

**February 9, 2010**

**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.**



**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., February 9, 2010

**FINAL AGENDA**

- I. Minutes (**Board Action Item**)
  - a. Approval of the Minutes from the January 12, 2010 Board Meeting
  
- II. Rules (**Board Action Items**)
  - a. Requirements for Irradiators (R313-34): 5-year agency review
  - b. Requirements for Irradiators (R313-34): Proposed rule amendment
  
- III. Radioactive Materials Licensing/Inspection  
No Items
  
- IV. X-Ray Registration/Inspection  
No Items
  
- V. Radioactive Waste Disposal
  - a. Charles Judd, Cedar Mountain Environmental, Presentation: Plans to Develop Low-Level Radioactive Waste Disposal Facility, Tooele County (**Board Information Item**)
  - b. Randy Horiuchi and Joe DiCamillo, Presentation: Technical and Policy Aspects of Downblending (**Board Information Item**)
  - c. Report from the Board Subcommittee on Waste Blending and Discussion of Draft Policy Statement on Waste Blending (**Board Action Item**)
  
- VI. Uranium Mill Licensing and Inspection  
No Items
  
- VII. Other Division Issues (**Board Information Items**)
  - a. Update on Proposed License Condition 35., *EnergySolutions*, UT 2300249
  - b. Update on Proposed Depleted Uranium Rule
    - i. Review of Public Comments
    - ii. Laura Lockhart, Administrative Rule Process for Revised Rules
  - c. Quarterly Report
  
- VIII. Public Comment
  
- IX. **The Next Scheduled Board Meeting: March 9, 2010 (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](mailto:bbaker@utah.gov).

UTAH RADIATION BOARD

BOARD MEMBERS - SIGN-IN SHEET

MEETING DATE: February 9, 2009

Peter A. Jenkins, M.S., CHP, Chair 


Elizabeth Goryunova, M.S., Vice Chair 

Amanda Smith, DEQ Executive Director 


Dane L. Finerfrock, Exec. Sec. 

Scott Bird 

Patrick D. Cone 

Frank D. DeRosso, MSPH, CIH 

Christian K. Gardner 

Colleen Johnson 

Edd Johnson 

Douglas S. Kimball, DMD 

Joseph K. Miner, M.D., MSPH 

John W. Thomson, M.D. 

David A. Tripp, PH.D. 

OTHER STAFF ATTENDING

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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.  
 February 9, 2010  
*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. THOMAS MAGETTE	ENERGY SOLUTIONS	Y - V-b
2. Don Shrum	Energy Solutions	Y - V-b
3. Christopher Thomas	HEAL Utah	y VAPC
4. Vanessa Pierce	HEAL Utah	N
5. Bryan Melchior	Public	N
6. BILL DORNSIFE	WCS	Y - V-b
7. JILL SWEET	GARLAND WEST	
8. Amy Graybe	Deseret News	NO
9. Mark Ledoux	Energy Solution	NO
10. Scott Kirk	WCS	
11. BOB ARCHIBALD	—	NO
12. Sean McCandless	Energy Solutions	no
13. MaryEllen Nantz	Public	N
14. Bob Archibald	"	N
15. Robert Baird	URS Corp	No
16. James Holdcamp	Hollw & Hunt	No
17. <sup>(see)</sup> Joseph DiCamillo	Studs vike	Item V.b. / present: on
18.		
19.		

added  
see



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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. David Esser	DRC	No
21. Randy Hara	studsvik	on agenda
22. Eric Spreng	HEAL Utah	No
23. Jepp Casey	Citizen	No
24. Sige Wallace	SIT/CA	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.

February 9, 2010

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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. James O'Neal	private citizen	yes VIII
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## Utah Radiation Control

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3. Christopher Thomas	HEAL Utah	Y V-b
4. Vanessa Pierce	HEAL Utah	N
5. Bryan Melchior	Public	N
6. BILL DORNSIFE	WCS <i>speaker</i>	Y - V-b
7. Jina Sweet	Galena West	
8. Amy Graybe	Deseret News	NO
9. Mark Ledoux	Energy Solution	NO
10. Scott Kirk	WCS	
11. Bob Archibald	—	NO
12. Sean McCandless	Energy Solutions	NO
13. MaryEllen Nantz	Public	N
14. Bob Archibald	"	N
15. Robert Baird	URS Corp	No
16. James Holdcamp	Holland & Hunt	No
17. Joseph DiCamillo	Stadsvik	Item V.b. <i>presentation</i>
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**RADIATION CONTROL BOARD**  
Department of Environmental Quality (Bldg #2),  
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2

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No Items

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No Items

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No Items

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i. Review of Public Comments,  
ii. Laura Lockhart, Admin. Rule Process for Revised Rules  
c. Quarterly Report

8

VIII. Public Comment  
IX. Other Issues:  
The Next Scheduled Board Meeting: February 9, 2010 (Tuesday), DEQ Bldg #2, Conference Room 101, 168 North 1950 West, Salt Lake City, Utah, 3:00 – 5:00 P.M.

- I. **Minutes (Board Action Item)**
  - a. **Approval of the Minutes from the  
January 12, 2010 Board Meeting**



**MINUTES  
OF  
THE UTAH RADIATION CONTROL BOARD**

**January 12, 2010**

**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  
Dane L. Finerfrock, Executive Secretary  
Scott Bird  
Patrick D. Cone  
Christian K. Gardner  
Colleen Johnson  
Edd Johnson  
Douglas S. Kimball, DMD  
Amanda Smith, DEQ Executive Director  
John W. Thomson, M.D.  
David A. Tripp, Ph.D.

**BOARD MEMBERS ABSENT/EXCUSED**

Elizabeth Goryunova, M.S., Vice Chair  
Frank D. DeRosso, MSPH, CIH  
Joseph K. Miner, M.D., MSPH

**DRC STAFF/OTHER DEQ MEMBERS  
PRESENT**

Kevin Carney, DRC Staff  
David Esser, DRC Staff  
Phil Goble, DRC Staff  
John Hultquist, DRC Section Manager  
Boyd Imai, DRC Staff  
Brad Johnson, Deputy Director for DEQ  
Ryan Johnson, DRC Staff  
Craig Jones, DRC Section Manager  
Laura Lockhart, Attorney, Atty General's Office  
Fred Nelson, Attorney, Atty General's Office  
Loren Morton, DRC Section Manager  
Sonja Robinson, DRC Staff

**DRC STAFF/OTHER DEQ MEMBERS**

**PRESENT - Continue**

Donna Spangler, PIO, DEQ – PPA Staff

**PUBLIC**

Attachment: Public Attendance List

**GREETINGS/MEETING CALLED TO ORDER**

Peter A. Jenkins, Chairman, called the board meeting to order at 3:05 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 December 8, 2009 Board Meeting**

Peter A. Jenkins, Chairman, asked the board members if they had any corrections to the minutes from December 8, 2009.

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

1. Page 7., Item V. b., third paragraph, second sentence which reads: "He said that when you start talking real numbers . . . whether it is **desecration-rates** or whatever . . ." Changed to read: ". . . **disintegration-rates** . . ."

Colleen Johnson abstained from the vote of approving the board minutes because she did not attend the last board meeting on December 8, 2009.

**MOTION MADE BY DOUGLAS S. KIMBALL TO APPROVE THE MINUTES OF DECEMBER 8, 2009 WITH THE REQUESTED CORRECTIONS**

**MOTION SECONDED BY DAVID A. TRIPP**

**MOTION CARRIED AND PASSED UNANIMOUSLY**

**II. RULES**

**a. Request to Extend Public Comment Period for R313-25-8, Depleted Uranium Rule (Board Action Item)**

Peter A. Jenkins, Chairman, informed the Board that he received a letter from EnergySolutions in which they requested a 30-day extension to the public comment period on depleted uranium (DU). He asked the board members to recall that last month they had, had a lengthy discussion regarding the length of the public comment period. They voted and agreed on 30-days. He said that because of the deadlines for filing the public notice on the public comment, there were two or three weeks when no formal action could be taken. Chairman Jenkins said that the public comment period would end on February 2, 2010, and there would be a public hearing on January 26, 2010.

Chairman Jenkins asked Dane Finerfrock whether the Board had received any comments on the rule. Dane Finerfrock, Executive Secretary, responded that the Division had not received any, but that most of the comments usually come in at the end of the comment period. Chairman Jenkins then asked for



comments from the public.

**PUBLIC COMMENTS:**

Stephen T. Nelson, Concerned Citizen from Provo, Utah

Stephen T. Nelson asked the Board to very seriously consider giving the public plenty of time and opportunity to comment on the rule, because it was going to effect whether or not this site could isolate DU waste.

Chairman Jenkins asked Mr. Nelson whether he was in favor of the 30-day extension period that EnergySolutions was requesting. Mr. Nelson responded that he was in favor of the extension period.

Tom Magette, EnergySolutions, explained that they believed that the "Statement of Basis" was filled with legal misinterpretation and technical inaccuracy. In order to comment and refute them, it would take time; consequently, EnergySolutions is asking for the additional 30 days.

Dane Finerfrock, Executive Secretary, explained that the public hearing scheduled for January 26, 2010 would provide the opportunity for the public to provide oral comments. He said that the meeting was not going to be for parties to debate the merits of what was being discussed; but rather, it would be an opportunity for oral comments to be received from people that had not taken the time to send in their written comments.

**MOTION MADE BY PATRICK D. CONE TO REJECT THE EXTENDED TIME REQUESTED BY ENERGYSOLUTIONS AND TO KEEP THE ORIGINAL PUBLIC COMMENT PERIOD OF 30-DAYS WHICH WOULD EXPIRE ON FEBRUARY 2, 2010**

**SECONDED BY JOHN W. THOMSON**

The Board Members voted on this action:

Scott Bird – Yes  
Patrick D. Cone – Yes  
Christian K. Gardner – Yes  
Peter A. Jenkins - Abstention  
Colleen Johnson – No  
Edd Johnson – Yes  
Douglas S. Kimball – Yes  
Amanda Smith - Yes  
John W. Thomson – Yes  
David A. Tripp – Yes

**Vote: 8 Yes; 1 No; and 1 Abstention**

## **MOTION PASSED AND CARRIED**

### U.S. Nuclear Regulatory Commission Stakeholder's Meeting Update:

Dane Finerfrock, Executive Secretary, updated the Board on this upcoming meeting. He said later this week the U.S. Nuclear Regulatory Commission (NRC) was hosting a Stakeholder's meeting on "waste blending." He said what had started this process was NRC's recognition that there was limited capacity for Class B and C waste disposal in this country. Mr. Finerfrock said that because of the changes in the operations of commercial waste disposal facilities, primarily in South Carolina, that there may be more interest in taking Class B and C waste and blending it. Blending would change the classification to Class A; thus, making EnergySolutions a disposal option for the blended, Class A material.

Mr. Finerfrock informed the Board that NRC had asked the State of Utah for comments, and over the last several weeks, the Division had prepared their comments. Mr. Finerfrock said that he would now let Amanda Smith report on where they were in this process.

Amanda Smith, DEQ Executive Director, distributed the comments that the Division had prepared for the Board. Ms. Smith said the Division shared the comments and position on waste blending with the Governor's Office. The Governor agreed with the Division's comments. The Division opposed waste blending for the intent to alter waste classification. Ms. Smith said that Mr. Finerfrock had done an excellent job of outlining the Division's comments. (See Attached Copy)

### **QUESTIONS BY THE BOARD:**

Patrick D. Cone asked whether there would be someone from the Department representing the State of Utah at this meeting.

Dane Finerfrock, Executive Secretary, explained that a colleague and regulator from the Low-Level Waste Forum from the State of South Carolina would be representing all of the States that chose to send-in comments. Mr. Finerfrock said that there would not be anyone from the DRC attending this activity; but rather; that the colleague would be representing all of the States on this matter.

Edd Johnson said that he was involved in the radiation control process back in the 70s when the Low-Level Radioactive Waste Compact was passed. He said that every State in the Union said they would join a particular Regional Compact. Each Regional Compact agreed to have its own disposal site. In addition, the Compact agreed that if a particular host State became filled and could no longer accept any more waste (they said "yes"), each State would be



willing to “throw their hat into the ring” and host a low-level waste site. The fact that there have only been three commercial waste sites in operation since that time, it does not put on us within the State of Utah, to have to accept everybody’s waste. The NRC is making the claim that it is an absolute necessity that they go into a blending program, because of the lack of other waste sites. I do not think it is Utah’s problem (There was tremendous clapping from the public for Mr. Edd Johnson’s final comments).

Dane Finerfrock, Executive Secretary, informed the Board that he would forward the transcript of the Stakeholder’s meeting with the NRC to the Board as soon as it was available.

**b. Proposed Rule to Prohibit Blended Wastes (Board Action Item)**

Christian K. Gardner, Board Member, informed the Board on the proposed rule to prohibit the blending of Class B and C waste. Mr. Gardner said that waste blending should be discussed by the public, and that the Board should have a public debate on it. It is a matter of good public policy, and it is something that the Board should really look at as it relates to DU. It would bring waste streams into the EnergySolutions site for disposal that had not been contemplated years ago.

The proposed rule would start the process of discussing what board members thought. He said he appreciated Amanda Smith’s updating the Board with the Governor’s letter, and the six points that the Board should take into consideration. Mr. Gardner said that one of the questions that needed to be addressed was the original Performance Assessment and if it contemplated these types of blended waste streams. Mr. Gardner said the Board needed to discuss these issues, and get some feedback on them.

**DISCUSSION BY THE BOARD:**

Chairman Jenkins said that he would like the State of Utah to put safe guards in place, something that would be a “catch all:” if it is not specifically classified the Board will not need to come back and say “what is the purpose here.” He said, ultimately, the Board wants to protect the health and safety of the citizens of Utah—we need to write a rule that addresses this, rather than “swatting at every fly” or “flavor of waste” that comes at us.

