

# LLW *notes*

Volume 27, Number 6 November/December 2012

## ***U.S. Nuclear Regulatory Commission***

### **NRC Issues *Federal Register* Notice re Part 61 Preliminary Rule Language**

On Friday, December 7, 2012, the U.S. Nuclear Regulatory Commission issued a *Federal Register* notice (77 *Federal Register* 72,997) that announced an opportunity to comment on the preliminary rule language, “November 2012 Preliminary Rule Language for Proposed Revisions to Low-Level Waste Disposal Requirements (10 CFR Part 61),” that supports the 10 CFR Part 61 rulemaking.

The November 2012 preliminary rule language is being made available to inform interested stakeholders of the current status of the NRC’s activities and to solicit public comments on the preliminary rule language. It is publicly available under ADAMS accession number ML12311A444 and on <http://www.regulations.gov> under Docket ID NRC-2011-0012.

Comments on the November 2012 preliminary rule language should be submitted no later than January 7, 2013. Comments received after this date will be considered if it is practical to do so, but the NRC is able to assure consideration only for comments received on or before this date.

You may access information and comment submissions related to the November 2012 preliminary rule language, which the NRC possesses and are publicly available, by searching on <http://www.regulations.gov> under Docket ID NRC-2011-0012.

Earlier the same week, on December 03, 2012, NRC released 10 CFR Part 61 regulatory basis document, “Regulatory Analysis for Proposed Revisions to Low-Level Waste Disposal Requirement (10 CFR Part 61).” (See related story, this issue.) The regulatory basis document—which is publicly available under ADAMS accession number ML12306A480—is being made available to inform stakeholder comments on the November 2012 preliminary

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As part of that mission, the LLW Forum publishes a newsletter, news flashes, and other publications on topics of interest and pertinent developments and activities in the states and compacts, federal agencies, the courts and waste management companies. These publications are available to members and to those who pay a subscription fee.

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# Low-Level Radioactive Waste Forum, Inc.

## LLW Notes

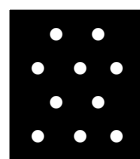
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## Key to Abbreviations

U.S. Department of Energy .....	DOE
U.S. Department of Transportation .....	DOT
U.S. Environmental Protection Agency .....	EPA
U.S. Government Accountability Office .....	GAO
U.S. Nuclear Regulatory Commission .....	NRC
Naturally-occurring and accelerator-produced radioactive material .....	NARM
Naturally-occurring radioactive material .....	NORM
Code of Federal Regulations .....	CFR

***Low-Level Radioactive Waste Forum, Inc.***

## **Register Now for Spring 2013 LLW Forum Meeting**

***Charleston, South Carolina: March 25-26, 2013***

Interested stakeholders are encouraged to register at their earliest convenience for the Low-Level Radioactive Waste Forum's spring 2013 meeting—which will be held in downtown Charleston, South Carolina on March 25-26, 2013. There are a limited number of hotel rooms remaining for the meeting—which will feature a slide show and panel discussion about the Barnwell facility.

The meeting is being co-hosted by the Atlantic Interstate Low-Level Radioactive Waste Compact Commission and the State of South Carolina.

*The meeting documents can be found on the Home Page of the LLW Forum's web site at [www.llwforum.org](http://www.llwforum.org).*

### **Attendance**

Officials from states, compacts, federal agencies, nuclear utilities, disposal operators, brokers/processors, industry, and other interested parties are invited and encouraged to attend.

The meeting is an excellent opportunity to stay up-to-date on the most recent and significant developments in the area of low-level radioactive waste management and disposal. It also offers an important opportunity to network with other government and industry officials and to participate in decision-making on future actions and endeavors affecting low-level radioactive waste management and disposal.

### **Location and Dates**

The meeting will be held at the Francis Marion Hotel in the Historic District of downtown

Charleston, South Carolina on March 25-26, 2013. It will be a one and one-half day meeting.

The meeting will include a slide show and panel discussion about the Barnwell facility featuring representatives from the Atlantic Compact Commission, Chem-Nuclear/EnergySolutions, nuclear utilities, South Carolina Department of Health and Environmental Control, and South Carolina Budget and Control Board.

### **Registration**

All persons must pre-register for the meeting and pay any associated registration fees in order to be allowed entry. Registration forms are needed in order to ensure that you receive a meeting packet and name badge. Accordingly, interested attendees are asked to please take a moment to complete the registration form at your earliest convenience and return it to the LLW Forum at the address, e-mail or fax number listed at the bottom of the form.

The meeting is free for members of the LLW Forum. Non-member registration is \$500, payable by check only to the "LLW Forum, Inc." (Credit card payments are not accepted.)

### **Reservations**

Persons who plan to attend the meeting are strongly encouraged to make their hotel reservations and send in their registration forms as soon as possible, as we have exceeded our block at the last few meetings.

A block of hotel rooms have been reserved for Sunday, March 24<sup>th</sup> and Monday, March 25<sup>th</sup> at the rate of \$137 plus tax. Also, a very limited

block of rooms at the same rate is available for March 23<sup>rd</sup> and March 26, 2013.

*To make a reservation, please call (877) 756-2121. The deadline for reserving a room at the discounted rate is February 22, 2013. Please ask for the Low-Level Radioactive Waste Forum block.*

### **Transportation and Directions**

From Charleston airport, one way taxi fare is available for approximately \$30.00. Shuttle buses are also available for about \$15 one way.

*For additional information, please contact Todd D. Lovinger, the LLW Forum's Executive Director, at (202) 265-7990 or go to [www.llwforum.org](http://www.llwforum.org).*

## **Low-Level Radioactive Waste Forum Meetings** ***Fall 2013 and Beyond***

The following information on future meetings of the Low-Level Radioactive Waste Forum is provided for planning purposes only. Please note that the information is subject to change.

*For the most up-to-date information, please see the LLW Forum's web site at [www.llwforum.org](http://www.llwforum.org).*

### **2013 Meetings**

The Atlantic Interstate Low-Level Radioactive Waste Commission and State of South Carolina will co-host the spring 2013 meeting of the LLW Forum. The meeting will be held at the Francis Marion Hotel in Charleston, South Carolina on March 25-26, 2013. The meeting will include a slide show and panel discussion about the Barnwell facility. (See related story, this issue.)

The State of Utah and EnergySolutions have agreed to co-host the fall 2013 meeting of the LLW Forum. There will be an optional site tour of the EnergySolutions' Clive facility for interested attendees as well. The meeting will be held on October 22-23, 2012 at the Marriott facility in Park City, Utah.

### **2014 Meetings**

The State of Texas and Waste Control Specialists LLC (WCS) have agreed to co-host the spring 2014 meeting in Austin, Texas. There will be an optional site tour of the WCS facility for

interested attendees as well. The co-hosts are currently making facility arrangements. Once completed, we will provide additional information regarding specific dates and so forth.

### **Search for Volunteer Hosts for Fall 2014 and 2015 Meetings**

The LLW Forum is currently seeking volunteers to host the fall 2014 meeting, as well as both the spring and fall 2015 meetings and those thereafter. Although it may seem far off, substantial lead-time is needed to locate appropriate facilities.

If your state or compact has not hosted a meeting in the past two years, we ask that you consider doing so. If necessary, we may be able to assist you in finding a co-host.

Non-state and non-compact entities are eligible to co-host LLW Forum meetings, so please let us know if your company or organization is interested in doing so.

*Anyone interested in potentially hosting or sponsoring a meeting should contact one of the officers or Todd D. Lovinger, the organization's Executive Director, at (202) 265-7990 or at [LLWForumInc@aol.com](mailto:LLWForumInc@aol.com).*

### ***Central Midwest Compact/State of Illinois***

## **IEMA and CMW Compact Host LLW Generators' Conference**

On November 8, 2012, the State of Illinois Emergency Management Agency (IEMA) and the Central Midwest Interstate Low-Level Radioactive Waste Commission (Central Midwest Commission) hosted a low-level radioactive waste generators/radioactive materials licensee conference.

The purpose of the conference was to bring users and regulators together to highlight recent activities and discuss program and regulatory changes.

The conference was held at The Lisle/Naperville Hilton at 3003 Corporate West Drive in Lisle, Illinois. The number of attendees for this conference was limited to 150.

A variety of topics were discussed, speakers from the industry participated in the conference, and there was ample time for discussion and questions from attendees. Topics of interest for waste generators were discussed in the morning session. The afternoon session was tailored to radioactive materials licensees.

The draft agenda included, among others, the following items:

- Bureau of Environmental Radiation Safety (BERS) overview (Adnan Khayyat, IEMA, Acting Chief, BERS);
- sealed source disposal at the Clive facility (Dan Shrum, EnergySolutions, Senior Vice President of Regulatory Affairs);
- overview of Texas Compact facility/sealed source disposal at Waste Control Specialists (Jeff Havlicak, WCS Business Development);

- broker/processor requirements regarding disposal at WCS (John McCormick, Bionomics, Vice President);
- university/hospital waste management (Matt Hadden, University of Chicago, Health Physicist and Laser Safety Officer);
- low-level radioactive waste generator program (Marcia Marr, Central Midwest Commission Executive Director and IEMA Policy Analyst, and Michael Klebe, IEMA Engineer)

*For additional information, please contact Marcia Marr of the Central Midwest Commission/State of Illinois at (217) 785-9982 or at [Marcia.Marr@Illinois.gov](mailto:Marcia.Marr@Illinois.gov).*

## **Dresden's Flooding Response Plan Under Review**

On November 2, 2012, the U.S. Nuclear Regulatory Commission announced that the agency has issued a letter asking Exelon Generation Company to address the NRC's concerns with Dresden Nuclear Station's response plan for external flooding events. The two-unit plant is located in Morris, Illinois—approximately 25 miles southwest of Joliet.

