste classification?
4. What are the potential blending policies/positions that NRC could take and the advantages and disadvantages of each?
5. How should NRC implement a position on blending of LLRW (*i.e.*, by rulemaking, guidance, policy statement or other means)?

6. If a rule were to be promulgated, what compatibility category should it be; *i.e.*, how strictly must Agreement States follow any NRC rule?

7. NRC regulations only require waste to be classified when it's ready for disposal. What advantages or disadvantages might there be to classifying it earlier?

8. If blended waste could not be attributed to the original generator of the waste, what issues does this raise that NRC should address, if any?

9. What would be a risk-informed, performance-based approach to addressing blending?

10. Given that Agreement States are not required to adopt NRC's guidance on blending, how are different States addressing this issue? What are the advantages and disadvantages of these approaches?

11. NRC is budgeting resources to initiate a long-term rulemaking to revise the waste classification system. How might alternative waste classification systems be affected by blending?

12. What oversight might be needed to ensure that blending is performed appropriately?

13. What other issues should NRC staff consider in developing options for Commission consideration related to blending?

Dated at Rockville, Maryland this 23rd day of November, 2009.

For The Nuclear Regulatory Commission.

Gregory F. Suber,

Acting Deputy Director, Environmental Protection, and Performance Assessment Directorate, Division of Waste Management, and Environmental Protection, Office of Federal and State Materials, and Environmental Management Programs.

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NUCLEAR REGULATORY COMMISSION

[NRC-2009-0517; Docket Nos. 50-250 and 50-251; License Nos. DPR-31 and DPR-41]

Florida Power and Light Company; Receipt of Request for Action Under 10 CFR 2.206

Notice is hereby given that by petition dated January 11, 2009, Mr. Thomas Saporito (petitioner) has requested that the NRC take action with regard to Florida Power & Light Company's Turkey Point Nuclear Generating Units 3 and 4. The petitioner requests that the NRC take enforcement action against Florida Power & Light Company (FPL) by issuing a Notice of Violation and Imposition of Civil Penalty in the