Chairman Jenkins asked Laura Lockhart what she would need from the Board in order to begin “laying” such a rule. Ms. Lockhart recommended that the Board have a subcommittee work on it. Chairman Jenkins said that policy would need to be included on what would be acceptable assumptions for the performance assessments that would need to be added.

**MOTION MADE BY PATRICK D. CONE TO PURSUE THE**

**CHAIRMAN'S DIRECTION AND FORM A SUBCOMMITTEE AND THEY WOULD REPORT DURING THE NEXT BOARD MEETING AND THEY WOULD WORK WITH THE ATTORNEY GENERAL'S OFFICE TO COME UP WITH A STATEMENT OF BASIS FOR A MORE COMPREHENSIVE LOOK AT WASTE STREAMS**

**SECONDED BY DAVID A. TRIPP**

**DISCUSSION ON THE MOTION:**

Amanda Smith, DEQ Executive Director, proposed that the Division guide the board members through the rule and the issues being looked at. And ask Laura Lockhart to look into how the Board would substantiate the rule. They needed to have a discussion based on the State's ability to regulate the waste.

Chairman Jenkins said that he agreed with the Executive Director. In addition, if the blended waste is a health and safety issue, then the Board would need to have a rule against it. He asked them to look at the issue from a general perspective (like Mr. Gardner talked about) that would "umbrella other possibilities" that the Board cannot imagine right now.

**PUBLIC COMMENT**

Joe DeCommillo, Attorney for Studwig:

Mr. DeCommillo said Studwig was a customer and a competitor of EnergySolutions. He said that the NRC, in their analysis and in their letter to Studwig, made a proposition that large scale blending by a third party is outside the scope of the Branch Technical Position Document. And NRC's response was that "current industry proposals seek to expand the historical practice of blending." He said he would like the Board to consider that issue when they hear statements that NRC's guidance allows waste blending to occur.

Randy Horiuchi, Salt Lake County Councilman:

Mr. Horiuchi said that he was a Salt Lake County Councilman. He had been retained by Studwig in the eight years that he spent managing Salt Lake County's Landfill, because they do volume reduction. He said that because of volume reduction, they were able to extend the life of the landfill 45 years. The idea is very important for Clive's landfill.

Mr. Horiuchi said what happens when you are the only acceptor of a waste stream in a commercial facility is that you become the defector. The idea that you bring in the higher B and C waste after it has been blended, it is a disguise--a fake nose and glasses. You increase the radiation, and it is a health and safety concern. He said what the Executive Director said is important. This is a public policy issue; I hate to tell you that's why you make



the big bucks. Mr. Horiuchi said it's like me at the Salt Lake County Council we have to do crazy stuff, we're the decision makers. He said to the Board "You are charged with the responsibility of health and safety and I think frankly, the public policy of radiation disposal."

Mr. James O'Neal, Concerned Citizen from Provo, Utah:

Mr. O'Neal said that the low-level radioactive waste facility in Barnwell, South Carolina closed in 2008 to waste generators outside of South Carolina's compact. He said that means there are 36 states that can no longer dispose of waste at South Carolina's site—they have to send it to Utah. They have decided to blend Class B and C waste with Class A waste.

NRC's regulations only require radioactive waste to be classified when it is ready for disposal. If it is mixed and sent from a different place, the origin of the waste will be unknown. 10 CFR Part 20, appendix G, Section 80 allows radioactive waste generators to defer classifying waste, until the waste is ready for disposal—it does not require generators to classify waste, before it is shipped from a generator to a processor. Waste blending will make the classification of waste subject to a lot of potential inaccuracy.

Mr. O'Neal read the definition for the meaning of the word "blend," and the meaning of the word "dilute." He said that he did not care what NRC said--it was still diluting, and it was a way to get around a problem.

Christopher Thomas, HEAL-Utah:

Mr. Thomas said he had learned from the DU issue to review what others have done, rather than to blaze a new trail. Mr. Thomas said he respected the Chairman of the Board; however, he had to disagree with his idea of making a general rule. He said it would be more difficult than following Texas's precedent.

Mr. Thomas said there is a huge policy issue here. He said that Board member Edd Johnson's comment summed it up rather well: "if Utah takes all of the nation's Class A waste and almost all of the Class B and C waste, there is very little incentive for the rest of the country to develop their own disposal solutions." By not addressing this issue, it is locking Utah in as a State to be "the nation's defector low-level waste dump" for as long as EnergySolutions continues to develop more disposal capacity. Mr. Thomas said that he thought the Board should absolutely go forward and close this hole within its own regulations, rather than trying to do something grand. Mr. Thomas asked the Board not to abandon this issue while it was at their door-step.

George Chapman, Concerned Citizen:

Mr. Chapman said that he agreed with the Chair that safety was important. He said that EnergySolutions is not a safe, viable, long-term disposal site, if they cannot set standards that can make them safe for the long-term. Mr. Chapman

pointed out that EnergySolutions had stainless steel barrels buried in a salt desert. He said that stainless steel does not normally hold-up that long. He suspected that 70 percent of the barrels would not be intact in 50 years. He said from a public safety standpoint, the waste needed to be safe for a hundred years (for Class A waste). He said blending Class A waste with Class B and C waste creates a public safety issue, because you do not know what nuclides are in the blended waste stream. It could be unsafe for 500 years, which means you need to increase your surety remediation fund and the closing fund.

Helene Cumo, Concerned Citizen of Utah:

Ms. Cumo said this issue was not just among the Board, EnergySolutions and HEAL-Utah—"there were no lines that could be set that way." She said they were looking at future generations of people in Utah. The Board needed to make a broad rule, and not let these types of issues keep happening. We need to look right now at the "blended issue," she said.

Ms. Cumo said that she was disappointed in Utah's elected officials: Senator Hatch and Senator Bennett. She said she was disappointed that no one would sponsor Matheson at the U.S. Senate. Governor Herbert waited way too long to write a letter about DU. She said the public needed their support and protection--not only for us now, but our future generations. Future generations need adequate protection from DU and the blended waste.

Ms. Cumo said she was there when the NRC addressed the Board, and they said that there were a lot of DU issues that the NRC did not know yet. She said that Utah needed to put a halt to DU and the blended waste, until the Board has the answers: the site analysis and knowing what the blending means. She said that the DU issue had "totally gotten out of hand." The Board needed to stop the waste shipments, until they knew what the answers were.

Chairman Jenkins asked Patrick D. Cone to reinstate his motion that he had made earlier.

**MOTION MADE BY PATRICK D. CONE THAT THE BOARD FORM A SUBCOMMITTEE TO LOOK AT THE REPORT--FIRST DURING THE NEXT BOARD MEETING; AND FEED INFORMATION TO LAURA LOCKHART, UNTIL THEY COME UP WITH A STATEMENT OF BASIS; AND ALSO COME UP WITH SOME RECOMMENDATIONS FOR THE NEXT BOARD MEETING (WHETHER THE BOARD WOULD LIKE TO PRODUCE A SPECIFIC GLOBAL REGULATION ON BLENDED WASTE OR BOTH).**

**SECONDED BY DAVID A. TRIPP**



**The Board members voted on this action:  
Vote: 9 Yes; and 1 Abstention**

**MOTION CARRIED AND PASSED**

Chairman Jenkins then asked for volunteers from the Board to be on the subcommittee. The volunteers were: Christian K. Gardner, Patrick D. Cone, Peter A. Jenkins, Amanda Smith, David A. Tripp, and Edd Johnson. Patrick D. Cone volunteered to be the Chairman of this committee.

**c. Presentation on Waste Blending by EnergySolutions  
(Board Information Item)**

Tom Magette, EnergySolutions, informed the Board on this item. Mr. Magette gave the Board a couple of handouts on his presentation. He said the handout was a condensation of a presentation that he gave (at the invitation by the NRC) to the NRC on December 15, 2009. He talked about the following issues: (1) first introduced the topic; and (2) talked a little about the concept; (3) addressed the current regulatory status of blended waste; (4) gave an update on what the NRC was doing; (5) what EnergySolutions has planned to do. He said that he would be glad to answer the board members' questions. (See Attached Copy of Tom Magette's Presentation)

**QUESTIONS BY THE BOARD:**

Patrick D. Cone asked whether EnergySolutions was requesting a license amendment to receive this material or if they thought they did not need one to do this.

Tom Magette, EnergySolutions, responded that he did not think EnergySolutions needed an amendment to its license, because people would be blending the B and C radioactive-waste outside of Utah and outside of the EnergySolutions' facility. He said that he did not know how Utah or EnergySolutions would know what kind of waste was being received, because the waste manifest does not record what the waste used to be. He said if the waste is not manifested and it is manifested as Class A waste,-- EnergySolutions can take it.

The board members continued their discussion with EnergySolutions regarding NRC's guidance on the downblending of Class B and C waste. Mr. Magette reaffirmed that there would be no way of knowing whether any of the waste that was coming in had at any time been down-blended—the manifest does not record what the waste used to be.

**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)**

John Hultquist, Section Manager, said that the Division had received 20 comments from eight individuals. He summarized the comments that were received. He reported that both the “extended, public-comment-period request” and the public hearing request were denied by the Division Director. They were denied because there had been ample opportunity during the rulemaking process to add additional comments. In addition, there would be a public hearing. Mr. Hultquist said that the Division was currently working on making a response to the public comments.

**Questions by the Board:**

David A. Tripp asked if the comments that were received from the public could be distributed to the board members.

Dane Finerfrock, Executive Secretary, said that he would e-mail “the public comments that the Division had received” to the board members.

John Hultquist, Section Manager, said that the Division would be through responding to the public comments in about two or three weeks--he said that after this process, the amendment could be issued in 60 days by the Executive Secretary. He said that after the amendment became part of the license, it would be enforceable.

b. **Governor’s and DOE Agreement on DU Disposal (Board Information Item)**

Amanda Smith, DEQ Executive Director, reported to the Board on this item. Ms. Smith said that the Department of Energy issued a letter addressed to Governor Herbert regarding the agreement on DU disposal in Utah. Ms. Smith said that there were parts of the letter that the Governor agreed with, but there were issues and new issues that were being negotiated—issues that were not specifically addressed in the DOE’s letter to Governor Herbert. The Executive Director said that she was not at liberty to share what the specifics were in DOE’s letter. She said that most of the issues being negotiated with Utah were about the terms of the second and third rail shipments—DEQ would be working with EnergySolutions about the specifics. As soon as DEQ had finalized the agreement with DOE, she would e-mail it to the board members.

**QUESTIONS BY THE BOARD:**

Peter A. Jenkins, Chairman, asked the Executive Director if she could update the Board on the "two-month time limit" within the agreement, since the last press release.

Amanda Smith, DEQ Executive Director, responded that there had been some confusion as to what the "two-month time period/limit" was going to be. The Governor had asked the Department and DOE what to do--they had agreed with DOE to the "two-month time period." The Division would work with EnergySolutions, and look specifically at the safety standards that should be in place that were not in place in the license; specifically concerning: depth, cover, height, and radon detection. She said they were still working on additional issues that were still under negotiation with DOE.

Ms. Smith said that, today, the Governor had asked the Department and the Division to complete independent testing on drums that had been received by EnergySolutions from Savannah River. She said that EnergySolutions had already completed testing some of the drums, but they had not received the results yet. She said that DEQ would be sending staff out to conduct independent testing, and that she would bring the results to the Board. The Governor felt that there had been enough questions raised, and as the regulator, the Division should do independent testing.

The Executive Director explained that the Department would not be allowing a contractor to do the testing; but rather, the Division of Radiation Control's staff would be doing the testing and looking at the containers. The samples would be sent to another entity for lab analysis.

Chairman Jenkins said that Christopher Thomas, from HEAL-Utah, would like to address the Board on this issue.

**PUBLIC COMMENTS:**

**Christopher Thomas, HEAL-Utah:**

Christopher Thomas said he had some concerns. He said that when the sampling takes place, it is completed in a particular way. As we see from DOE's standards, it is grossly inadequate: 33 samples over 33,000 drums. That is one-tenth of one percent. It seems crazy that they rely on 33 samples to determine what is in all of the 33,000 drums.

EnergySolutions' sampling method is to take aliquots and to mix them together--then to characterize it as a mixed-sample. Consequently, if you take a very large activity drum, and mix the aliquots mixture with the very high activity drum, the results comes out somewhere in the middle. You never



capture the fact that *EnergySolutions* had a high-radioactivity drum that exceeds the State's limits for that radionuclide. This is a real important consideration for how these drums will be sampled in the future.

Mr. Thomas said it was unjust for the State of Utah to "pay" to do the additional sampling. He felt very strongly that the DOE should pay to do the robust, systematic sampling required in order to demonstrate that the drums do not violate Utah's standards--or DOE should not be able to send DU shipments to Utah. Mr. Thomas said that he was disappointed that this agreement was not protecting the citizens of Utah from the waste, and disappointed that it was able to come to Utah. He said that he hoped the additional shipments would not enter the State, period!

Amanda Smith, DEQ Executive Director, said that it would be helpful for Dane Finerfrock to explain the reasoning behind the process of how many DU drums to test. She also thought it would be great to hear from *EnergySolutions*, about the testing that they had done.

Division Explanation on the 33 Samples from the Drums:

Dane Finerfrock said that he could not address specifically why the DOE's waste characterization plan required taking 33 samples. He said that he could tell the Board and the Public that the standard methods behind bulk-sampling are based on knowledge of the homogeneity or heterogeneity of the waste. Mr. Finerfrock explained that if there were a high-confidence that it is homogeneous waste, a minimal number of samples would be represented. In this case, as a result of knowing there would be large volumes of the same material at *EnergySolutions* (coming for 15 years, maybe longer), a waste characterization plan for DOE's DU had been created. DOE expects *EnergySolutions* to follow the waste characterization plan for the new DU waste streams and for the existing waste streams. Mr. Finerfrock explained that the Division inspects *EnergySolutions* for compliance with the waste characterization plan.