### **General Issues of Concern**

NRC inspectors identified multiple areas of concern during recent inspections conducted in response to the Fukushima Dai-ichi accident. The issues pertain to the plant's plan to respond to a Probable Maximum Flood – a hypothetical flooding level which postulates the largest conceivable flood from the combination of the most severe meteorological and hydrologic conditions. Such conditions have never been known to occur in this area and are highly improbable. The issues with Dresden's flood response plan do not represent an immediate safety issue but are an area the NRC would like

## States and Compacts *continued*

additional information on to ensure it meets post-Fukushima standards.

### **Specific Issues to Dresden**

The NRC has two major areas of concern with Dresden's flood response plan:

- ♦ the quality and viability of the procedure; and,
- ♦ the availability and capability of equipment specified in the response plan to fulfill their intended functions.

### **Next Steps**

The NRC asked Exelon to respond the NRC's letter within 30 days by:

- ♦ addressing the list of specific NRC concerns;
- ♦ demonstrating that the existing procedures and strategies to respond to postulated maximum flooding events would be successful or offering alternative solutions; and,
- ♦ providing a schedule for the actions the plant intends to take in response to the NRC's concerns.

After the NRC receives Exelon's response, a public meeting will be scheduled to provide a forum for discussing these issues with members of the public.

### **Background**

Dresden was originally licensed for operation in 1966 for the flood value of 506.4 feet above mean sea level. The reactor and other plant structures were constructed at 517 feet above mean sea level, 10 feet above the historic flood levels. While the plant was within its design basis at this time, the NRC changed the flood design criteria in 1982 by basing it on a more stringent hypothetical flood value for the area. Dresden developed a response plan to address the disparity between the original and the revised design bases for flooding.

As the agency works to enhance the protection of nuclear plants against extreme natural disasters after the accident in Japan, the issues with Dresden's flood plan have come into stronger focus. "We expect the plant to address the concerns with Dresden's flood plan NRC inspectors identified during recent inspections looking at Dresden's ability to deal with a hypothetical flood," said NRC Region III Administrator Charles Casto. "We expect our licensees to be in compliance with the plant's design and licensing basis."

*NRC's letter and attachments detailing the NRC's concerns will be available through the NRC's electronic document system ADAMS under ML12306A393, or by calling the NRC Region III Public Affairs Office.*

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### ***Northwest Compact/State of Idaho***

## **US Ecology Announces Senior Management Changes**

### ***Company Reports Record Earnings***

On October 29, 2012, US Ecology, Inc. announced senior management changes—including the termination of James R. Baumgardner as the company's President, Chief Executive Officer and Chief Operating Officer. Baumgardner also resigned from the Board of Directors, although there are no current plans to fill the vacated Board seat.

Later that same day, US Ecology reported financial results for the quarter ended September 30, 2012 and provided future guidance.

## States and Compacts *continued*

### Senior Management Changes

In announcing the termination of Baumgardner's employment, Board Chairman Stephen Romano stated, "Our Board appreciates Jim's past efforts and dedicated service to US Ecology and wishes him the best in his future endeavors."

Romano also announced additional senior management changes as follows.

**Acting President and Chief Operating Officer**  
Effective October 25, 2012, the Board appointed Jeffrey Feeler as Acting President and Chief Operating Officer. Feeler formerly served as Vice President, Chief Financial Officer and Treasurer.

"Our Board has great confidence in Jeff's ability to lead the Company and execute the Company's longstanding growth strategy based on his knowledge of the business, his central role in recent acquisitions and his outstanding communication and leadership skills," stated Romano. "We anticipate a seamless transition given Jeff's involvement as a senior executive for the last six years and his close working relationship with the rest of our seasoned management team and our Board. The current executive management team has been together for over five years and we have every confidence that they will continue to deliver."

Romano will assume an expanded role as Chairman to support Feeler and his team. "I will be actively engaged providing guidance and support," Romano noted. Romano served as the Company's Chief Executive Officer from 2002 through 2009 after previous service as President and Chief Operating Officer, President of the Company's Idaho subsidiary and Vice President for development and regulatory affairs from 1998 to 2002.

Feeler, who joined the Company in 2006 as Vice President, Chief Accounting Officer, Treasurer and Controller, was promoted in 2007 to Vice President and Chief Financial Officer. Prior to

2006, he held financial and accounting management positions with MWI Veterinary Supply, Inc., Albertson's, Inc., Hewlett-Packard Company and PricewaterhouseCoopers LLP. Feeler is a Certified Public Accountant and holds a BBA in Finance and a BBA in Accounting from Boise State University.

**Acting Chief Financial Officer and Treasurer**  
As part of the Company's reorganization, effective October 25, 2012, Vice President and Controller Eric Gerratt was appointed Acting Chief Financial Officer and Treasurer, and Chief Accounting Officer.

"Eric's 15 years of financial and business management experience, including over five years as a key contributor on US Ecology's executive team, make him a perfect fit for his expanded role," Feeler commented.

Gerratt joined the Company in August 2007 as Vice President and Controller. He previously held financial and accounting management positions at SUPERVALU, Inc., Albertson's, Inc. and PricewaterhouseCoopers LLP. Gerratt is a Certified Public Accountant and holds a BS in Accounting from the University of Idaho.

The Board of Directors will evaluate the effectiveness of the new management structure over time prior to determining whether to make these positions permanent or supplement the team with additional executive level talent.

### Financial Results and Guidance

On October 29, 2012, US Ecology reported financial results for the quarter ended September 30, 2012 and provided future guidance.

**Third Quarter 2012** Net income for the third quarter of 2012 was \$8.7 million, or \$0.47 per diluted share. Adjusted earnings per diluted share grew 33% to \$0.44 for the third quarter of 2012. This compares to \$3.7 million of net income for the third quarter of 2011, or \$0.20 per diluted



## States and Compacts *continued*

share, and adjusted earnings per diluted share of \$0.33. Operating income for the third quarter of 2012 grew to a record \$12.4 million, up 30% from \$9.6 million in the third quarter of 2011.

Total revenue for the third quarter of 2012 was \$45.7 million, up 15% from \$39.7 million in the same quarter last year. Treatment and disposal (T&D) revenue increased 12% quarter over quarter. Transportation revenue increased 40%.

Total quarterly waste volume disposed or processed at the company's Idaho, Michigan, Nevada, Texas and Quebec waste facilities was 266,000 tons in the third quarter of 2012—down 7% from 287,000 tons disposed or processed in the third quarter of 2011.

"Continued Base Business growth and a favorable service mix more than made up for a quarter-over-quarter decline in Event Business," commented Vice President, Acting Chief Financial Officer and Chief Accounting Officer Eric Gerratt. "All six of our facilities performed at or above our expectations and, despite lower volumes, our continued focus on building our Base Business and targeting higher margin waste streams helped drive T&D margin to 48% in the quarter."

Total volume disposed or processed at the company's Idaho, Michigan, Nevada, Texas and Quebec waste facilities in the first nine months of 2012 was 742,000 tons—up 6% from the 701,000 tons disposed or processed in the first nine months of 2011.

"Like the second quarter, stronger third quarter results were driven by continued growth in recurring, Base Business," commented Jeff Feeler, Acting President and Chief Operating Officer. "An excellent win rate in our Event Business more than replaced earnings from the GE Hudson River project that shipped in the third quarter last year. Looking ahead, the fourth quarter looks to be strong with continued Base Business strength and a healthy pipeline of Event Business."

**Future Guidance** "On October 4<sup>th</sup>, we entered an agreement with the U.S. Environmental Protection Agency regarding our thermal recycling operations in Texas," stated Feeler. "We are pleased to clarify the applicable regulatory requirements and believe this agreement provides a clear framework for us to continue providing quality service to thermal recycling customers for years to come."

With record third quarter results and a favorable outlook for the fourth quarter of 2012, management revised its 2012 earnings guidance upward.

"2012 is shaping up to be a year of record financial performance for the company on many fronts," commented Feeler. "While we are still early in our planning and budgeting cycle for 2013, initial views give us confidence that we will post solid growth in 2013 as well."

### **Background**

US Ecology, Inc., through its subsidiaries, provides radioactive, hazardous, PCB and non-hazardous industrial waste management and recycling services to commercial and government entities, such as refineries and chemical production facilities, manufacturers, electric utilities, steel mills, medical and academic institutions and waste brokers.

Headquartered in Boise, Idaho, the company is one of the oldest radioactive and hazardous waste services companies in the North America.

*US Ecology held a conference call on October 30 to discuss recent management changes, third quarter 2012 financial results and the company's business outlook. The conference call was broadcast live and is archived on the company's website at [www.usecology.com](http://www.usecology.com).*

### ***Northwest Compact/State of Utah***

## **Utah DRC Approves EnergySolutions' Class A West Amendment**

On November 26, 2012, the Director of the Division of Radiation Control (DRC) approved the proposed Class A West (CAW) amendments to the EnergySolutions' Low-Level Radioactive Waste Disposal License (RML UT 2300249) and Ground Water Quality Discharge Permit (No.UGW450005). EnergySolutions submitted the license amendments and permit modifications in May 2011 to combine the two existing low-level radioactive waste disposal embankments into a single disposal embankment.

The approved license and permit amendments make changes associated with the proposed combination of the two existing low-level radioactive waste disposal embankments into a single embankment to be designated as the Class West embankment. The new Class A West embankment encompasses the footprints of the existing Class A and Class A North embankments.