*EnergySolutions* Waste Characterization on the Testing of the Drums:

Daniel Shrum, *EnergySolutions*, said that *EnergySolutions* had collected eleven samples. The samples had been submitted for analytical work. *EnergySolutions* had also collected samples from Savannah River's DU material that had been shipped before. *EnergySolutions* could provide that information to the Board. He said that *EnergySolutions* would be highly receptive to DEQ's taking samples--they did not have an issue with this. Mr. Shrum said that he did not know how the DU material was assessed as it came out of the processing facility and was put into drums. He said that he would find this information, and report back to the Board.

He said the DU waste's "waste profile" was generated before the material was sent to the Clive facility. Based on the profile, they can agree that it will meet



the Class A limit. Afterward EnergySolutions gives the "Notice to Transport," and the manifest "shows-up." EnergySolutions' compares the manifest to their license and ensures that the material meets all of EnergySolutions' license conditions.

**QUESTIONS BY THE BOARD:**

Edd Johnson asked whether on the manifest that DOE sends to EnergySolutions, if DOE indicates when there are other containments i.e., the plutonium, etc?

Mr. Shrum responded that EnergySolutions was only aware of the containments that were listed on the manifest that were also on the profile.

**VI. URANIUM MILL LICENSING AND INSPECTION**  
**No Items**

**VII. OTHER DIVISION ISSUES**

**a. Quarterly and Monthly Update (Board Information Item)**

Peter A. Jenkins, Chairman, asked the Board, if there were any questions on the Division Activities Report. The board members had none.

**VIII. PUBLIC COMMENT**

**Please refer to Item II. a. and b. and V. b.**

**IX. The Next Scheduled Board Meeting: February 9, 2010 (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 5:52 P.M.**

- I. **Minutes (Board Action Item)**
  - a. **Approval of the Minutes from the  
January 12, 2010 Board Meeting**

**Public Attendance List – January 12, 2010**



**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.  
 January 12, 2010  
**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. Joe DiComillo	Stu dsuik	yes - 2 B Blandeg
2. Randy Ahrak	"	" "
3. BOB ARCHIBALD	4115 QUARANTER SANDY 82092 BABBLECS@GLOBAL.NET	NO
4. MARY ELLEN NAVAS	SANDY 82092 MENAVAS@GLOBAL.NET	No
5. James O'Neal	private citizen isco uyehira@yahoo.com	yes - II b.
6. Kimi Barnett	SALT LAKE COUNTY	no
7. George Gates	HEAL	no
8. K. Albany	HEAL	No
9. Humberto Willette	GOPB	no
10. Cherry King	Heal	NO
11. Bryan Melcher	private citizen	no
12. Steve Nelson	citizen	yes II A
13. Tim Gillie	Toche Transcript Bulletin	no
14. Ed Firmage	self	Yes
15. Christopher Thomas	HEAL	yes II & V
16. Vanessa Pierce	HEAL	NO
17. Kelsa Bowers	concerned citizen	no
18. Sherry Mien	concerned citizen	no
19. Jean Sweet	GALLAGHER WEST	

**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.  
**January 12, 2010**  
*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. <i>Helene Cuomo</i>	<i>self</i>	<i>yes</i>
21.		
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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.  
**January 12, 2010**  
***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. <i>George Chapman</i>	<i>gechapman@yahoo.com</i> <i>Soft, 855E Spring View Dr</i> <i>Salt Lake City 867-7071</i>	<i>Yes general comment</i> <i>need more staff</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.

January 12, 2010

*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. David Esser	DRC	NO
59. Dan Shum	Energy Solutions	NO
60. Tom Magette	Energy Solutions	NO
61. Clare Gilmore	HEAL Utah	NO
62. <del>SA</del> Kelly Nichols		YES
63. Robert Baird	URS Corp	NO
64. ARTHUR WASSER	HEAL	NO
65. Steve Erickson	Cit Education Project	yes
66. Steve ERICKSON		
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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.

January 12, 2010

*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. MAXINE KAISER	Heal Uth manha	No
97. Se Corth	"	No
98. Patrick vander Hofites	pvdhofites@gmail.com 801-657-2247	No
99. Judy Lord	bookcat@hotmail.com 801-486-6694	No
100. Cynthia of the desert	cynthearm@gmail.com HEAL UT	?
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- II. Rules (Board Action Item)**
  - a. Requirements for Irradiators (R313-34):**
    - 5-year agency review**

# UTAH RADIATION CONTROL RULES

## BOARD ACTION ITEM

### Requirements for Irradiators (R313-34)

#### **Five-Year Rules Review**

The Utah Administrative Rulemaking Act requires an agency to review each of its administrative rules within five years of the rule's original effective date or the last five-year review. The purpose of the review is to remind agencies to amend or repeal rules that are archaic in form, are no longer used, for which statutory authority no longer exists, or are otherwise unnecessary. Rule R313-34, *Requirements for Irradiators*, is due for a five-year review.

The Radiation Control Act specifies that the Radiation Control Board may make rules. Because the Rulemaking Act's definition of "agency" includes each state board authorized or required by law to make rules, it is appropriate that the Board approve the five-year review of Rule R313-34. The Five-Year Notice of Review and Statement of Continuation for Rule R313-34 is attached.

#### **Recommendation**

**The Executive Secretary recommends that**

- 1. the Board approve the attached Five-Year Notice of Review and Statement of Continuation for Rule R313-34, and**
- 2. the Board direct Division of Radiation Control staff to file the Notice with the Division of Administrative Rules.**

## FIVE-YEAR NOTICE OF REVIEW AND STATEMENT OF CONTINUATION

Rule Information	
DAR file no:	Date filed:
State Admin Rule Filing Key: 149332	
Utah Admin. Code ref. (R no.): R313-34	

Agency Information				
1. Agency:	ENVIRONMENTAL QUALITY - Radiation Control			
Room no.:	212			
Building:				
Street address 1:	168 N 1950 W			
Street address 2:				
City, state, zip:	SALT LAKE CITY UT 84116-3085			
Mailing address 1:	PO BOX 144850			
Mailing address 2:				
City, state, zip:	SALT LAKE CITY UT 84114-4850			
Contact person(s):				
Name:	Phone:	Fax:	E-mail:	Remove:
Craig Jones	801-536-4264	801-533-4097	cwjones@utah.gov	
(Interested persons may inspect this filing at the above address or at DAR during business hours)				

Rule Title
2. Title of rule or section (catchline): Requirements for Irradiators

Rule Provisions
3. A concise explanation of the particular statutory provisions under which the rule is enacted and how these provisions authorize or require the rule: Subsection 19-1-106(1) created the Radiation Control Board within the Department of Environmental Quality. Subsection 19-3-104(4) provides that the Board may make rules necessary for controlling exposure to sources of radiation that constitute a significant health hazard and to meet the requirements of federal law relating to radiation control.

Comment Summary
4. A summary of written comments received during and since the last five-year review of the rule from interested persons supporting or opposing the rule: This has not been a controversial rule. The Radiation Control Board recommends the continuation of this rule. No other comments have been received since the last five-year review.

Justification Information
5. A reasoned justification for continuation of the rule, including reasons why the agency disagrees with comments in opposition to the rule, if any: This rule must be continued because it establishes the requirements for the possession and use of sealed sources containing radioactive materials in irradiators. These devices use gamma radiation to irradiate objects or materials. The rules provide for protection of public health and safety by controlling the use of panoramic irradiators that have either dry or wet storage of the radioactive sealed sources; underwater irradiators in which both the source and object being irradiated are under water; and irradiators whose dose rate exceeds 500 rad per hour at one meter from the radioactive source in air or in water.



Indexing Information

6. Indexing information - keywords (maximum of four, one term per field, in lower case, except for acronyms (e.g., "GRAMA") or proper nouns (e.g., "Medicaid")):  
irradiator, survey, radiation, radiation safety

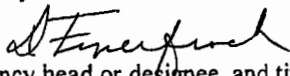
File Information

7. Attach an RTF document containing the text of this rule change (filename):  
There is a document associated with this rule filing.

To the Agency

Information requested on this form is required by Section 63G-3-305. Incomplete forms will be returned to the agency for completion, possibly delaying the effective date.

Agency Authorization

  
Agency head or designee, and title: Dane Finerfrock  
Director

Date (mm/dd/yyyy): 01/26/2010

- II. Rules (Board Action Item)**
  - b. Requirements for Irradiators (R313-34):  
Proposed rule amendment**

# UTAH RADIATION CONTROL RULES

## BOARD ACTION ITEM

### Requirements for Irradiators (R313-34)

#### **Proposed Rule Amendment**

During the process to complete a five-year review of Rule R313-34, *Requirements for Irradiators*, it was noted that the rule incorporated, by reference, portions of the 2001 edition of the Code of Federal Regulations. It is proposed that the rule be amended to update the incorporated material to the 2010 edition of the Code of Federal Regulations.

The Notice of Proposed Rule Amendment form is attached along with the amended rule. New text is underlined and text to be deleted is bracketed and printed with a strikethrough.

#### **Recommendation**

**The Executive Secretary recommends that**

- 1. the Board approve filing the proposed change with the Division of Administrative rules, and**
- 2. the Board establish a 30-day period for public comments.**



NOTICE OF  
PROPOSED RULE AMENDMENT

- The agency identified below in box 1 provides notice of proposed rule change pursuant to Utah Code Section 63G-3-301.
- Please address questions regarding information on this notice to the agency.
- The full text of all rule filings is published in the Utah State Bulletin unless excluded because of space constraints.
- The full text of all rule filings may also be inspected at the Division of Administrative Rules.

Rule Information	
DAR file no:	Date filed:
State Admin Rule Filing Key: 149333	
Utah Admin. Code ref. (R no.): R313-34	

Agency Information				
1. Agency:	ENVIRONMENTAL QUALITY - Radiation Control			
Room no.:	212			
Building:				
Street address 1:	168 N 1950 W			
Street address 2:				
City, state, zip:	SALT LAKE CITY UT 84116-3085			
Mailing address 1:	PO BOX 144850			
Mailing address 2:				
City, state, zip:	SALT LAKE CITY UT 84114-4850			
Contact person(s):				
Name:	Phone:	Fax:	E-mail:	Remove:
Craig Jones	801-536-4264	801-533-4097	cwjones@utah.gov	
(Interested persons may inspect this filing at the above address or at DAR during business hours)				

Rule Title
2. Title of rule or section (catchline): Requirements for Irradiators

Notice Type
3. Type of notice: Amendment

Rule Purpose
4. Purpose of the rule or reason for the change: During the process to complete a five-year review of this rule, it was noted that the rule referred to the 2001 edition of the Code of Federal Regulations. The incorporated material was updated to the 2010 edition. The federal requirements did not have any changes since the 2001 edition was incorporated by reference.

Response Information
5. This change is a response to comments by the Administrative Rules Review Committee. • No Yes

Rule Summary

6. Summary of the rule or change:

References to the 2001 edition of 10 CFR 36 and Appendix B of 10 CFR 20 were updated to the 2010 edition.

Aggregate Cost Information

7. Aggregate anticipated cost or savings to:

A) State budget:

Affected:                    No • Yes

The Division of Radiation Control will have a small cost to acquire a copy of the applicable Code of Federal Regulations. This cost is estimated to be less than \$75.

B) Local government:

Affected:                    • No    Yes

There are no local governmental agencies licensed to receive, possess or use radioactive materials in an irradiator.

C) Small businesses:

Affected:                    No • Yes

("small business" means a business employing fewer than 50 persons)

One regulated entity will need to acquire a copy of the applicable Code of Federal Regulations. This cost is estimated to be less than \$75.

D) Persons other than small businesses, businesses, or local government entities:

Affected:                    • No    Yes

("person" means any individual, partnership, corporation, association, governmental entity, or public or private organization of any character other than an agency)

The Utah Radiation Control Board is not aware of any direct impact on other entities.

Compliance Cost Information

8. Compliance costs for affected persons:

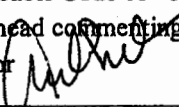
Since the rule changes will not add or remove any regulatory requirements, there are no additional compliance costs.

Department Head Comments

9. A) Comments by the department head on the fiscal impact the rule may have on businesses:

There is one Utah business currently affected by this rule. The fiscal impact is minimal and is associated with the need to obtain a copy of the applicable Code of Federal Regulations.

B) Name and title of department head commenting on the fiscal impacts:

Amanda Smith, Executive Director 

Citation Information

10. This rule change is authorized or mandated by state law, and implements or interprets the following state and federal laws.

State code or constitution citations (required) (e.g., Section 63G-3-402; Subsection 63G-3-601(3); Article IV) :  
Subsection 19-3-104(4), 10 CFR 36, Appendix B of 10 CFR 20

Incorporated Materials

11. This rule adds, updates, or removes the following title of materials incorporated by references (a copy of materials incorporated by reference must be submitted to DAR; if none, leave blank) :

Official Title of Materials Incorporated (from title page)App. B of 10 CFR 20 PublisherGPO Date Issued01/01/2010 Issue, or version ISBN Number ISSN Number Cost of Incorporated Reference Adds, updates, removesUpdates
--

Official Title of Materials Incorporated (from title page)10 CFR 36 PublisherGPO Date Issued01/01/2010 Issue, or version ISBN Number ISSN Number Cost of Incorporated Reference Adds, updates, removesUpdates
--



Comments

12. The public may submit written or oral comments to the agency identified in box 1. (The public may also request a hearing by submitting a written request to the agency. The agency is required to hold a hearing if it receives requests from ten interested persons or from an association having not fewer than ten members. Additionally, the request must be received by the agency not more than 15 days after the publication of this rule in the Utah State Bulletin. See Section 63G-3-302 and Rule R15-1 for more information.)