The new Class A Waste embankment will have a capacity not to exceed 8,724,097 cubic yards. Together, the total aggregate capacity of low-level radioactive waste for the Class A West Disposal Cell and the Mixed Waste Landfill Cell shall not exceed 10.8 million cubic yards.

### **Public Participation**

On June 12, 2012, a public comment period began for the purpose of receiving comment regarding an initial decision to amend the License and Permit. Three sets of public comments were received. After review and consideration, the license underwent a few minor revisions including adding License Conditions 43 and 76 with

additional requirements for financial surety. Proposed license and permit amendments, as well as a Safety Evaluation Report and a Statement of Basis, were made available to the public for review and were posted on the DRC Web page at [www.radiationcontrol.utah.gov/EnSolutions/licamends.html](http://www.radiationcontrol.utah.gov/EnSolutions/licamends.html).

On July, 17, 2012, a public hearing was held at the Tooele County Building, 47 South Main in Tooele, Utah. On July 26, 2012, the public comment period ended. Comments received during the comment period and the DRC responses to the comments were compiled into a Public Participation Summary (PPS).

### **License/Permit Information**

The approved license and permit amendments make changes associated with the proposed combination of the two existing low-level radioactive waste disposal embankments into a single embankment to be designated as the Class West embankment. The new Class A West embankment encompasses the footprints of the existing Class A and Class A North embankments.

In its May 2011 submittal, EnergySolutions also withdrew an earlier proposal submitted in January 2008 to convert a portion of the disposal capacity of the 11e.(2) disposal embankment to Class A low-level radioactive waste disposal capacity (referred to as the Class A South design proposal).

*The Notice of Agency Action, Public Participation Summary (PPS) and the License have been posted on the DRC's web page at [www.radiationcontrol.utah.gov/EnSolutions/licamends.html](http://www.radiationcontrol.utah.gov/EnSolutions/licamends.html).*

*For additional information, please contact Rusty Lundberg, Director of the Division of Radiation Control at the Utah Department of Environmental Quality, at (801) 536-4257 or at [rlundberg@utah.gov](mailto:rlundberg@utah.gov).*

### Utah Radiation Control Board Holds November Meeting

On November 13, 2012, the Utah Radiation Control Board held a regularly scheduled meeting in Conference Room 1015 of the Multi Agency State Office Building at 195 North 1950 West in Salt Lake City, Utah. The meeting—which was open to the public—began at 3:00 pm.

The following items, among others, were on the November 2012 meeting agenda:

- I. Welcome and Introduction of Board Members
- II. Election of Chair and Vice Chair (Board Action)
- III. Minutes (Board Action)
  - a. Approval of the Minutes from the October 9, 2012 Board Meeting
- IV. Administrative Rules
- V. Radioactive Materials Licensing/Inspection
  - a. Five-year Review of R313-15, Standards for Protection Against Radiation
- VI. X-Ray Registration/Inspection
- VII. Informational Items
  - a. Low-Level Radioactive Waste Disposal – *EnergySolutions*
    - i. Class A West – combined disposal embankment
    - ii. Radioactive Materials
    - iii. Ground Water Permit
  - b. Other Division Items
  - c. NRC Activities
    - i. Branch Technical Position—Concentration Averaging and Encapsulation
    - ii. Branch Technical Position—Import of Non-U.S. Origin Radioactive Sources

- iii. Site-Specific Analysis Rulemaking (10 CFR Part 61, Licensing Requirements for Land Disposal of Radioactive Waste)
- iv. Draft Comparative Environmental Evaluation of Alternatives for Handling Low-Level Radioactive Waste Spent Ion Exchange Resins from Commercial Nuclear Power Plants

#### VIII. Presentations

- a. Radioactive Materials
- b. Uranium Watch
- c. Energy Fuel Resources
- d. HEAL Utah
- e. *EnergySolutions*

#### IX. Public Comment

- X. Next Scheduled Board Meeting: January 8, 2013 (Tuesday)  
Multi Agency State Office Building,  
Conference Room 1015  
195 North 1950 West  
Salt Lake City, Utah

The Radiation Control Board—which is appointed by the Utah Governor with the consent of the Utah Senate—guides development of Radiation Control policy and rules in the state.

The Board holds open meetings ten times per year at locations throughout the state. A public comment session is held at the end of each meeting.

*The informational material associated with this meeting is available at:*  
[http://www.radiationcontrol.utah.gov/Board/docs/2012/packet/Package\\_nov.pdf](http://www.radiationcontrol.utah.gov/Board/docs/2012/packet/Package_nov.pdf).

*Copies of the Utah Radiation Control Board meeting agendas can be found at <http://www.radiationcontrol.utah.gov/Board/minagd/agenda.pdf>.*

## States and Compacts *continued*

*For additional information, please contact Rusty Lundberg, Director of the Division of Radiation Control at the Utah Department of Environmental Quality, at (801) 536-4257 or at [rlundberg@utah.gov](mailto:rlundberg@utah.gov).*

### ***Northwest Compact/State of Washington***

## **Meeting Held re Post-Fire Corrective Actions at Richland Facility**

On November 14, 2012, U.S. Nuclear Regulatory Commission staff held a meeting with officials of AREVA NP to discuss investigative findings and corrective actions put in place following a fire at the company's Richland facility in September 2012.

On September 9, a fire occurred in the waste handling and packaging area in one of the facility's buildings. The fire prompted an Alert declaration, the lowest of the NRC's emergency classifications for nuclear fuel facilities. The fire was extinguished and there was no threat to public health, safety or the environment.

The meeting, which was open to the public, was held at the NRC's Region II offices in the Marquis One Tower, Suite 1200, 245 Peachtree Center Ave., NE, in Atlanta. NRC officials were available to answer questions from the public after the business portion of the meeting.

### ***Southwestern Compact/State of California***

## **ASLB Denies Citizens Oversight's Request for Hearing re San Onofre Meetings Held re Restart Proposal and Steam Generator Issues**

On December 21, 2012, the NRC's Atomic Safety and Licensing Board (ASLB) denied Citizens Oversight's request for a hearing to challenge Southern California Edison's (SCE's) proposal to amend some of the "technical specifications" governing the San Onofre Nuclear Generating Station. The Board is a quasi-judicial panel of three judges who are independent of the Commissioners and of the NRC staff.

Earlier the same month, on December 18, 2012, NRC staff met with SCE officials to discuss the utility's proposal to restart the plant's Unit 2. The meeting followed a public meeting on November 30, 2012, during which SCE representatives met with NRC staff at the Hills Hotel in Laguna Beach to address the company's response to the NRC's Confirmatory Action Letter (dated March 27, 2012), which concerned actions required to address steam generator tube degradation.

The plant, operated by SCE, is located in San Clemente, California.

### **Denial of Request for Hearing**

The ASLB ruled that Citizens Oversight had failed to articulate any challenges or "contentions" that meet the NRC's legal threshold for convening an evidentiary hearing. The issue dates back to August 16, 2012, when the NRC issued a notice that Southern California Edison had asked to amend San Onofre's licenses. The notice gave members of the public 60 days to file a challenge, and Citizens Oversight filed on

## States and Compacts *continued*

October 17, 2012 requesting an evidentiary hearing.

Citizens Oversight, the NRC Staff, and SCE then submitted legal briefs. On December 5, 2012, the Board heard oral arguments from these parties on whether or not Citizens Oversight's request for an evidentiary hearing met the NRC legal criteria. The webcast of the oral argument will be available through Feb. 5, 2013 on NRC's web site at [www.nrc.gov](http://www.nrc.gov). Copies of the pleadings in this proceeding, as well as the oral argument transcript, are available through the NRC's Electronic Hearing Docket, in the folder entitled "San Onofre 50-361&50-362-LA."

The Board's ruling found that none of Citizens Oversight's contentions satisfied the admissibility criteria of the NRC's hearing regulations. The Board denied Citizens Oversight's first objection – that the proposed amendments would "relocate" or remove some technical specifications from public view and allow Edison to change them without prior public or NRC review – because binding precedent issued by NRC Commissioners in 2001 found that such relocation was legally proper. The remainder of Citizens Oversight's contentions were denied because they dealt with existing license provisions that were unaffected by the proposed license amendments. Citizens Oversight can appeal the Board's decision to the Commissioners.

### **Public Meetings**

**December Meeting re Restart Proposal** On December 18, 2012, NRC staff met with SCE representatives at the agency's headquarters in Rockville, Maryland to discuss the utility's proposal to restart San Onofre Nuclear Generating Station's Unit 2.

During the meeting, which ran from 1:00 – 4:00 p.m. in the Commissioners' Hearing Room, staff discussed the restart plan and the agency's requests for more information on the proposal. No restart decisions were made during the

meeting. The public was provided an opportunity to ask the NRC staff questions before the meeting concluded.

### **November Meeting re Steam Generator Issues**

On January 31, 2012, a leak in a Unit 3 steam generator tube led to the shutdown of that unit. The other reactor, Unit 2, was off-line for maintenance and refueling at the time. Subsequent inspections of the nearly new steam generators in both units found unexpected wear. Both units remain safely shut down and will not be permitted to restart until NRC has reasonable assurance they can be operated safely.

On November 30, 2012, NRC staff and SCE officials met to discuss the steam generator issues. The meeting included a technical presentation by SCE on the basis, methodology, and conclusions of their efforts to identify the causes of the unexpected steam generator tube wear, the corrective actions taken to address those causes, and the basis for continued safe operation of Unit 2. The presentation and NRC dialogue required the majority of the meeting time. The public was invited to observe the meeting and was provided an opportunity to talk to the NRC staff after the business portion of the meeting, before it adjourned.