A) Comments will be accepted until 5:00 p.m. on (mm/dd/yyyy) :

03/31/2010

B) A public hearing (optional) will be held:

On (mm/dd/yyyy): At (hh:mm AM/PM): At (place):

Proposed Effective Date

13. This rule change may become effective on (mm/dd/yyyy):

04/15/2010

NOTE: The date above is the date on which this rule MAY become effective. It is NOT the effective date. After the date designated in Box 12(A) above, the agency must submit a Notice of Effective Date to the Division of Administrative Rules to make this rule effective. Failure to submit a Notice of Effective Date will result in this rule lapsing and will require the agency to start the rulemaking process over.

Indexing Information

14. Indexing information - keywords (maximum of four, one term per field, in lower case, except for acronyms (e.g., "GRAMA") or proper nouns (e.g., "Medicaid")):  
irradiator, survey, radiation safety, radiation

File Information

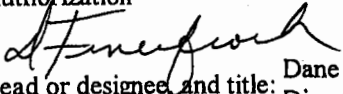
15. Attach an RTF document containing the text of this rule change (filename):

There is a document associated with this rule filing.

To the Agency

Information requested on this form is required by Sections 63G-3-301, 302, 303, and 402. Incomplete forms will be returned to the agency for completion, possibly delaying publication in the Utah State Bulletin, and delaying the first possible effective date.

Agency Authorization

  
Agency head or designee, and title: Dane Finerfrock  
Director

Date (mm/dd/yyyy): 01/26/2010

**R313. Environmental Quality, Radiation Control.**

**R313-34. Requirements for Irradiators.**

**R313-34-1. Purpose and Authority.**

(1) Rule R313-34 prescribes requirements for the issuance of licenses authorizing the use of sealed sources containing radioactive materials in irradiators used to irradiate objects or materials using gamma radiation.

(2) The rules set forth herein are adopted pursuant to the provisions of Subsections 19-3-104(4) and 19-3-104(8).

(3) The requirements of Rule R313-34 are in addition to, and not in substitution for, the other requirements of these rules.

**R313-34-2. Scope.**

(1) Rule R313-34 shall apply to panoramic irradiators that have either dry or wet storage of the radioactive sealed sources; underwater irradiators in which both the source and the product being irradiated are under water; and irradiators whose dose rates exceed 5 grays (500 rads) per hour at 1 meter from the radioactive sealed sources in air or in water, as applicable for the irradiator type.

(2) The requirements of Rule R313-34 shall not apply to self-contained dry-source-storage irradiators in which both the source and the area subject to irradiation are contained within a device and are not accessible by personnel, medical radiology or teletherapy, the irradiation of materials for nondestructive testing purposes, gauging, or open-field agricultural irradiations.

**R313-34-3. Clarifications or Exemptions.**

For purposes of Rule R313-34, 10 CFR 36, 20[θ]10 ed., is incorporated by reference with the following clarifications or exceptions:

(1) The exclusion of the following 10 CFR sections: 36.1, 36.5, 36.8, 36.11, 36.17, 36.19(a), 36.91, and 36.93;

(2) The substitution of the following:

(a) Radiation Control Act for Atomic Energy Act of 1954;

(b) Utah Radiation Control Rules for the reference to NRC regulations and the Commission's regulations;

(c) The Executive Secretary or the Executive Secretary's for the Commission or the Commission's, and NRC in the following 10 CFR sections: 36.13, 36.13(f), 36.15, 36.19(b), 36.53(c), 36.69, and 36.81(a), 36.81(d) and 36.81(e); and

(d) In 10 CFR 36.51(a)(1), Rule R313-15 for NRC;

(3) Appendix B of 10 CFR Part 20 refers to the 20[θ]10 ed. of 10 CFR; and

(4) The substitution of Title R313 references for the following 10 CFR references:

(a) Section R313-12-51 for reference to 10 CFR 30.51;

(b) Rule R313-15 for the reference to 10 CFR 20;

(c) Subsection R313-15-501(3) for the reference to 10 CFR 20.1501(c);

(d) Section R313-15-902 for the reference to 10 CFR 20.1902;

(e) Rule R313-18 for the reference to 10 CFR 19;

- (f) Section R313-19-41 for the reference to 10 CFR 30.41;
- (g) Section R313-19-50 for the reference to 10 CFR 30.50;
- (h) Section R313-22-33 for the reference to 10 CFR 30.33;
- (i) Section R313-22-210 for the reference to 10 CFR 32.210;
- (j) Section R313-22-35 for the reference to 10 CFR 30.35;

and

- (k) Rule R313-70 for the reference to 10 CFR 170.31.

**KEY: irradiator, survey, radiation, radiation safety**

**Date of Enactment or Last Substantive Amendment: [~~September 14, 2001~~]**

**Notice of Continuation: March 8, 2005**

**Authorizing, and Implemented or Interpreted Law: Subsections 19-3-104(4) and 19-3-104(8)**



- V. Radioactive Waste Disposal**
  - a. Charles Judd, Cedar Mountain Environmental, Presentation: Plans to Develop Low-Level Radioactive Waste Disposal Facility, Tooele County (Board Information Item)**

February 1, 2010

TO: Radiation Control Board Members

Enclosed with this letter is a summary of a presentation that will be made at the Board Meeting on February 9, 2010. The presentation has been prepared to brief the Board on the plans Cedar Mountain Environmental (CME) has to open a new facility in Tooele County. CME has been working to open a new facility for over five years and is convinced that this Tooele County facility will be a significant asset to Tooele County, the State of Utah, taxpayers and those in the radioactive waste marketplace.

It is clear that the capacity for LLRW in the United States is very limited and that a majority of the LLRW that is being disposed of at commercial facilities is being disposed of at EnergySolutions (ES) facility at Clive. EnergySolutions has already contracted to take more LLRW than it has capacity to dispose. The question is what will happen to the additional waste and more importantly what will happen to the 10,000,000 cubic feet of waste that ES has already created at the Clive site.

Cedar Mountain is working with Utah State Institutional Trust Lands to develop a site which is three miles north of Interstate 80 at about milepost 50. During the operation of the site, millions of dollars will be paid to the State Lands Trust which will then be used for Utah Schools. In addition millions will be paid to Tooele County and the State of Utah. CME also supports the need to double the amount paid to the State to provide oversight of facilities in Utah.

The CME facility will provide a disposal site with many improved engineering designs. The new CME design includes twice as much radon barrier to cover the waste. The site will be operated in a much cleaner approach where waste is covered sooner and the site itself will not create large amounts of new waste. The design is for one cell instead of many cells which is much more cost effective and better for site drainage.

CME is excited to move forward on this new site and expect that it will be a benefit to Tooele County, the State of Utah, Utah Schools, US taxpayers, utility users and many more as we provide a cleaner, more economical, taxpaying disposal operation. We look forward to making this presentation to you next week.

Best Regards,



Charles A. Judd, President

Cedar Mountain Environmental

# Status of Commercial LLRW Disposal in U. S.

- 98% of LLRW disposed at commercial facilities is disposed at Clive, Utah.
- Average price per cubic foot for disposal at Clive is \$30 per cubic foot.
- Capacity at Clive is quickly running out.
- New facility in Texas has limited waste acceptance abilities.
- Both commercial and government generators are in need of additional commercial LLRW disposal facilities.



# Where Will All The LLRW Go?

## EnergySolutions Site in Clive, Utah

Permitted Remaining LLRW Capacity August 2009	53 million cf
Cell Space needed for Clay Liner and Temporary Cover	- <u>3 million cf</u>
Cell Space Available for Waste Placement	50 million cf

Committed under contract to Nuclear Power Plants	85 million cf
Expected by DOE in next 5 years	12 million cf
Expected by other Government Agencies in next 5 years	+ <u>3 million cf</u>
Waste Scheduled to come to site as of 2009	100 million cf

Other Wastes suggested by EnergySolutions

- Depleted Uranium
- Blended Wastes
- Foreign Wastes

# Cell Space Needed

LLRW accepted at Clive Aug. '08 to Aug. '09	100,962 cy
LLRW cell space used at Clive Aug. '08 to Aug. '09	226,544 cy

2.2 cubic yard cell space used for every  
Cubic LLRW accepted.

200 million cubic feet of cell space required to dispose of currently  
committed waste to EnergySolutions Clive site.

# Uncovered Waste Cells at Clive



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# Who Will Cover The Waste Already At Clive?

- For every cubic foot of waste EnergySolutions accepts, it is required to put money aside to pay to properly cover the waste. (SFAS No. 143 Accounting for Asset Retirement Obligations)
- EnergySolutions has not properly covered any waste in the last 4 years.
- It is estimated that there is currently 136,000,000 cubic feet of waste at the Clive site that is not properly covered.
- The State of Utah estimates that it will cost \$82 million to properly cover the waste and close the Clive site alone.
- EnergySolutions has set aside less than \$70 million to properly cover the waste and close the Utah site, the properly cover the waste and close the South Carolina site, to decontaminate and decommission their facilities in Tennessee and to do the same at certain customer sites.
- EnergySolutions took \$13 million out of this account in 2007

# Important Need for Tooele County and the State of Utah

- An additional 10,000,000 cubic feet of waste has been created by EnergySolutions and is currently at the Clive site.
- 20,000,000 cubic feet of cell space will be needed to clean up the Clive site when it closes.

If you want something done right;  
You had better do it yourself.

-My Father

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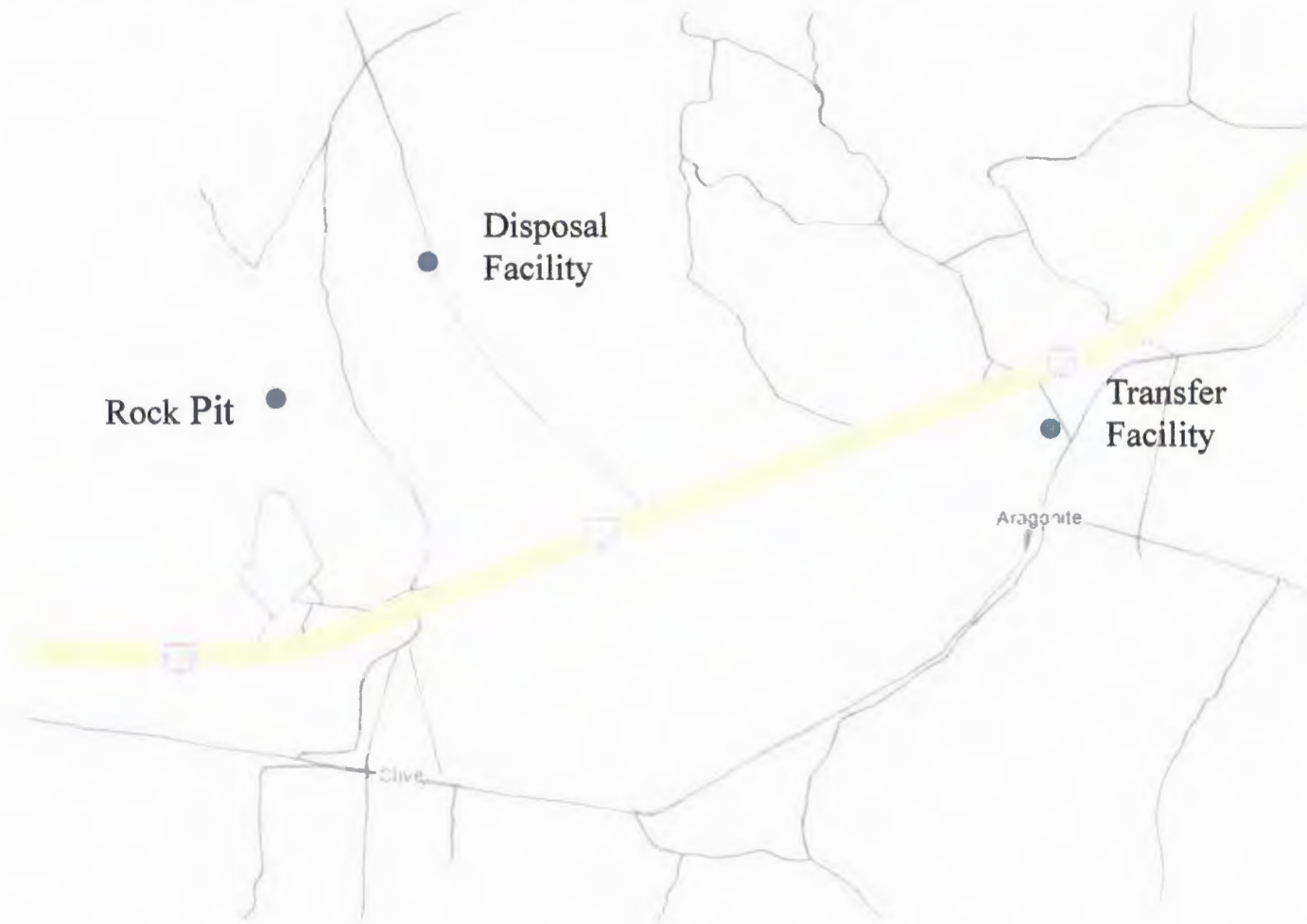
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# Proposed New Site