*A copy of SCE's response to the NRC's Confirmatory Action Letter can be found at <http://pbadupws.nrc.gov/docs/ML1228/ML122850320.html>.*

### ***Southwestern Compact/State of South Dakota***

## **Draft SEIS Issued re Dewey-Burdock Uranium Recovery Project**

On November 16, 2012, the U.S. Nuclear Regulatory Commission announced that the agency has issued a draft supplemental environmental impact statement (SEIS) for the proposed Dewey-Burdock in-situ uranium recovery project in Custer and Fall River counties in South Dakota. Members of the public are encouraged to submit comments about the statement, which includes the NRC staff's preliminary recommendation to grant the license unless safety issues mandate otherwise.

### **Background**

Powertech (USA) Inc. submitted a license application for the facility on August 10, 2009. The license would authorize Powertech to construct, operate and ultimately decommission the facility, which would use the in-situ leach process to recover uranium from underground ore and convert the recovered uranium into yellowcake for use in the production of nuclear fuel.

The NRC draft report analyzes environmental impacts specific to the Dewey-Burdock site and mitigation strategies to reduce or avoid adverse effects on the surrounding environment. The staff continues to analyze safety aspects of the application in a separate technical review.

### **Submitting Comments**

Public comments on the draft supplemental environmental impact statement will be accepted for 45 days following publication of a notice in the *Federal Register* in late November 2012.

Comments may be submitted via either of the following methods:

- the federal government's rulemaking website using Docket ID NRC-2012-0277; or,
- mail to Cindy Bladey, Chief, Rules, Announcements and Directives Branch, Office of Administration, Mail Stop TWB-05-B01M, U.S. Nuclear Regulatory Commission, Washington D.C. 20555-0001.

*The draft supplemental environmental impact statement for the proposed Dewey-Burdock uranium recovery project is available on the NRC website as Supplement 4 to NUREG-1910, Generic Environmental Impact Statement for In-Situ Leach Uranium Milling Facilities. More information on the application and the staff's review is also available on the NRC website at [www.nrc.gov](http://www.nrc.gov).*

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### ***Texas Low-Level Radioactive Waste Disposal Compact Commission***

## **Texas Compact Commission Meets in November in Austin**

The Texas Low-Level Radioactive Waste Disposal Compact Commission (Texas Compact Commission) held a meeting on November 30, 2012. The meeting was held in Room E1.028 of the Texas State Capitol.

The following is an abbreviated overview of the agenda for the November 30 Texas Compact Commission meeting. Persons interested in additional detail are directed to the formal agenda themselves.

- call to order;
- roll call and determination of quorum; introduction of commissioners, elected officials and press;

## States and Compacts *continued*

- public comment;
- presentation by the Low-Level Radioactive Waste Forum's (LLW Forum's) Disused Sources Working Group (DSWG);
- discussion and possible action with respect to resolving the questions of when a waste becomes a waste for the purposes of the applicability of Commission rules;
- consideration of and possible action on applications and proposed agreements for importation of low-level radioactive waste;
- update on issues and progress of the Disposal Allotment Committee;
- update on issues and progress of the Exports Committee;
- consideration of and possible action on applications and proposed agreements for exportation of low-level radioactive waste;
- discussion and possible action with respect to the applicability of the Texas Low-Level Radioactive Waste Disposal Compact to certain types of mixed waste;
- receive reports from the Texas Commission on Environmental Quality (TCEQ) on the status of the TCEQ rate case; status of pending Waste Control Specialists (WCS) license amendment applications; method of tracking out of compact disposal quantities in connection with current WCS license limits and in connection with Texas law; and, update on status of capacity study;
- receive report from WCS about recent site operations; pending license amendment applications; and, expectations for utilizing the full allocation of volume and curies for the non-compact waste through April 26, 2013;
- Chairman's report on Texas Compact Commission activities including reporting on fiscal matters and on other actions to be taken by the compact;
- report from Leigh Ing, Consulting Supervisory Director of the Texas Compact Commission, on her activities and questions related to compact commission operations;

- discussion and possible changes of dates and locations for remaining fiscal year 2013 meetings; and,
- adjourn.

The Texas Compact Commission may meet in closed session on any item listed above if authorized by the Texas Open Meetings Act, Chapter 551, Texas Government Code.

*For additional information, please contact Leigh Ing, Consulting Supervisory Director of the Texas Compact Commission, at (512) 217-8045 or at [ing.leigh@gmail.com](mailto:ing.leigh@gmail.com) or Robert Wilson, Chairman of the Texas Compact Commission, at (512) 820-2930 or at [bob.wilson@tllrwdcc.org](mailto:bob.wilson@tllrwdcc.org).*

### ***State of Texas***

## **TCEQ Releases LLRW Capacity Report**

### ***Indicates Significant Room for Non-Compact Waste***

In October 2012, the Radioactive Materials Division of the Texas Commission on Environmental Quality (TCEQ) released its "Capacity Report for Low-Level Radioactive Waste: A Report to the Texas Legislature."

The results indicate that the Waste Control Specialists' (WCS) Compact Waste Disposal Facility (CWDF) could take significant curies of out-of-compact waste before impeding on space that is required to be reserved for waste from Texas and Vermont generators under the current license conditions.

Current legislation limits the amount of non-compact waste that may be accepted at the CWDF to 220,000 curies through April 26, 2013. Each

## States and Compacts *continued*

year beyond that, the limit is currently set at 120,000 curies per year.

The report will be reviewed by the Texas legislature, which will convene its next session in January 2013.

*The following are excerpts from the Executive Summary of the report. Persons interested in additional information or details are directed to the full report.*

### Background

**Legislative Direction** In 2011, the Texas Legislature passed Senate Bill 1504 (82nd regular session), which charged the Texas Commission on Environmental Quality (TCEQ) with conducting “a study on the available volume and curie capacity of the CWDF for the disposal of party state compact waste and nonparty state compact waste.” As codified in the Health and Safety Code, Chapter 401, Section 401.208, the TCEQ is required to consider and make recommendations on the following topics:

- 1) the future volume and curie capacity needs of party state and nonparty state generators and any additional reserve capacity necessary to meet those needs;
- 2) the calculation of radioactive decay related to the CWDF and radiation dose assessments based on curie capacity;
- 3) the necessity of containerization of the waste;
- 4) the effects of the projected volume and radioactivity on the health and safety of the public; and
- 5) the costs and benefits of volume reduction and stabilized waste forms.

**Methodology** The TCEQ conducted a survey to obtain radioactivity projections for this report. The party state low-level radioactive waste (LLRW) generators were surveyed and the expected volume of waste over the life-span of the

CWDF was calculated. Of the hundreds of radioactive material licensees in the Texas Compact, approximately 200 were identified as potential LLRW generators and contacted. The remaining facilities were licensed for radioactive materials that generate waste but do not require LLRW disposal or disposal is prohibited by the license.

It is important to note that the CWDF was licensed in 2009 for 15 years until 2024 and has the possibility for two additional 10-year renewal periods until 2044. Based on questionnaire responses, it was determined that approximately 0.73 million cubic feet and 0.08 million curies (Ci) of operational waste will be generated by 2024, and 1.15 million cubic feet and 0.14 million Ci of operational waste will be generated by 2044 by utility and non-utility generators within the Texas Compact.

Consideration was also given to the decommissioning volumes and activities for the Texas Compact nuclear utilities. The licenses of all five nuclear power electric generating units currently in operation will expire prior to 2033; therefore, capacity in the CWDF must be reserved to account for the potential waste streams from the Texas Compact nuclear utilities. The combined decommissioning estimates for volume and radioactivity for the Texas Compact nuclear utilities are 1.7 million cubic feet and 0.67 million Ci, respectively.

In addition to the five existing units in the Texas Compact, two additional units are currently in the NRC licensing process and are anticipated by the applicant to be in operation after 2020. Texas law requires some reserve capacity within the CWDF for Texas Compact generated LLRW. The operational volume and activity contribution potential through 2024 is 136,000 cubic feet and 62,700 Ci. The operational volume and activity contribution potential through 2044 is 816,000 cubic feet and 376,000 Ci.



## States and Compacts *continued*

The predicted total decommissioning waste volume and activity for the future units is 1,556,587 cubic feet and 550,000 Ci, respectively. All capacity predictions provided by this study show the disposal needs of the Texas Compact with and without these two future units taken into account. The survey revealed the following information:

	<u>Millions of Cubic Feet</u>	<u>Millions of Curies</u>
Licensed Volume	2.31	3.89
<u>Existing Facilities</u>		
2024 Operating	0.73	0.08
2044 Operating	1.15	0.14
Decommissioning	1.70	0.67
Total (2044)	2.85	0.81
<u>Possible New Facilities</u>		
2024 Operating	0.136	0.0627
2044 Operating	0.816	0.376
Decommissioning	1.557	0.550
Total (2044)	2.373	0.926
Combined Total (2044)	5.223	1.736

### Findings

**Generation Information** The report found that, based on the operation and decommissioning estimates, the nuclear utilities generate in excess of 90 percent of the Texas Compact LLRW volume and more than 95 percent of the Texas Compact LLRW radioactive inventory. Texas Compact process and generation information regarding nuclear utilities were presumed to apply to nuclear utilities in nonparty states and suggests nuclear utilities in nonparty states will likely be a majority of the LLRW that is currently in the United States, as opposed to academic, medical, or industrial sources.