Already Invested: \$10 Million

Rock Source, Land, Transfer Facility, Transfer Containers

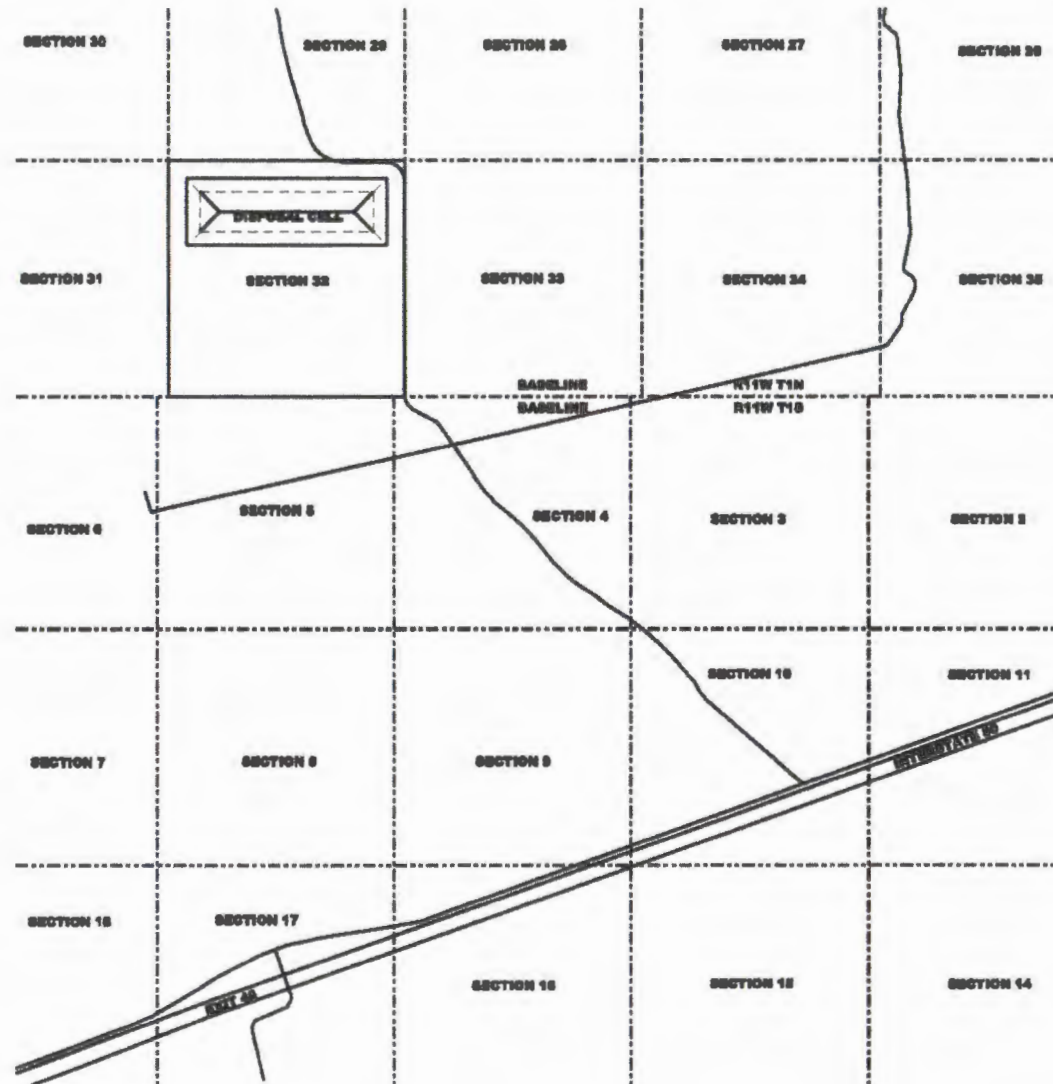


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# Location: Tooele Facility



# Wastes Accepted

- Class A Waste
- NO Foreign Wastes
- NO Blended Wastes
- NO Depleted Uranium

Goal: Work with the Governor, Northwest Compact, public officials, and other regulatory agencies.

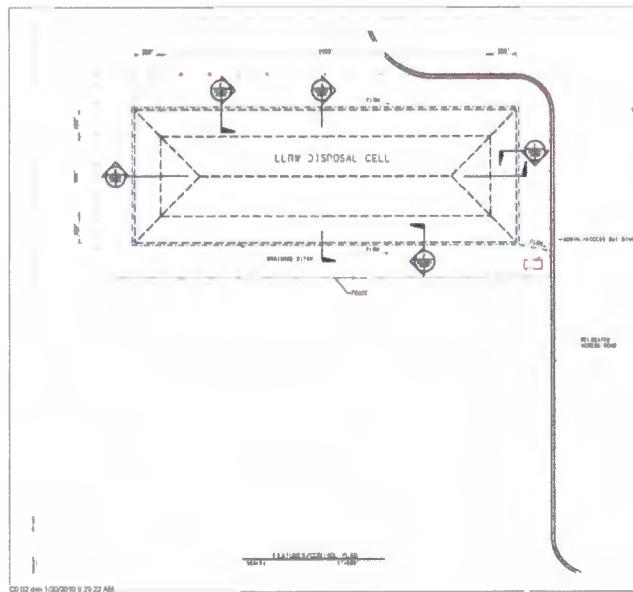


# Licensing Process

- Finalize Agreement with State Lands
- Complete Siting Criteria
- Work out Agreements with Tooele County
- Complete License Application with State of Utah
- Work out Agreements with NW Compact
- Governor & Legislative approval
- Construct Facility

# New Compact Design

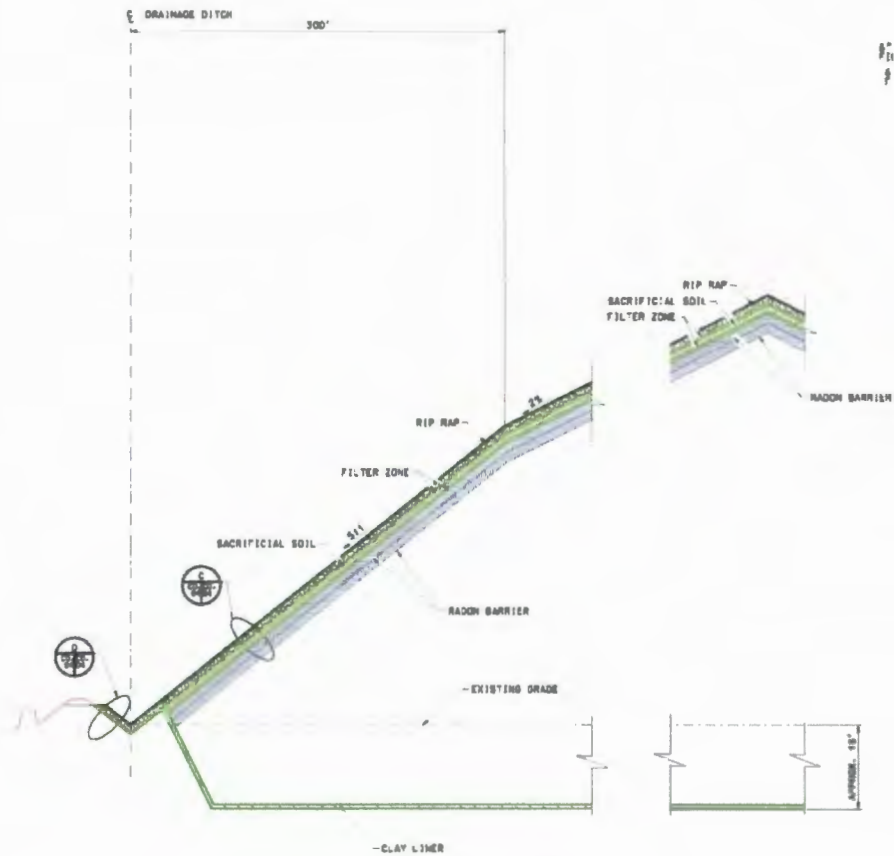
**Compact Approach to Operations**  
**13 million cubic yards**



**7 Cell Design**  
**16 million cubic yards**

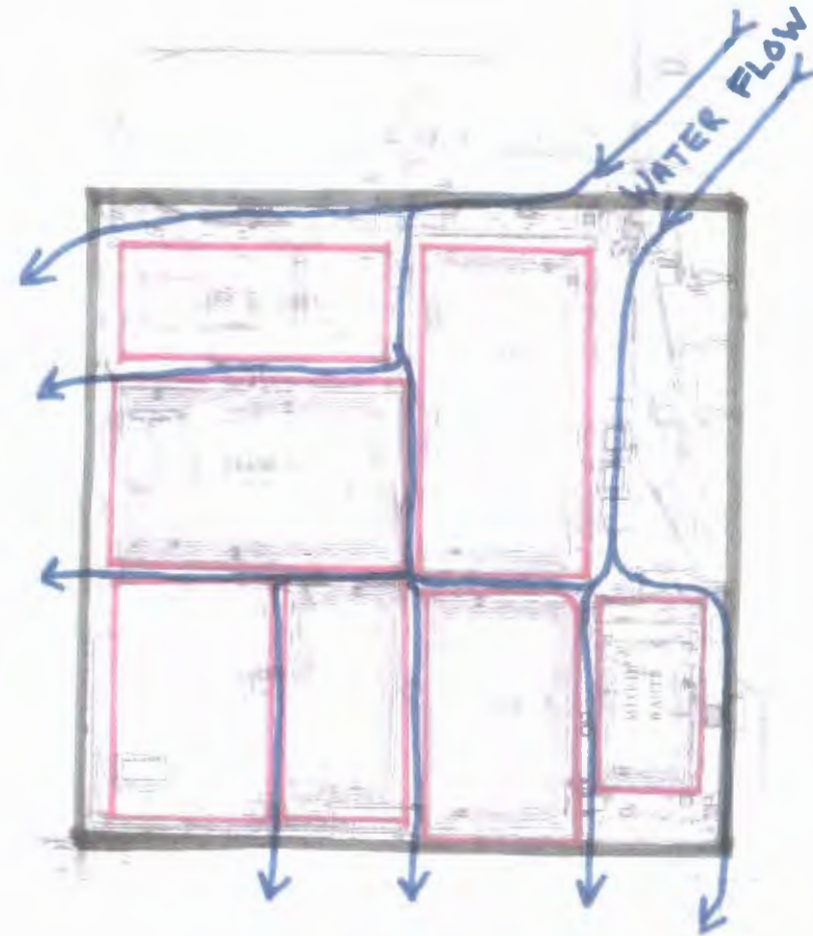
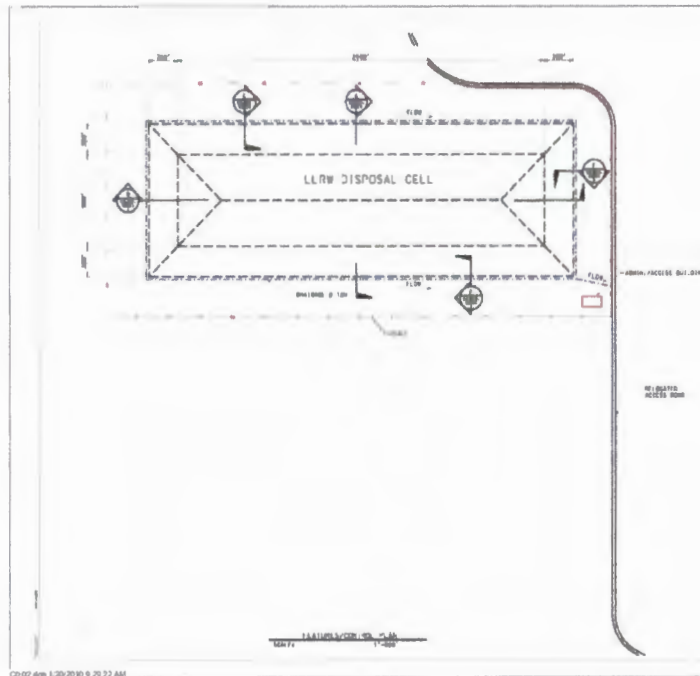


# Better Cover Design 4 Foot Radon Barrier



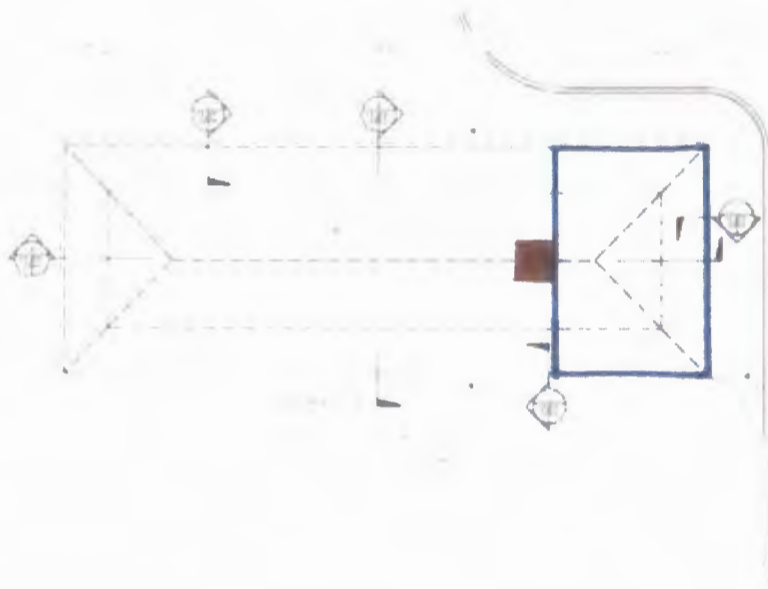
SECTION  
SCALE: 1" = 10'  
NOTE: SECTION IS SHOWN WITH AN  
EXAGGERATED VERTICAL SCALE

# One Cell – Better Flow Past Cell Less Construction Costs

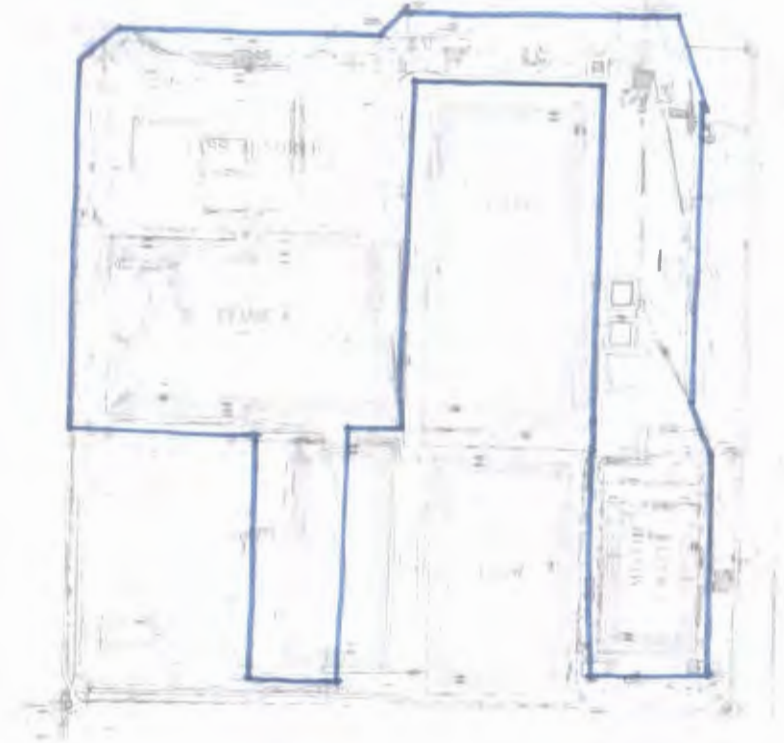




# Comparison of Contaminated Areas Cleaner Operation – Less Open Waste



New Site



Clive Site

# Taxes & Fees Proposed

1. Support increase in State Oversight Fee from \$0.15 per cubic foot to \$0.30 per cubic foot.
2. Support 50% increase in State Tax on radioactive waste.
3. Pay millions in fees to State Land to support Utah schools.
4. Determine a fair way to pay Tooele County Fees (maybe per cubic foot charge).
5. Possible new tax on DU, Blended Waste, and Foreign Wastes.