Currently, there are eighty (80) nuclear power plant units in nonparty states that do not have viable disposal options. The following table shows the average annual generation rate of several waste streams and the total annual volume estimated to be generated by these nuclear utilities. The table separates out the two major types of reactors, Pressurized Water Reactors (PWR) and Boiling Water Reactors (BWR), because they operate differently and produce significantly different volumes of LLRW.

Number of Units	<u>52 PWR</u>	<u>28 BWR</u>	<u>80 Total</u>
Combined Waste Streams			
Wet B/C (resins and filters)	5,720 ft <sup>3</sup>	1,680 ft <sup>3</sup>	7,400 ft <sup>3</sup>
Wet A (resins and filters)	10,400 ft <sup>3</sup>	50,400 ft <sup>3</sup>	60,800 ft <sup>3</sup>
Dry Active Waste (combined)	1,456,000 ft <sup>3</sup>	1,232,000 ft <sup>3</sup>	2,688,000 ft <sup>3</sup>
Activated Hardware	N/A	1,372 ft <sup>3</sup>	1,372 ft <sup>3</sup>

*\* The above information regarding US Industry Average Annual LLRW Generation Rates for Nuclear Utilities is taken from EPRI RadBench and Texas Compact BWR questionnaire responses.*

## States and Compacts *continued*

**Long-Term Estimates** Using these totals, by 2024 nuclear utilities in nonparty states are projected to produce a total of approximately 33.1 million cubic feet of operational LLRW. By 2044, nonparty state's nuclear utilities are projected to produce 88.2 million cubic feet of operational LLRW. This is approximately 14 times the capacity that the Texas Compact utilities will need for both operational and decommissioning volumes combined.

**Individual Studies by Non-Party States** In addition to survey results, six nonparty states provided their own LLRW studies. These studies showed highly variable volumes and activities generated each year, making it difficult to determine if these results can be extrapolated to be representative of the entire 36 states without viable disposal options. However, these reports did have several things in common. All six studies indicated that the majority of radioactive waste that is generated is Class A, and that the majority of this waste is generated by utilities. In addition, all stated that Class B and C waste has been stored on site awaiting a disposal option after the Barnwell, South Carolina disposal site stopped accepting imported Class B and C LLRW in June 2008.

**Likely Use of CWDF by Non-Party State Generators** Based on economic considerations and discussions with nonparty generators about a lack of other options, it can be assumed that nonparty states that get approval for importation will begin to dispose of their Class B and C waste at the Texas LLRW CWDF. Due to the availability of other options, and for economic reasons, generators are likely to select disposal options other than the CWDF for Class A waste unless there are regulatory or economic changes in Texas that make it economically sensible for generators to send Class A waste to Texas.

**Impact of Processing** The volumes presented above are estimated prior to processing the waste. Processing of waste typically involves volume reduction techniques that can result in volume

reduction factors of between 3 and 100, depending on the technique used. For dry active waste, super-compaction and incineration are typically chosen, and have volume reduction factors of 3-10 and 100, respectively. For process waste, such as utility resins and filters, conversion reforming is typically the technique of choice and volume reduction factors between 5 and 33 can be achieved. Conversion reforming is the processing of choice for wet waste for two reasons.

First, it can be very costly to ship unprocessed due to poor packing efficiencies and void spaces. Second, conversion reforming greatly reduces the water content of the wet waste, which, if not reduced, can lead to waste stability issues. However, this technique may concentrate the waste so as to produce a waste form which exceeds the acceptance criteria of disposal facilities due to certain nuclide concentrations (i.e., could produce waste that is greater-than-Class C [GTCC] waste). Also of importance to note, is that neither of these predictions takes radioactive decay into account because it is very difficult to predict which radionuclides will be disposed of at what point in time.

**Use of Volume Reduction Techniques** It is apparent from the responses to the questionnaires that many generators in the Texas Compact continue to use volume reduction techniques due to the lack of LLRW disposal options in the past. The NRC identified volume reduction as a possible solution to the lack of disposal options beginning in 1981 with their Volume Reduction Policy Statement and generators have applied various volume reduction techniques since that time. The effect of implementing volume reduction techniques on the LLRW generated in the Texas Compact should increase the capacity of the CWDF for taking non-party waste. However, the costs for disposal, transportation, and processing will factor into whether a generator of LLRW decides to use volume reduction techniques prior to disposal.

## States and Compacts *continued*

### Containerization of LLRW

In accordance with Section 401.208(b)(3), this study also examines the necessity of containerization of LLRW. First, containerization helps maintain the structural stability of the site and the waste form, and can assure that the waste remains in the designated location and is required for some LLRW at Chapter 401 at Section 401.218 relating to Disposal of Certain Waste. Second, containerization provides shielding for workers from radiation during operations. Shielding allows the CWDF to accept higher activity LLRW while keeping the radiation dose incurred by the workers as low as reasonable achievable. Finally, containerization slows the movement of radionuclides into the environment.

### Results of Performance Assessment

In order to evaluate the effects of the volume and radioactivity of the LLRW to be disposed of in the CWDF, the Texas LLRW license and applicable rules require a Performance Assessment (PA) to be conducted. A PA for the CWDF is a quantitative analysis used for demonstrating compliance with the following performance objectives:

- ♦ protection of the general population from releases of radioactivity;
- ♦ protection of individuals from inadvertent intrusion;
- ♦ protection of individuals during operations, and;
- ♦ stability of the disposal site after closure.

Eighty-five (85) radionuclides were considered in evaluating the source term for the CWDF. The PA evaluated short-term (i.e., 30 years) exposure for workers and long-term (i.e., 50,000 years) exposure for the public. As part of the long-term evaluation, the modeling accounted for decay of radionuclides over the 50,000 year period of analysis. Note that the decay of radionuclides was not considered for the short-term worker

evaluation since radionuclides may be accepted for disposal at any time during the operational period.

The results from the PA show that the dose from the waste inventory (with decay accounted for) is within acceptable limits. It can be further postulated that the doses from the capacity study acquired from Texas Compact generator questionnaires will also be within acceptable limits for the health and safety of the general population considering that the total activity predicted to be generated in only the Texas Compact by 2024 is less than what is currently allowed in the license. In addition, projections through the end of the CWDF lifespan to 2044 indicate that it can accommodate Texas Compact waste.

*For additional information, please contact Charles Maguire, Director of TCEQ's Radioactive Materials Division, at (512) 239-5308 or at [Charles.Maguire@tceq.texas.gov](mailto:Charles.Maguire@tceq.texas.gov).*

## Comment Sought re Draft SEIS for South Texas Project Renewal Application

On December 18, 2012, the U.S. Nuclear Regulatory Commission announced that the agency is seeking public comment on a draft supplemental environmental impact statement (SEIS) for the proposed renewal of the South Texas Project nuclear power plant's operating licenses for an additional 20 years.

### Public Meetings

On Jan. 15, 2013, NRC staff will hold two public meetings in Bay City, Texas to present the findings of the draft report and accept public comments. The meetings will be held at the Bay

## States and Compacts *continued*

City Civic Center, 201 Seventh St., from 2:00 - 5:00 p.m. and 7:00 - 10:00 p.m. NRC staff members will be available for one hour prior to each session to meet informally with members of the public.

### Plant Overview

The South Texas Project nuclear plant has two pressurized-water reactors, located in Bay City, about 90 miles southwest of Houston. The plant operator, STP Nuclear Operating Co., submitted its license renewal application on October 25, 2010. The current operating licenses expire August 20, 2027 for Unit 1 and December 15, 2028 for Unit 2.

### Submitting Comments

Public comments on the draft environmental impact statement for the South Texas Project license renewal will be accepted through February 22, 2013. They may be submitted via any of the following methods:

- ♦ online via the federal government's rulemaking website at [www.regulations.gov](http://www.regulations.gov) using Docket ID NRC-2010-0375;
- ♦ mailed to Cindy Bladey, Chief, Rules, Announcements and Directives Branch (RADB), Division of Administrative Services, Office of Administration, Mail Stop: TWB-05-B01M, U.S. Nuclear Regulatory Commission, Washington, D.C., 20555-0001; or,
- ♦ faxed to (301) 492-3446.

### Background

The draft supplemental environmental impact statement contains the NRC staff's analysis of potential impacts specific to the South Texas Project site. In preparing the report, the staff held a public meeting in Bay City on March 2, 2011 as part of the public "scoping" process for the report. The staff also conducted site audits at the plant in May and July 2011 and consulted with other

agencies while analyzing the applicant's environmental report submitted with the application.

The draft NRC report does not discuss potential environmental impacts of extended storage of spent nuclear fuel after the plant eventually ceases operation. That issue will be addressed in the NRC's waste confidence environmental impact statement and rule, expected by September 2014. In August 2012, the Commission decided that the agency will not issue final licensing decisions for reactors, including license renewal, until the waste confidence rule is completed. If at that time, site-specific issues relating to spent fuel storage at South Texas Project remain unresolved, they will be addressed separately.

*The South Texas Project draft supplemental environmental impact statement is available for public inspection in the NRC Public Document Room at NRC headquarters, 11555 Rockville Pike, Rockville, Maryland. The South Texas Project license renewal application, information about the NRC staff's environmental and safety reviews, and the draft supplemental environmental impact statement are available on the NRC website at [www.nrc.gov](http://www.nrc.gov).*

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### ***State of Michigan***

## Palisades Performance Improved but Still Needs Heightened Oversight

On November 9, 2012, the U.S. Nuclear Regulatory Commission issued a report on a follow-up inspection conducted by nine NRC inspectors from September 17-28, 2012 to evaluate the Palisade nuclear plant's resolution of safety issues identified in 2011. These issues resulted in the plant moving from Column I of the NRC's performance Action Matrix, which

## States and Compacts *continued*

involves the normal level of NRC inspections, to Column III, where plants get an increased level of inspection. As part of this increased oversight, NRC inspectors also conducted an independent review of the plant's safety culture, which included interviews with over 100 employees.

The report concluded that the Palisades nuclear plant has adequately addressed last year's safety problems, but still requires additional oversight—finding that the plant's safety culture was adequate and improving. As a result, the plant is being moved back to Column I, which would normally indicate that the plant would no longer get increased oversight by the agency. However, the NRC has decided to deviate from its normal process to conduct over 1000 additional hours of inspections at the plant in 2013 in order to ensure that:

- ♦ the remaining corrective actions to improve the organization and strengthen the safety culture at the site are properly implemented and can be sustained; and,
- ♦ the leaks that occurred at the plant in 2012 and the plant's proposed corrective actions are well understood so that these issues will not lead to additional safety concerns.

In addition, the Region III staff plans to conduct enhanced communication with the communities in southwest Michigan regarding the status of NRC's oversight, safety improvements at the plant, and the resolution of technical issues. This will be accomplished through public meetings, webinars and other means as called for in order to be responsive to the communities of interest.

“While the licensee has demonstrated satisfactory resolution of the most significant risk issues and we have no immediate safety concerns, other issues, such as the leaks that came to light during this year, continue to occur,” said Region III Administrator Charles Casto. “We have chosen to deviate from our normal process and continue our inspections at an elevated pace ensuring that all issues are resolved. Our inspectors will continue

their relentless focus on reactor safety and ensuring the protection of the public.”

The Palisades nuclear power plant is owned by Entergy Nuclear Operations and is located in Covert, Mich., approximately 40 miles west of Kalamazoo.

*Copies of the NRC's inspection report and request for heightened oversight will be available through the NRC's Agencywide Documents Access and Management System (ADAMS) at the NRC website or by contacting the NRC's Region III office.*

## ***Nuclear Power Plants and Other NRC Licensees***

### **News Briefs for Nuclear Power Plants Across the Country**

The following news briefs provide updates on recent activities, enforcement actions and general events at nuclear power plants and other licensees around the country. The briefs are organized by compact and state.

*For additional information, please contact the referenced facility or licensee.*

#### **Appalachian Compact/Commonwealth of Pennsylvania**

**Gamma Irradiator Service Company** On December 10, 2012, U.S. Nuclear Regulatory Commission staff held a public meeting with Gamma Irradiator Service (GIS) to discuss the actions taken and planned by the Pennsylvania-based company to prevent a recurrence of an overexposure event involving an irradiator in New Jersey. In addition to NRC staff, representatives from regulatory agencies in New Jersey and Pennsylvania responsible for overseeing GIS activities in their respective states attended the meeting. GIS—which is based in Benton, Pennsylvania—performs preventive maintenance and other services on irradiators. On October 8, 2011, employees of the firm were involved in an event at an irradiator facility in Raritan, New Jersey in which a GIS employee and two subcontractors were exposed to radiation in excess of regulatory limits. The overexposure event occurred while a radioactive source was being loaded into an irradiator. “While there were no expected health impacts for the workers involved in this event, the NRC is interested in the actions taken since then to prevent a recurrence or more serious event from occurring,” NRC Region I Administrator Bill Dean said. At the time of the event, the work was being performed under the

jurisdiction of the State of New Jersey. However, the event raised questions for the NRC regarding the adequacy of radiological controls used by GIS, since they would also be utilized when the company was performing work that is under NRC jurisdiction. On October 20, 2011, the NRC issued a Confirmatory Action Letter to GIS (available in the NRC’s electronic documents system at <http://www.nrc.gov/reading-rm/adams.html> under Accession number ML112930399). That letter listed actions to be taken by the company to address issues associated with the October 8, 2011 event, including retaining a third party to assess the adequacy of the company’s operating and emergency procedures.

#### **Central Compact/States of Arkansas, Kansas and Louisiana**

**Arkansas Nuclear One Nuclear Plant** On December 6, 2012, NRC met with officials from Entergy Operations, Inc. to discuss the Arkansas Nuclear One nuclear plant located in Russellville, Arkansas. The meeting was held from 8:00 - 10:00 a.m. in NRC’s Region IV offices at 1600 E. Lamar in Arlington, Texas. The public was invited to attend this meeting and was provided an opportunity to ask questions following the discussion between the NRC and Entergy Operations officials. NRC staff and Entergy officials met to discuss Entergy’s actions to address human performance issues that were first identified in the NRC’s 2011 annual assessment letter issued on March 5. The issues had not been corrected and therefore were discussed again in the NRC’s mid-cycle letter issued on September 4. The annual assessment letter dated March 5 (ML120610412) sent from the NRC to plant officials addresses the performance of the plant during 2011. *It is available on the NRC web site at: [http://www.nrc.gov/NRR/OVERSIGHT/ASSESS/LETTERS/ano\\_2011q4.pdf](http://www.nrc.gov/NRR/OVERSIGHT/ASSESS/LETTERS/ano_2011q4.pdf).* *Current performance information for Arkansas Nuclear One Unit 1 is available on the NRC web site at: [http://www.nrc.gov/NRR/OVERSIGHT/ASSESS/ANO1/ano1\\_chart.html](http://www.nrc.gov/NRR/OVERSIGHT/ASSESS/ANO1/ano1_chart.html).*

*Current performance information for Unit 2 is available at:*

*[http://www.nrc.gov/NRR/OVERSIGHT/ASSESS/ANO2/ano2\\_chart.html](http://www.nrc.gov/NRR/OVERSIGHT/ASSESS/ANO2/ano2_chart.html).*

**Wolf Creek Nuclear Plant** On December 10, 2012, NRC met with officials from the Wolf Creek Nuclear Operating Company to discuss the Wolf Creek nuclear power plant located near Burlington, Kansas. The public was invited to observe the meeting and was provided an opportunity to ask questions after the business portion of the meeting. NRC staff and Wolf Creek officials met to discuss the company's actions to address performance issues that were identified in the NRC's 2012 mid-cycle assessment letter, which was issued on September 4. Specifically, the company was asked to address performance issues in the areas of problem identification and resolution and human performance. *The NRC's mid-cycle assessment letter to Wolf Creek officials, which addresses the performance of the plant from July 2011 to June 2012, is available on the NRC website at [http://www.nrc.gov/NRR/OVERSIGHT/ASSESS/LETTERS/wc\\_2012q2.pdf](http://www.nrc.gov/NRR/OVERSIGHT/ASSESS/LETTERS/wc_2012q2.pdf). Current performance information for Wolf Creek is also available on the NRC website at [http://www.nrc.gov/NRR/OVERSIGHT/ASSESS/WC/wc\\_chart.html](http://www.nrc.gov/NRR/OVERSIGHT/ASSESS/WC/wc_chart.html).*

**River Bend Nuclear Plant** On December 14, 2012, NRC announced that the agency will conduct a special inspection at the River Bend Nuclear Station to review the circumstances surrounding a problem with an emergency diesel generator. River Bend, operated by Entergy Operations Inc., is located 24 miles northwest of Baton Rouge. On December 2, 2012, during testing of one of the emergency diesel generators, plant operators identified a leak from a pipe that provides cooling water to the engine. Operators shut down the diesel generator. Emergency diesel generators are the main back-up power source to the plant's safety systems if there is a loss of offsite power. The issue is a safety concern that warrants additional NRC attention. The other on-site generator remains functional. "The purpose of

this special inspection is to better understand the cause of the leak and review the licensee's corrective actions to ensure that the diesel generator will perform as intended," said Region IV Administrator Elmo E. Collins. The NRC inspectors will review the licensee's response to previous leaks involving emergency diesel generator piping, evaluate the licensee's cause analyses, and review the corrective actions taken to address the problems. The inspection report documenting their findings will be publicly available within 45 days of the end of the inspection.

### **Central Midwest Compact/State of Illinois**

**Honeywell Metropolis Works Facility** On November 29, 2012, NRC staff held a public meeting in Metropolis, Illinois to discuss a Confirmatory Order issued to Honeywell Metropolis Works and the company's actions to modify the plant to meet NRC requirements. In addition to NRC officials, Honeywell executives, the mayor of Metropolis and representatives of the state of Illinois, the Commonwealth of Kentucky and Massac and McCracken counties participated in the meetings. The NRC issued a Confirmatory Order to Honeywell in October 2012, outlining actions the company must take before it can resume its uranium conversion operations at the facility. Following an inspection in May, the NRC concluded that process equipment in the facility lacks seismic restraints, support and bracing needed to assure integrity during a significant earthquake or tornado. Specifically, the inspection determined that the amount of uranium hexafluoride that could be released into the environment should the process equipment be damaged by such an event could be significantly larger than previously assumed. The material that could be released poses more of a chemical hazard than a radiation hazard. There is no current safety concern since the facility has been shut down since May 2012. The Honeywell plant takes milled uranium and converts it into uranium hexafluoride gas which is then enriched

at other facilities to make fuel for commercial power reactors.