# New Proposal for Taxes & Fees on Radioactive Waste

## Fees Paid to State for Oversight of Facilities

1. \$0.30 per cubic foot for LLRW
2. \$5.00 per cubic foot for Containerized Waste
3. \$5.00 per cubic foot for DU
4. \$5.00 per cubic foot for Foreign Waste
5. \$5.00 per cubic foot for Blended Waste

# New Proposal for Taxes & Fees on Radioactive Waste

## Taxes Paid to State of Utah for Radioactive Waste

1. \$0.50 per cubic foot for government LLRW
2. \$5.00 per cubic foot for commercial LLRW
3. \$25.00 per cubic foot for Containerized Waste
4. \$25.00 per cubic foot for DU
5. \$250.00 per cubic foot for Foreign Waste
6. \$250.00 per cubic foot for Blended Waste



# New Proposal for Taxes & Fees on Radioactive Waste

## Fees Paid to Tooele County

1. \$0.50 per cubic foot for government LLRW
2. \$2.50 per cubic foot for commercial LLRW
3. \$25.00 per cubic foot for Containerized Waste
4. \$25.00 per cubic foot for DU
5. \$250.00 per cubic foot for Foreign Waste
6. \$250.00 per cubic foot for Blended Waste

# New Proposal for Taxes & Fees on Radioactive Waste

Fee Paid to Utah State Institutional Trust Lands  
to help Utah schools

1. Per cubic foot rate
2. Millions raised for Utah schools

# Estimated Taxes & Fees With New Proposal (Annually)

(based on 5,100,000 cubic feet of waste each year)

1. Fee Paid to State for Oversight of Facilities	\$2,000,000
2. Taxes Paid to State of Utah for Radioactive Waste	\$14,000,000
3. Fee Paid to Tooele County	\$9,000,000
4. Fee Paid to Utah State Institutional Trust Lands to help Utah schools	Millions

Tens of millions more if DU, Blended waste, and foreign waste taxed.

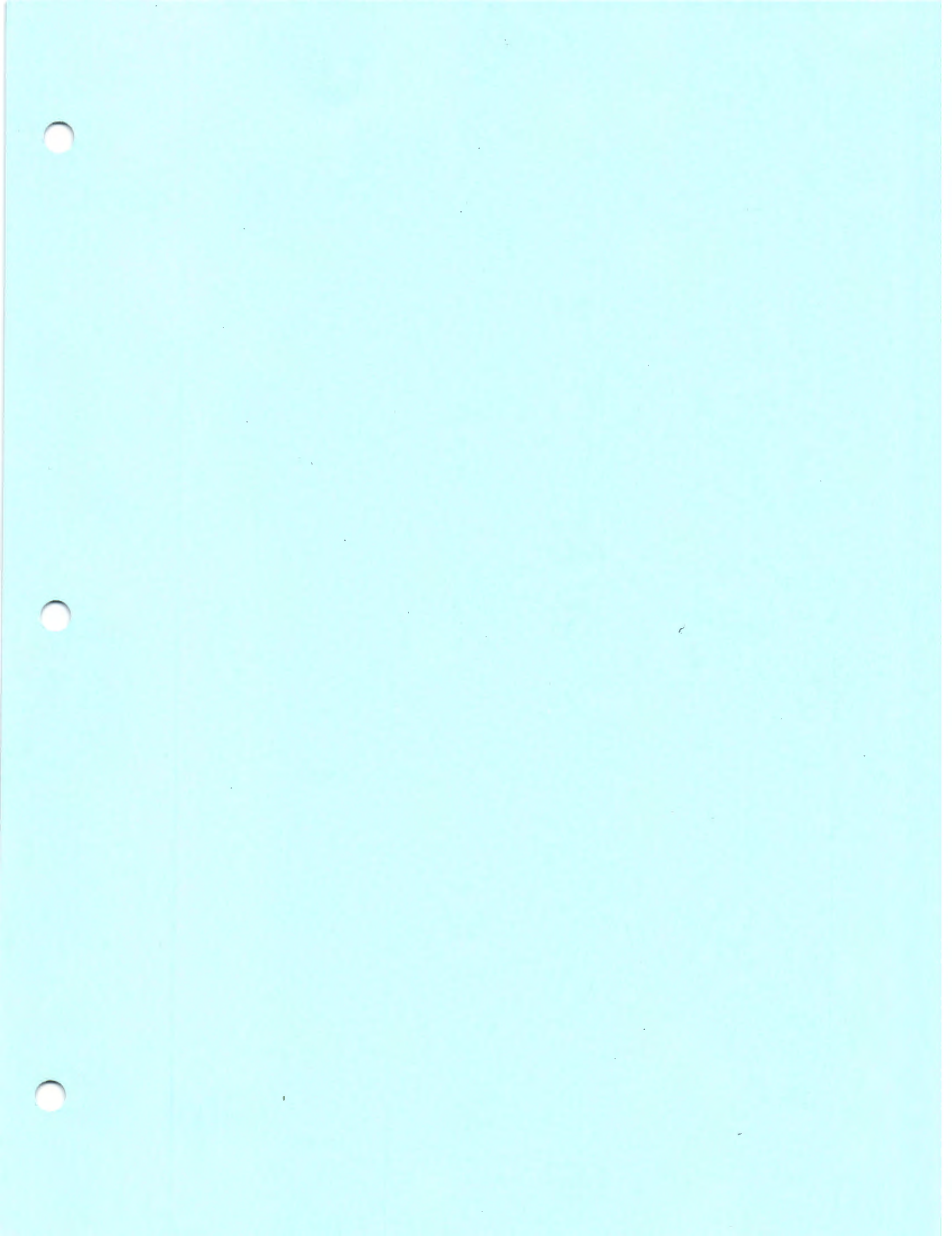
# DO IT RIGHT

1. No Foreign Waste
2. No DU
3. No Blended Waste
4. Better Design
5. Better Site Layout
6. Cleaner Operations
7. More State Fees for Oversight
8. More Tax Dollars to Utah
9. More Dollars to Tooele County
10. Millions more for Utah Schools



# Those Who Will Benefit Include:

- Tooele County
- State of Utah
- Utah Schools
- U.S. Taxpayers
- Utility Users





State of Utah

GARY R. HERBERT  
Governor

GREG BELL  
Lieutenant Governor

Department of  
Environmental Quality

Amanda Smith  
Executive Director

DIVISION OF RADIATION CONTROL  
Dane L. Finerfrock  
Director

**Radiation Control Board**  
Peter A. Jenkins, M.S., CHP, *Chair*  
Elizabeth Goryunova, M.S., *Vice-Chair*  
Scott Bird  
Patrick D. Cone  
Frank D. DeRosso, MSPH, CIH  
Christian K. Gardner  
Colleen Johnson  
Edd Johnson  
Douglas Scott Kimball, D.M.D.  
Joseph K. Miner, M.D., MSPH  
Amanda Smith  
John W. Thomson, MD  
David A. Tripp, Ph.D.  
Dane L. Finerfrock,  
*Executive Secretary*

Memorandum

February 8, 2010

**From:** Peter Jenkins, Chairman  
Utah Radiation Control Board

**To:** Stakeholders Interested in the Waste Blending Issues

**Subject:** Questions Relating to Low-level Radioactive Waste Blending

As part of the effort to distinguish public health and safety concerns from other policy issues, the Executive Secretary and I have proposed the following list of questions. I believe the questions are necessary because the Board could consider separate remedies. For instance, a safety issue might be currently and adequately addressed in the DRC rules versus a policy matter where a Board action may be desirable. As an interested party, please provide written answers to the following questions relating to low-level radioactive waste blending.

1. What are the health and safety issues to affected individuals as a potential blended waste stream moves through a process to disposal? Include in your answer, the generator, the transporter, the waste processor and the land disposal site.
2. If a blended waste stream is classified as a Class A low-level radioactive waste, how might it differ from other unblended Class A waste streams? If differences exist, how might they affect disposal site long-term performance and compliance with disposal standards? What are the effects?
3. Does it make sense that waste classification takes place at the time the waste is consigned for disposal?
4. How should the public view waste blending?
5. From a health and safety perspective, why or why not should blended wastes be prohibited from disposal in Utah?
6. Currently, is there any situation in which blending is or is not allowed for health and safety reasons?

- V. **Radioactive Waste Disposal**
  - b. **Randy Horiuchi and Joe DiCamillo,  
Presentation: Technical and Policy Aspects  
of Downblending (Board Information Item)**



**Dane Finerfrock - Getting on the RAD Cont bd agenda**

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**From:** "Randy Horiuchi" <RHoriuchi@MWSBF.COM>  
**To:** <dfinerfrock@utah.gov>  
**Date:** 1/25/2010 9:25 AM  
**Subject:** Getting on the RAD Cont bd agenda

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Could we get on the agenda for 15-20 minutes to make a technical and policy presentation on downblending for the Feb 9th meeting?

Randy Horiuchi  
Joe DiCamillo

- V. **Radioactive Waste Disposal**
  - b. **Randy Horiuchi and Joe DiCamillo,  
Presentation: Technical and Policy Aspects  
of Downblending (Board Information Item)**

**Joseph DiCamillo – Studsvik Letter to Dane  
Finerfrock, DRC/DEQ**

**Re: Additional Information Regarding Blending**

# Studsvik

[Via Electronic Mail to dfinerfrock@utah.gov](mailto:dfinerfrock@utah.gov)

February 23, 2010

Mr. Dane L. Finerfrock, Director  
Division of Radiation Control  
Department of Environmental Quality  
State of Utah  
PO Box 144850  
Salt Lake City, UT 84114-4850

Re: Additional information regarding blending

Dear Mr. Finerfrock:

Under separate cover, Studsvik provided its responses to the questions posed by the Chairman in his February 8, 2010 memo to Stakeholders Interested in the Waste Blending Issues. The Chairman further requested that Studsvik provide information relating to its Bulk Survey for Release (BSFR) process and its relationship to blending.

Studsvik considers this letter a public document and requests that it be circulated to all Radiation Control Board members and be made available to the public.

As discussed with the Board at its February 8, 2010 meeting, BSFR is not blending. BSFR is a process where low-level radioactive waste is segregated from materials with extremely low levels of radioactive contamination. The Director of the Tennessee Division of Radiological Health, the entity with regulatory authority over Studsvik's BSFR process, has described BSFR as "...what remains after the waste materials that need to go to a licensed LLRW disposal facility have been segregated out and properly disposed." June 19, 2007 Memorandum from Lawrence E. Nanney to Municipal Solid Waste Advisory Committee, available at <http://www.state.tn.us/environment/rad/pdf/bsfr-nanney.pdf>.<sup>1</sup>

To the contrary, blending is the intentional mixing of higher concentrations of radionuclides with lower concentrations to create a mixture with an overall lower concentration.<sup>2</sup>

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<sup>1</sup> Because the amount of radioactivity for what can be disposed of through the BSFR process is so low, and through the oversight in place under Tennessee rules and regulations both for licensees and the landfills where BSFR materials are disposed of, it is virtually impossible that low-level radioactive waste can be disposed of through this process. Indeed, to attempt such a bold maneuver would result in serious sanctions.

<sup>2</sup> NRC Chairman Jaczko has defined blending as "the idea that a small quantity of more radioactive material can be combined with a large quantity of less hazardous material in order to make the resulting material overall less hazardous in concentration." "Taking the Broad View" Prepared Remarks for The

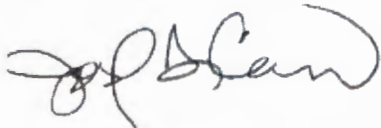
# Studsvik

Mr. Dane L. Finerfrock  
February 23, 2010  
Page 2

On another matter, Studsvik would be remiss if it did not respond, albeit briefly, to the remarks made by EnergySolutions at the Board's February 8, 2010 meeting. In its remarks, EnergySolutions did not address two of the main points of Studsvik's remarks: Namely that large scale blending (as proposed by EnergySolutions) is an expansion of current blending practices (as NRC has confirmed); and that the annual amounts of radioactivity disposed of at the Clive site will increase by 700% or more.