**Zion Nuclear Plant** On November 1, 2012, NRC staff held a public meeting to discuss the agency's actions to ensure the safe decommissioning of the Zion Nuclear Power Station. The two-unit plant—which is located in Zion, Illinois—is approximately 40 miles north of Chicago and ceased operation in 1997. Decommissioning activities at the plant are being carried out by *ZionSolutions*, a subsidiary of *EnergySolutions* created to manage the decommissioning work at Zion and based in Salt Lake city, Utah. During the November 1 meeting, NRC staff discussed its roles and oversight of the decommissioning project. The NRC also addressed issues of concern, such as how people can have confidence that spent nuclear fuel at Zion will be stored safely and how NRC's oversight processes assure that the site is decontaminated to levels that permit release of the property and termination of the NRC license. Zion Unit 1 operated from 1973 to 1997; Unit 2 operated from 1974 to 1996. After a nuclear plant is permanently shut down, the NRC requires decommissioning to take place within 60 years of the shut-down date. In 2008, plant owner Exelon Corporation, submitted a request to the NRC to transfer licensed ownership to *ZionSolutions*. The NRC reviewed the license transfer request, making sure that the company had proper staffing and expertise to safely implement decommissioning activities and that there would be sufficient funds to fully decommission the plant. The NRC approved the license transfer September 2010.

### **Northwest Compact/State of Washington**

**AREVA Facility** On November 14, 2012, U.S. Nuclear Regulatory Commission staff conducted a meeting with officials of AREVA NP to discuss investigative findings and corrective actions put in place following a fire at the company's Richland facility in September 2012. On September 9, a fire occurred in the waste handling and packaging area in one of the facility's buildings. The fire

prompted an Alert declaration, the lowest of the NRC's emergency classifications for nuclear fuel facilities. The fire was extinguished and there was no threat to public health, safety or the environment. The meeting, which was open to the public, was held at the NRC's Region II offices in the Marquis One Tower, Suite 1200 in Atlanta, Georgia. NRC officials were available to answer questions from the public after the business portion of the meeting.

**Columbia Nuclear Generating Station** On October 25, 2012, NRC announced that the agency has determined that two inspection findings at the Columbia Generating Station on the plant's emergency preparedness program are "white," meaning they had low to moderate safety significance. The plant, operated by Energy Northwest, is located near Richland, Washington. The first white finding involved the licensee's failure to maintain a plan to appropriately characterize emergency action levels which could have delayed recognition of some radiological emergency conditions. The second white finding involved the licensee's failure to maintain adequate methods for assessing and monitoring actual or potential offsite radiation releases from the plant during emergencies. This adversely affected the licensee's ability to assess the consequences of a radiological release and had the potential to impact protective action recommendations necessary to protect public health and safety. These conditions existed between 2000 and 2011, after which time they were corrected. The violations were identified by NRC during an inspection conducted between October 18, 2011 and June 27, 2012. A violation is also being issued because regulations require the licensee to make prompt notification to the NRC of any event that results in a major loss of emergency assessment capability. The NRC identified these issues during its inspection but the licensee did not report them to the NRC in a timely manner, as required. After the NRC staff issued preliminary findings, a conference was held on September 20, 2012 during which Energy Northwest officials presented their perspective on



the root cause of the findings and violations and corrective actions. After consideration, the NRC staff has determined that the inspections findings are appropriately characterized as “white.” The two white findings move the Columbia Generating Station into the “degraded cornerstone” column of the NRC’s action matrix, resulting in a higher level of NRC scrutiny. This is the third highest level of NRC oversight and Columbia joins seven other nuclear plants in that category. *The position of all nuclear units within the NRC action matrix is available at:*

*[http://www.nrc.gov/NRR/OVERSIGHT/ASSESS/actionmatrix\\_summary.html](http://www.nrc.gov/NRR/OVERSIGHT/ASSESS/actionmatrix_summary.html).*

### **Southeast Compact/States of Alabama, Florida and Tennessee**

**Browns Ferry Nuclear Power Plant** On December 5, NRC staff held a public meeting to discuss the completion of three supplemental inspections for one White inspection finding and two White performance indicators at the Browns Ferry nuclear plant. Supplemental inspections, such as the ones that were discussed at the meeting, are added to the NRC’s normal, or baseline, inspection program in response to specific events or declining regulatory performance. One of the inspections at Browns Ferry reviewed TVA’s response to a White inspection finding related to operators and staff not being adequately trained on new shutdown procedures. The two other inspections looked at the response to a White performance indicator caused by Unit 1’s high pressure injection system being out of service more than expected and a White performance indicator related to unplanned shutdowns on Unit 3. These supplemental inspections were conducted to assure that the causes of the issues were understood, that the extent of condition was identified, and that TVA’s corrective actions were sufficient. The main purpose of the December 5 meeting was to discuss TVA’s performance and corrective actions for these issues, but NRC officials also discussed the current status of the ongoing supplemental inspections for the Red finding

issued in 2011. The NRC evaluates both inspection findings and performance indicators at commercial nuclear power plants with a color-coded system which classifies them as green, white, yellow or red, in increasing order of safety significance. As the significance increases, the NRC increases the level of oversight for that plant. If a plant takes appropriate corrective actions and improves safety performance, the agency returns to its normal, but still extensive, inspection schedule.

**St. Lucie Power Plant** On November 9, 2012, NRC staff held a meeting with officials of Florida Power & Light for 1:00 pm to discuss a supplemental inspection of the St. Lucie nuclear power plant located in Jensen Beach, Florida. The meeting, which was open to the public, was held in the Stuart/Martin County Chamber of Commerce at 1650 South Kanner Highway in Stuart. NRC officials were available to answer questions from the public after the business portion of the meeting. A supplemental inspection is one that is added to the NRC’s normal, or baseline, inspection program in response to specific events or declining regulatory performance. The inspection at St. Lucie was conducted during the second week in October 2012 and reviewed FPL’s response to two White performance indicators related to unplanned shutdowns on Unit 1. Those indicators put St. Lucie Unit 1 in the degraded cornerstone column of the NRC’s action matrix. Earlier this year, St. Lucie Unit 1 crossed the green-to-white threshold for the NRC’s Unplanned Scrams per 7,000 Critical Hours performance indicator. That was due to a total of three trips during the second half of 2011 and early 2012. In addition, the NRC identified that the Unplanned Scrams with Complications performance indicator also crossed the green-to-white threshold after two complicated trips during the same period. A White performance indicator means a plant has fallen below the NRC’s expected range of performance in that area. A supplemental inspection was conducted to assure that the causes of the shutdowns were understood, that the extent

of condition was identified, and to ensure FPL's corrective actions were sufficient. The purpose of the November 9 meeting was to discuss FPL's performance and corrective actions.

**Turkey Point Nuclear Plant** On December 7, NRC staff held a public meeting to discuss Florida Power and Light's draft responses to NRC questions regarding the alternative site selection process described in the company's combined license application for two new units at the Turkey Point nuclear plant site. The meeting was open to the public and NRC officials were available to answer questions after the business portion of the meeting. FPL submitted an application in June 2009 seeking approval to build and operate two Westinghouse AP1000 reactors at the site about 20 miles south of Miami near Homestead, Florida. *More information on the company's application and the NRC review can found at [www.nrc.gov/reactors/new-reactors/col/turkey-point.html](http://www.nrc.gov/reactors/new-reactors/col/turkey-point.html).*

**Sequoia and Watts Bar Nuclear Power Plants** On December 3, NRC staff held a public meeting to discuss flood-related improvement strategies for the Sequoyah and Watts Bar nuclear plants with Tennessee Valley Authority officials. The Sequoyah plant is on Chickamauga Lake about 16 miles northeast of Chattanooga, and the Watts Bar plant is on Watts Bar Lake about 60 miles southwest of Knoxville. Both lakes are part of the Tennessee River system and TVA must account for potential flooding in the plant site design and emergency procedures. TVA requested the meeting with the NRC to provide an update to the NRC staff. Although the meeting was open to the public, some portions of the meeting were closed when the information related to plant security. NRC officials were available to answer questions from the public after the business portion of the meeting.

### **Southwestern Compact/State of California**

**Diablo Canyon Nuclear Power Plant** On November 28, 2012, NRC held two public

meetings to discuss topics including seismic issues and plant performance for the Diablo Canyon nuclear plant. The plant, operated by Pacific Gas and Electric Company (PG&E), is located near San Luis Obispo, California. The NRC staff held two open house sessions from 1:00 – 3:00 p.m. and 6:00 – 7:00 p.m. during which subject matter experts answered questions on topics related to current plant performance and the recently issued Research Information Letter in response to PG&E's Report on the Analysis of the Shoreline Fault Zone. From 7:00 – 9:00 p.m. the panel of subject matter experts held a question and answer session with the public to provide information and address public comments. In 2008, PG&E first notified the NRC about the Shoreline fault and then updated their data and analysis in early 2011. Following an October 2011 site visit, the NRC review team analyzed ground motion from earthquakes the Shoreline Fault could potentially generate. All of those ground motions fell within Diablo Canyon's existing design limits, which are based on ground motion associated with an earthquake from the larger Hosgri fault near the plant. On October 12, 2012, the NRC issued Research Information Letter 12-01, "Confirmatory Analysis of Seismic Hazard At The Diablo Canyon Power Plant From the Shoreline Fault Zone," to communicate the results of the NRC's analysis of PG&E's assessment. *The October 12 NRC Research Information Letter is available on the NRC web site at: <http://adamswebsearch2.nrc.gov/webSearch2/main.jsp?AccessionNumber='ML121230035'>. Current performance information for Diablo Canyon Unit 1 is available on the NRC website at: [http://www.nrc.gov/NRR/OVERSIGHT/ASSESS/DIAB1/diab1\\_chart.html](http://www.nrc.gov/NRR/OVERSIGHT/ASSESS/DIAB1/diab1_chart.html). Information for Unit 2 is available at: [http://www.nrc.gov/NRR/OVERSIGHT/ASSESS/DIAB2/diab2\\_chart.html](http://www.nrc.gov/NRR/OVERSIGHT/ASSESS/DIAB2/diab2_chart.html).*

**San Onofre Nuclear Generating Station** On December 21, 2012, NRC's Atomic Safety and Licensing Board denied Citizen's Oversight's request for a hearing to challenge Southern

California Edison's (SCE's) proposal to amend some of the "technical specifications" governing the San Onofre Nuclear Generating Station. Earlier the same month, NRC staff met with SCE officials to discuss the utility's proposal to restart the plant's Unit 2, which followed public meetings in November in California to discuss the steam generator issues. (For additional information, see related stories, this issue.)