Feel free to contact me should you or the Board have any questions.

Sincerely,



Joseph DiCamillo  
General Counsel

JGD:s



- V. **Radioactive Waste Disposal**
- b. **Randy Horiuchi and Joe DiCamillo,  
Presentation: Technical and Policy Aspects  
of Downblending (Board Information Item)**

**Public Comments – Tom Magete, EnergySolutions  
Presentation to the DRC Board**

# Blending of Low-Level Radioactive Waste

February 9, 2010



Public Comments:  
Tom Mangate, Energy Solutions  
DRC Board Mtg - Feb. 09, 2010  
T. Loren V. h. - Public Comment



**Lewis Johnson**  
**President, Studsvik**

***“We believe waste classification is sacrosanct. An isotope that is really hot and classified as a B/C isotope needs to stay that way. We do not believe in down blending.”***

***“According to US NRC, it is illegal to down blend, NRC is currently studying that.”***

**January 22, 2010**

# NRC Clarification



- Joseph DiCamillo to NRC
  - NRC's regulations and BTP clearly spell out NRC's existing policy that waste streams may not be mixed solely to reduce the resulting waste classification
  - Wastes should not be mixed solely to lower the waste classification
  - NRC approves intentional mixing as long as classification of waste determined under NRC regulations is not altered
- NRC response
  - Blending is not prohibited in NRC regulations
  - NRC guidance acknowledges that blending, including some blending that may lower the waste classification, may be appropriate
  - Blending that may lower the waste classification may be appropriate under certain circumstances
  - This statement has been taken out-of-context



# NRC Clarification



- Joseph DiCamillo to NRC
  - A party who mixes any wastes in order to change their classification ... violates 61.55
  - Blending down to Class A doesn't eliminate the fact that this is Class B/C waste being disposed of
- NRC Response
  - NRC regulations do not require waste to be classified prior to its shipment for disposal
  - If waste is disposed that meets the concentration limits for Class A, then it is Class A waste

**Studsvik Contingency Plan for B/C waste  
returned from Texas should import  
authority not be granted – blend and  
dispose of as Class A waste at Clive**

## Studsvik

Mr. Johnny Graves  
August 18, 2008  
Page 2



the same care as it has for the last decade. This amendment request also does not seek to allow Studsvik to engage in activities which would change the classification of waste that it processes.

### Return of Waste

Studsvik presented numerous scenarios that address the possibility of waste being stored at WCS having to be recovered by Studsvik. All of those scenarios were supported by current technical, regulatory and/or legal authorities. The scenarios are set forth in Exhibit A. **Exhibit A contains data and information proprietary to Studsvik and in accordance with the Rules of the Department of Environment and Conservation, Division of Radiological Health, §1200-2-4.10(2), Studsvik requests that this Exhibit be redacted from the public file.** Studsvik believes it has presented viable alternatives for handling its waste stored at WCS with no impact to Tennessee.

Studsvik emphasizes that the scenarios described in Exhibit A are alternatives Studsvik would seek to implement only in the event that the waste stored at WCS is to be removed from that site by Studsvik. Studsvik considers this a highly unlikely event. Studsvik also notes that a situation in which waste is required to be removed would most likely be the result of an event at WCS in which many other generators of waste have a return of their waste. Accordingly, Studsvik believes, based upon the current disposal options in the United States, that a crisis situation would exist requiring the implementation of emergency powers at Federal, State and Compact levels. In the eventuality there is the possibility that other alternatives could emerge.

### Financial Assurance

Studsvik will post an irrevocable letter of credit with the State of Texas to assure adequate funds exist to cover removal, packaging, transport and disposal of waste stored at WCS. The initial amount of the letter of credit is \$2,382,948. That amount of credit will increase by a like amount with every sixth HIC stored at WCS.

The financial assurance posted by Studsvik to Texas will respond to all scenarios described in Exhibit A where the waste will not return to Tennessee.

Two of the scenarios described in Exhibit A envision the waste stored at WCS returning to Tennessee. The resin reprocessing scenario would require certain plant modifications. Studsvik proposes to provide financial assurance in the form of an irrevocable letter of credit to Tennessee in the amount of \$350,000 to cover the cost of the plant modifications.

*“Studsvik presented numerous scenarios that address the possibility of waste being stored at WCS having to be recovered by Studsvik. All of those scenarios were supported by current technical, regulatory and/or legal authorities.”*



# Dose analysis of blending process



## ALARA Review for HIC Return Scenario

### Attachment Three

Recovery Tasks	Estimated Exposure (mRem)
1. Receive and offload shipment to shredder receiver hopper	30
2. Remotely remove the HIC bail utilizing the Brokk robotic shear	5
3. Remove the bail utilizing the 45 ton crane	5
4. Replace upper shield of containment room	3
5. Stage temporary storage liner in HIC Package Vault	2
6. Shred the B/C container in five cubic foot increments	5
7. Transfer shredded materials to Reformed Residue Storage Tank	0
8. Repeat steps 6 and 7 until container is complete	50
Resin Processing	Estimated Exposure (mRem)
1. Stage final class A liner/HIC in HIC Package Vault	5
2. Stage down blending materials	2
3. Stage the temporary storage liner	10
4. Transfer designated ratio of B/C and down blending material	25
5. Remove temporary B/C container to storage	5
6. Cap and remove completed class A container	0
7. Decontaminate class A container for shipment	25
8. Place the class A container into storage awaiting shipment	5
<b>Total Estimated Exposure per Completed Class A Container</b>	<b>175 mRem</b>

Maintenance Activities	Annual Estimated Exposure (mRem)
1. Source reduction of component	2,000
2. Replace shredder teeth (6 month schedule)	8,000
3. Replace, adjust, inspect shredder screens	2,000
4. Monthly lubrication and inspection	2,000
<b>Total Annual Estimated Exposure</b>	<b>14,000 mRem</b>

## Resin Processing

Stage down blending materials

Transfer designated ratio of B/C and down blending material

Place the class A container into storage awaiting shipment

2000 NOV -3 AM 8:36  
TRI RADIOLOGICAL HEALTH

RECEIVED



Studsvik

RECEIVED

2008 NOV 10 AM 9:47

Mr. Johnny Graves  
November 7, 2008  
Page 2 of 3

TN RADIOLOGICAL HEALTH

3. *Please include ventilation system drawing for HIC Recovery Area.*

Response:

The capacity of the baghouse, F-PYRVLT, to be utilized is approximately 7,500 cfm. 500 cfm will be allocated for the HIC Recovery area with an estimated number of three air changeovers per hour for the room. The drawings illustrate two options, a duct with either a floor mounted or wall mounted prefilter arrangement. The illustrations show a top view and a side view of each arrangement. Please review Attachment 3 for ventilation drawings.

4. *Will non-radioactive materials be utilized for mixing with class B/C media?*

Response:

The final disposition of the process is to meet current disposal criteria at the Clive, Utah facility. The intent is to reprocess other contaminated materials along with the recovered reform residue from the returning HICs. The addition of concrete, or other clean material, will be for stabilization purposes or to meet other disposal site criteria.

5. *Give a more detailed description of the HIC Recovery Room in regard to construction, materials and cost.*

Response:

The room will consist of a high density concrete structure. The dimensions are 22 feet long, 22 feet wide and 25 feet tall. The top of the structure will be removable and will consist of 2 inch steel plates combined with 8 inches of concrete or similar shielding materials. The walls will consist of 2 feet of high density concrete, either filled block or preformed panels, to assist with shielding. The majority of the work will be done utilizing Studsvik personnel to reduce external cost. A cost estimate can be reviewed in Attachment 4.

6. *What does the term hydration mean in regard to returning HICs?*

Response:

Hydration solution is a liquid that is added to an in-service HIC as it is in final process, prior to being shipped for storage or disposal, to render the reformed residue non-dispersible. The reformed residue is in a more stable form and dries to a hard clay composition meeting the no free standing liquid criteria. There will be no additional hydration solution added to the container as it is introduced to the shredder process.

We trust that the information contained in this requested amendment is sufficient to allow your offices to perform an expeditious review of the request. If there are additional questions on the information contained herein please contact me directly at (423) 722-1979 and I will gladly provide any additional information that may be required.

“The final disposition of the process is to meet current disposal criteria at the Clive, Utah facility. The intent is to reprocess other contaminated materials along with the recovered reform residue from the returning HICs. The addition of concrete, or other clean material, will be for stabilization purposes or to meet other disposal site criteria.”

David M. Tenney,  
Radiation Safety  
Officer

# Blended RR vs. Blended Resin



**Studsvik**



**EnergySolutions**



# WCS Disposal Scenario



- Created hypothetical mathematical analogue of Class A waste
  - Began with Class C waste
  - Mathematically scaled down isotopic concentrations based on Cs-137 concentration
  - Then mathematically reduced concentrations to account for sum-of-fractions
  - Overall, diluted volume (with clean material) by factor of >80
  - Disposed in unlined trench with no container or engineered structure



# WCS Analytical Flaws



- Hypothetical mathematical analogue not representative of any real waste
  - Blending would introduce additional radionuclides
  - Sum-of-fractions would require addition of even more Class A waste
  - Overall reduction would greatly exceed 80X
  - Blending on this scale not feasible
- Disposal assumptions not representative of any existing, licensed disposal site
  - Disposal of blended liner at Clive would require container for shielding
  - Engineered features and depth provide significant intruder protection



- V. **Radioactive Waste Disposal**
  - b. **Randy Horiuchi and Joe DiCamillo,  
Presentation: Technical and Policy Aspects  
of Downblending (Board Information Item)**

**Public Comments – James O’Neal, Private Citizen**

## Blended Radioactive Waste

Remember Occam's ( Ocham's) Razor ? The simplest explanation or strategy tends to be the best one. A Utah grandmother who didn't know what the acronym NRC meant was asked what she thought of the blended radioactive waste issue. She said: "It looks like they're sneaking in the higher level."

A radioactive waste storage facility in South Carolina was closed in June 2008. That left 36 states without a place to send Class B and C radioactive waste. This problem caused increased interest in blending large amounts of the more dangerous B and C with lower-level Class A.

According to the Nuclear Regulatory Commission "blending" is mixing radioactive waste of different concentrations. It does not involve mixing radioactive waste with non-radioactive waste. They reject the term "dilution" for such "blending". This is misleading; a definition of dilution in Webster's Dictionary is "to diminish the strength, flavor, or brilliance of by admixture". This is an NRC word game; the "blending" they refer to is a kind of "dilution".

If companies blend large quantities of radioactive waste they could change classification in order to get rid of their B and C waste. A dictionary says blending is "to combine or associate so that the separate constituents or lines of demarcation cannot be distinguished". This is convenient for companies since they do not have to classify radioactive waste before it is shipped from a generator to a processor. There they can also delay classifying waste until it is ready for disposal. The true origin and composition of the radioactive waste by then might be unknown and a dangerous mystery in the future. Classification in this way is potential cause for serious inaccuracy. The huge amount of radioactive waste and so many containers is problem enough; add to this the concern that the companies involved are almost completely self-monitoring.

Utah already has a significant amount of radioactive waste but it could become a central dumping ground for the world. The state still has a reputation as a relatively clean environment. Tourists like to come here and new businesses find the life style attractive. A healthy image is critical to future growth of our economy. The last thing we want is the equivalent of a warning label for Utah that says: "This state contains large amounts of radioactive waste, a toxic substance known to cause cancer in humans."

For these scientific and economic reasons the Radiation Control Board should formulate a rule that prohibits blended radioactive waste from coming into Utah.

Sincerely,  
James O'Neal

Under federal law, “[e]ach State shall be responsible for providing, either by itself or in cooperation with other States, for the disposal of . . . low-level radioactive waste generated within the State . . . that consists of or contains class A, B, or C radioactive waste . . . .” 42 U.S.C. § 2021c(a).

In a *Notice of Public Meeting and a Request for Comment on Issues Related to Blending of Low-Level Radioactive Waste*, dated November 30, 2009, the Nuclear Regulatory Commission (NRC) noted that the closure of the Barnwell disposal facility in June 2008 to many of the nation’s low-level waste generators has resulted in generators located in 36 States having to store their Class B and C waste onsite “until a new disposal option becomes available.” 74 Fed. Reg. 62,608 (Nov. 30, 2009).

The closure of the Barnwell site does not negatively impact any Utah licensee because there are no known Utah licensees who generate a waste stream other than Class A waste, with the exception of the need to dispose of sealed sources. Utah low-level radioactive waste generators have access to the US Ecology Richland, Washington, site, permitted for Class A, B, and C low-level radioactive waste. The State of Utah is, therefore, acting in accord with federal policy by being responsible for the disposal of low-level radioactive waste generated in its State.

NRC says the EnergySolutions’ Clive disposal facility “remains available for Class A waste disposal by these generators that lost access to the Barnwell facility for their Class B/C wastes.” *Id.* NRC further states: “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.” *Id.* at 62,609.

In response to public comments on its 1995 guidance on waste blending, NRC said “wastes should not be intentionally mixed solely to lower the waste classification.” *Id.* at 62,609. In its current Federal Register Notice, NRC is requesting public comments on a series of questions. One of those questions is: “What policy issues are raised by blending of LLRW that lowers the waste classification?” *Id.*

The Utah Radiation Control Board is opposed to blending waste to alter the waste’s classification solely for the purposes of gaining access to the Clive Class A disposal site. While there may be legitimate reasons to allow blending, doing so to deliberately change the waste’s classification discourages States from licensing new disposal sites or accepting responsibility for providing for the disposal of waste generated within their States. It also undermines the basis upon which the State of Utah licensed the Clive site in 1991, *i.e.*, for the disposal of Class A low-level radioactive waste. Moreover, blending (or dilution) solely to change the waste’s classification is an inappropriate effort to circumvent Utah law that,

No entity may accept in the state or apply for a license to accept in the state for commercial storage, decay in storage, treatment, incineration, or disposal:

- (1) class B or class C low-level radioactive waste; or
- (2) radioactive waste having a higher radionuclide concentration than the highest radionuclide concentration allowed under licenses existing on February 25, 2005, that have met all the requirements of Section 19-3-105.

Utah Code Ann. § 19-3-103.7.

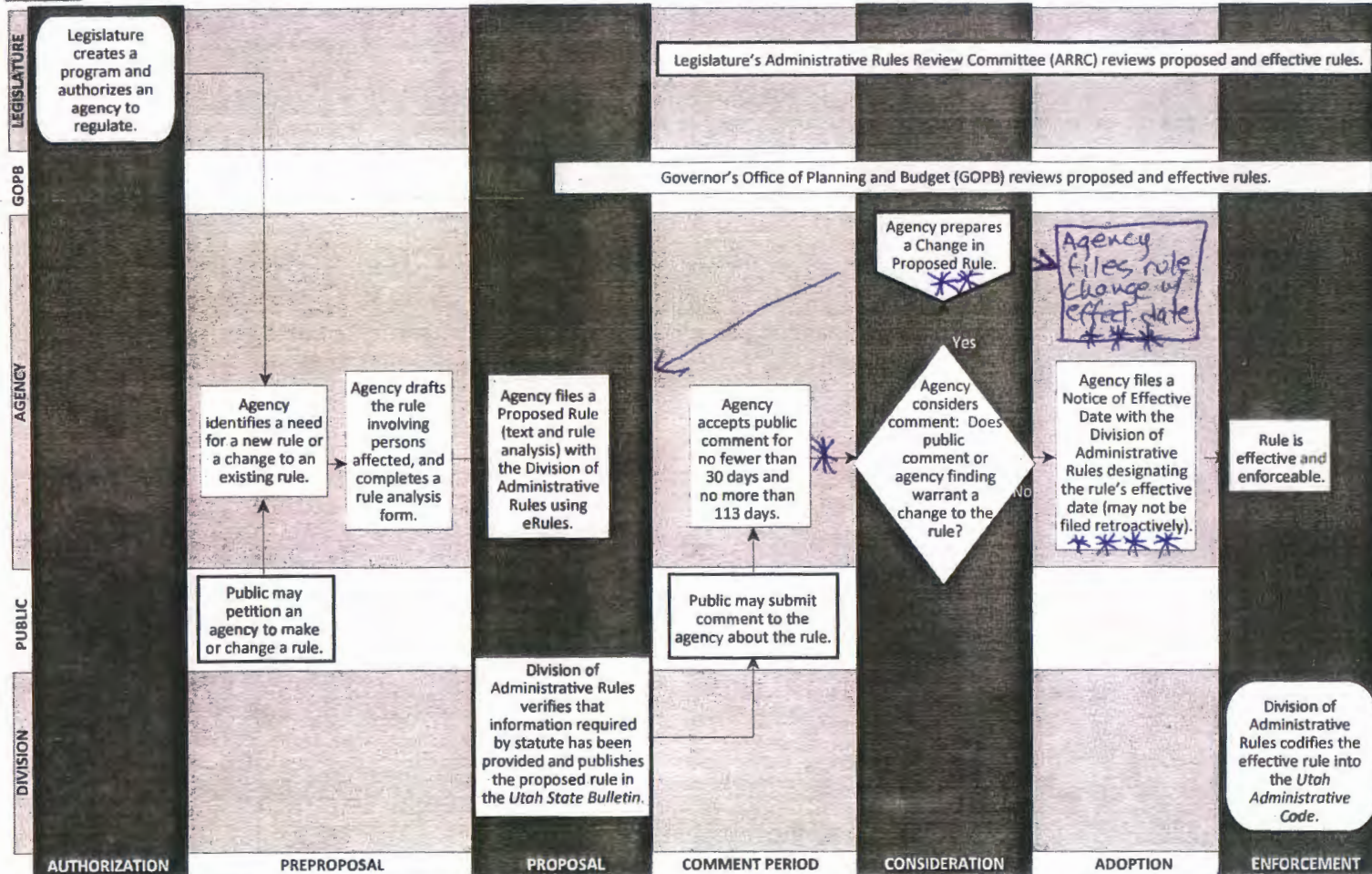


- V. **Radioactive Waste Disposal**
  - c. **Report from the Board Subcommittee on Waste Blending and Discussion of Draft Policy Statement on Waste Blending (Board Action Item)**

- VII. Other Division Issues (Board Information Items)**
  - b. Update on Proposed Depleted Uranium Rule**
    - ii. Laura Lockhart, Administrative Rule Process for Revised Rules**

# Utah Administrative Rulemaking Process

A Simplified View of Utah's Administrative Rulemaking Process. For the requirements of the process, see *Utah Code*, Title 63G, Chapter 3, and *Utah Admin. Code*, Title R15.



Utah Division of Administrative Rules ♦ 4120 State Office Building ♦ Salt Lake City, UT 84114-1201 ♦ Phone: 801-538-3764 ♦ Fax: 801-538-1773 ♦ rulesonline@utah.gov

12/2008

Item VII. b. ii - Laura Lockhart - Admin. Rule Process for Revised Rules

DRC Board meeting - February 9, 2010

Publication - about 15 days after subm. to DAR

← No more than 120 days →

Agency files effective date OR rule change

\* Agency determines whether to proceed with rule

\*\* Agency reviews nature of rule change

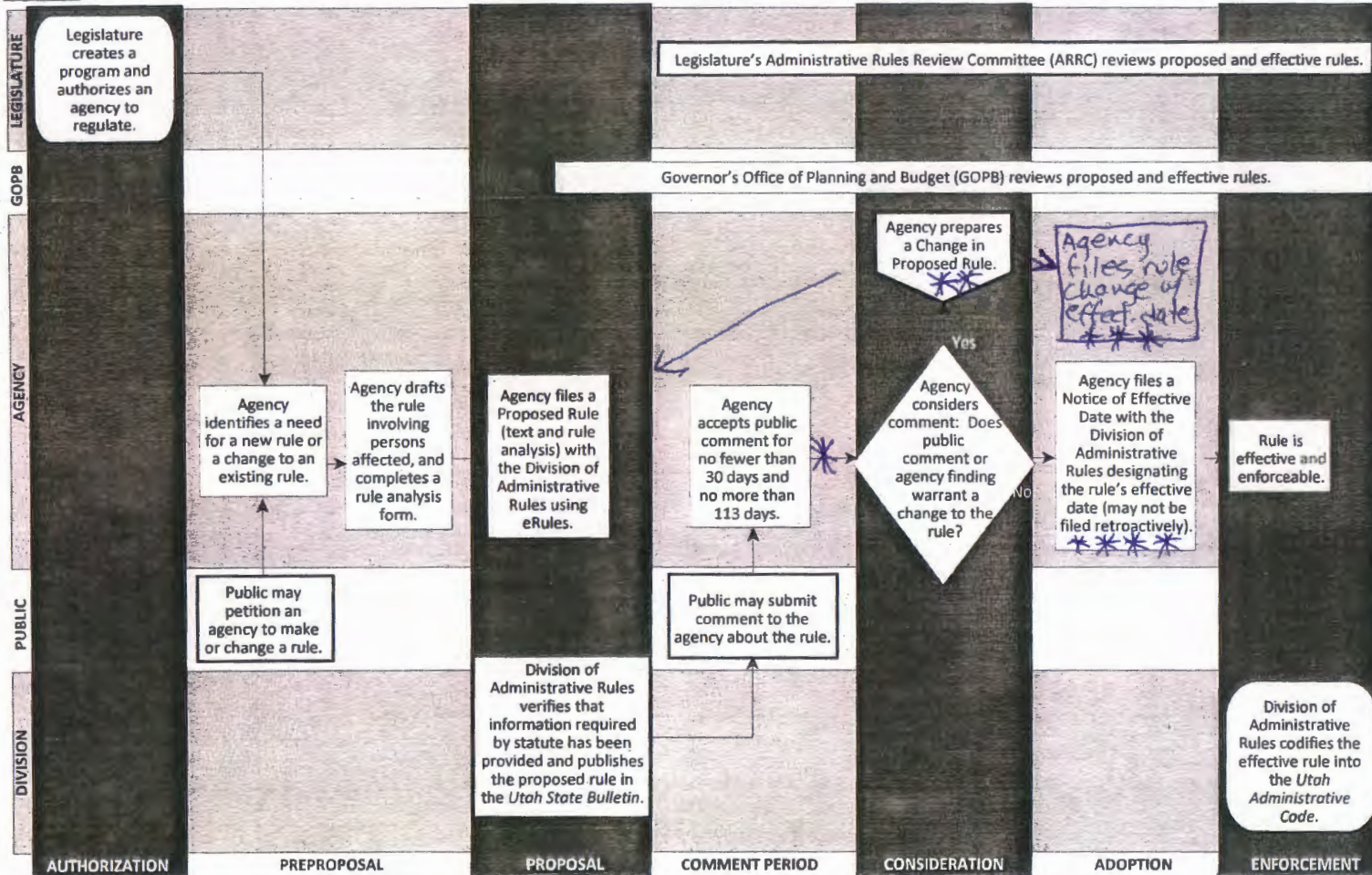
\*\*\* Effective date at least 30 but no more than 120 after publication - ~15 days after submitted to DAR

\*\*\*\* Effective date on adoption (if after noticed effective date) or may choose later date



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*Agency determines whether to proceed with rule*  
*\*\* Agency reviews nature of rule change*  
*\*\*\* Effective date at least 30 but no more than 120 after publication - ~15 days after submitted to DAR*  
*\*\*\*\* Effective date on adoption (if after noticed effective date) or may choose later date*

*Agency files rule change of effect. date*

*Agency accepts public comment for no fewer than 30 days and no more than 113 days.*

*Agency considers comment: Does public comment or agency finding warrant a change to the rule?*

*Agency prepares a Change in Proposed Rule.*

*Agency files a Notice of Effective Date with the Division of Administrative Rules designating the rule's effective date (may not be filed retroactively).*

*Rule is effective and enforceable.*

*Division of Administrative Rules codifies the rule into the Utah Administrative Code.*

*Public may submit comment to the agency about the rule.*

*Public may petition an agency to make or change a rule.*

*Agency identifies a need for a new rule or a change to an existing rule.*

*Agency drafts the rule involving persons affected, and completes a rule analysis form.*

*Agency files a Proposed Rule (text and rule analysis) with the Division of Administrative Rules using eRules.*

*Legislature creates a program and authorizes an agency to regulate.*

*Legislature's Administrative Rules Review Committee (ARRC) reviews proposed and effective rules.*

*Governor's Office of Planning and Budget (GOPB) reviews proposed and effective rules.*

*Division of Administrative Rules verifies that information required by statute has been provided and publishes the proposed rule in the Utah State Bulletin.*

*Division of Administrative Rules codifies the rule into the Utah Administrative Code.*

*Rule is effective and enforceable.*

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*12/2008*

*No more than 120 days*

*Publication - about 15 days after subm. to DAR*

*Agency files effective date OR rule change*



**VII. Other Division Issues (Board Information Items)**  
**c. Quarterly Report**

Division of Radiation Control  
Activities Report Summary  
January, 2010

Notices of Violation assigned a Severity Level I, II, or III or where a Monetary Penalty has been imposed.

1. Settlement Agreement for Notice of Violation and Order, Denison Mines, Utah Ground Water Discharge Permit No.UGW37004. A \$5000.00, monetary penalty was imposed for failure to pre-notify the Division when drilling or ground water sampling was conducted, preventing the Division from conducting oversight activities in Summer, 2009.

2. Order to Dispose of Radioactive Material, Harrison Cooper Systems, Inc., Radioactive Material License #UT0600189. On November 18, 2009, the Executive Secretary issued an order for the licensee to comply with its license permit and properly and timely dispose of licensed radioactive material. The licensee had 30 days from the date of the Order to file a Request for Agency Action with the Division of Radiation Control. The licensee failed to comply with the Order and did not file a Request for Agency Action by December 18, 2009. This matter was referred to the Attorney General's Office for enforcement. A civil enforcement action has been filed with the Second District Court in Davis County.

**From:** Denise Chancellor  
**To:** Dane Finerfrock  
**Date:** 1/21/2010 1:06 PM  
**Subject:** Oral Argument 10th Circuit Court of Appeals

The *EnergySolutions v. State of Utah et. al* case before the 10th Circuit Court of Appeals involves an appeal from the federal district court's ruling holding that the Northwest Interstate Compact does not have authority to control access to the Clive facility for out of compact low-level radioactive waste.

Oral argument was held on January 14, 2010 before the 10th Circuit Court of Appeals in Denver. The case was heard by a three judge panel: Judge Deanell Tacha, Judge Timothy Tymkovich, and Judge Arthur Alarcon (sitting by designation from the 9th Circuit).

The Appellants, the State of Utah, Northwest Compact and Rocky Mountain Compact, had requested additional argument time and the Court granted each side 25 minutes (instead of the usual 15 minutes) to present argument. I argued for the State of Utah, Kristen Mitchell argued for Northwest Compact and Barbara Green argued for the Rocky Mountain Compact. Michael Lee argued for Appellee, EnergySolutions.

The panel of judges was extremely well prepared. It was apparent they had read all the briefs and were familiar with the record. Based on the questions asked, the panel clearly understood both sides of the issues presented and asked pointed and probing questions. We all felt that argument went well but have to caution that it is impossible to predict the outcome. The timing of the decision is entirely in the hands of the Court; it could take a few months or over a year before they issue a ruling. After a decision is rendered, the non-prevailing party may ask for reconsideration by the entire 10th Circuit (such an en banc hearing is discretionary). The step after that is a petition to the U.S. Supreme Court.

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