### State of Michigan

**Palisades Nuclear Power Plant** On December 11, 2012, NRC officials held a public meeting to discuss with local residents Entergy's actions to ensure improvements in the Palisades nuclear plant's performance are sustained and the NRC's independent oversight of these actions. The plant is located in Covert, Michigan—approximately 50 miles west of Kalamazoo. The meeting—which was held at the Beach Haven Event Center in South Haven—consisted of a formal exchange between the NRC and Entergy representatives followed by the opportunity for members of the public to ask questions and make comments to the NRC staff. On November 9, 2012, NRC concluded that the Palisades nuclear plant has adequately addressed last year's safety problems. As a result, the plant has moved to the performance column which would no longer require increased oversight by the agency. However, the NRC has also concluded that the plant still needs additional oversight. As a result, the agency will deviate from its normal process by conducting over 1,000 additional hours of inspections at the plant in 2013 to (1) verify that the plant's actions to maintain the safety improvements are properly implemented and can be sustained, and (2) ensure that the licensee takes actions for the leaks that occurred in 2012, so they do not lead to more significant safety concerns. "We will discuss with the public how the NRC will oversee Entergy on their actions to sustain progress on safety performance at Palisades," said Region III Administrator Charles Casto. "This meeting will also provide a forum for the public to have a dialogue with the NRC staff on our

conclusions regarding maintenance of plant safety as we continue our relentless oversight of Palisades." NRC's inspection reports and other documents are available through the NRC's Agencywide Documents Access and Management System (ADAMS) at the NRC website or by contacting the NRC's Region III Public Affairs Office.

### State of Nebraska

**Fort Calhoun Nuclear Plant** On December 15, 2012, officials from the Omaha Public Power District met with NRC staff to discuss the status of the Fort Calhoun nuclear plant's performance improvement activities. OPPD operates the plant, which is located 19 miles north of Omaha. During the meeting, which was held at Dana College's Gardner-Hawks Center, NRC and OPPD officials discussed the status of the plant's performance improvement activities—including their actions to address the items outlined in the Confirmatory Action Letter sent on June 11, 2012. The second part of the meeting was conducted as a question and answer session between the NRC and the public on topics related to Fort Calhoun and the NRC's oversight. Fort Calhoun is shut down and remains in a safe mode following flooding along the Missouri River in 2011. This meeting was one of a series the NRC is holding to keep the public informed about OPPD's effort to address performance issues.

### State of New Hampshire

**Seabrook Nuclear Plant** On December 11, 2012, NRC staff held a meeting and open house to update the public regarding its ongoing reviews of concrete degradation at the Seabrook nuclear power plant. Seabrook is a single pressurized-water reactor located in the State of New Hampshire and operated by NextEra Energy Seabrook, LLC. Seabrook's concrete degradation is caused by alkali silica reaction. This chemically combines reactive silica from the concrete aggregate with the alkali from the cement paste in the presence of moisture. (Aggregates are inert

granular materials, such as sand, gravel or crushed stone that, along with water and cement paste, are an essential ingredient in concrete.) This reaction forms a gel, which can expand and may cause micro-cracks in the concrete. While the extent of the problem at Seabrook is still being evaluated, the NRC has determined that the structures identified to be affected by the degradation are able to continue to perform their safety function. NRC has established a page on the agency's website to consolidate information on concrete degradation at the Seabrook plant. Among the items on the web page are correspondence to and from the NRC regarding the issue, slides from a 2012 public meeting on the topic and graphics illustrating the condition. Information on the issue will be added to the page as it becomes available. *The page's address is: <http://www.nrc.gov/info-finder/reactor/seabrook/concrete-degradation.html>.*

### **State of New York**

**Indian Point Nuclear Power Plant** On December 10, an evidentiary hearing on technical and environmental challenges to the pending Indian Point nuclear power plant license renewal application resumed in Tarrytown, New York. The application was submitted by Entergy Nuclear Operations Inc., the owner and operator of the plant, which is located in Buchanan (Westchester County), New York. Three judges of the Atomic Safety and Licensing Board Panel (ASLBP), the independent judicial arm of the NRC, are conducting the evidentiary hearing, which involves technical and environmental challenges to the application. The issues under review have been raised by three intervenors: the State of New York and two public interest organizations (Hudson River Sloop Clearwater Inc. and Riverkeeper Inc.). In addition to these intervenors, several governmental bodies have been granted status as interested governmental entities in the proceeding. The Licensing Board from the ASLBP began hearing testimony on the contentions on October 15. The board heard additional testimony from December 10 to 14.

Entergy submitted its application for a 20-year extension of the Indian Point operating license on April 30, 2007. The initial 40-year operating licenses for Indian Point Units 2 and 3 are due to expire on September 28, 2013, and December 12, 2015, respectively. However, those initial licenses will remain in effect until the Commission has issued a final ruling on the renewal application. The following is a brief summary of each of the issues that were addressed at this hearing:

1. Contention NYS-5: Challenges Entergy's inspection and monitoring for corrosion or leaks in all buried systems, structures and components that convey or contain radioactive fluids.
2. Contention NYS-6/7: Challenges Entergy's Aging Management Program for non-environmentally qualified, inaccessible medium-voltage cables and wiring.
3. Contention NYS-8: Challenges Entergy's omission of an Aging Management Program for safety-related electrical transformers.

### ***International / Fukushima***

## **Meeting Held re Post-Fukushima Regulatory Framework**

On November 8, 2012, U.S. Nuclear Regulatory Commission staff met with members of the public and other interested parties to discuss the staff's progress in considering a revised regulatory framework—one of the broadest recommendations of the NRC's Japan Near-Term Task Force. The task force was established to examine issues raised by the 2011 Fukushima nuclear accident.

### **Meeting and Issues**

The meeting was held from 1:00 - 4:15 p.m. at the agency's headquarters in Rockville, Maryland. NRC staff explained their latest thinking regarding the task force's Recommendation 1—which calls for “establishing a logical, systematic, and coherent regulatory framework for adequate protection that appropriately balances defense-in-depth and risk considerations.” The agency's five Commissioners directed the staff to provide, by February 2013, options on how to address Recommendation 1.

The meeting will also address aspects of a risk-informed regulatory framework proposed earlier this year by a separate task force led by Commissioner George Apostolakis. The public was provided an opportunity to ask the NRC staff questions about these efforts during the meeting, which included a teleconference and webinar.

### **Background**

The NRC continues to evaluate and act on the lessons learned from Fukushima to ensure U.S. nuclear power plants implement appropriate safety enhancements. Following direction from

the agency's five Commissioners, the NRC's activities are being led by a steering committee comprised of senior NRC management. The agency has also established the Japan Lessons-Learned Project Directorate, a group of more than 20 full-time employees focused exclusively on implementing the task force's recommendations

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### ***International***

## **International Regulators Conference Held re Nuclear Security Issues**

***December 4-6, 2012 in Rockville, Maryland***

From December 4-6, 2012, the U.S. Nuclear Regulatory Commission hosted the International Regulators Conference on Nuclear Security in Rockville, Maryland. During the conference—which was a direct result of the 2012 Nuclear Security Summit in Seoul, South Korea—the NRC welcomed the international community to join the discussion on global nuclear security while solidifying relationships among regulatory agencies worldwide.

### **Keynote speakers included**

- ◆ Yukiya Amano, Director General of the International Atomic Energy Agency;
- ◆ John O. Brennan, Assistant to President Obama for Homeland Security and Counterterrorism;
- ◆ Ambassador Glyn T. Davies, U.S. Special Representative for North Korea policy; and,
- ◆ Mark Weatherford, Deputy Undersecretary for Cyber Security at the U.S. Department of Homeland Security.

## Federal Agencies and Committees *continued*

The conference was held at the Hilton Washington DC/Rockville Hotel & Executive Meeting Center which is located at 1750 Rockville Pike in Rockville, Maryland.

*Interested individuals can find additional information online at:*  
[www.nrcsecurityconference.org](http://www.nrcsecurityconference.org).

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### **Atomic Safety and Licensing Board (ASLB)**

## **ASLB Holds Hearings re Prairie Island and Davis-Besse**

On November 8 - 9, 2012, the Atomic Safety and Licensing Board (ASLB) held a pre-hearing conference to hear arguments on the Prairie Island Indian Community's standing and admissibility of their contentions challenging the license renewal application for the Independent Spent Fuel Storage Installation (ISFSI) at the Prairie Island Nuclear Generating Plant. The plant—which is operated by Northern States Power Company—is located in Red Wing, Minnesota.

A few days earlier, on November 5 – 6, 2012, the ASLB heard oral arguments on a new contention in the Davis-Besse nuclear plant relicensing hearing. The contention alleges that cracks in the plant's shield building should be considered "an aging-related feature" that would preclude renewing the plant's operating license for an additional 20 years.

The ASLB is a quasi-judicial panel of judges independent of the NRC staff that conducts adjudicatory hearings in major licensing actions by the NRC.

### **Prairie Island Pre-Hearing Conference**

The pre-hearing conference on the Prairie Island plant was held in the Devitt Courtroom of the Warren E. Burger Federal Building & United States Courthouse at 316 North Robert Street in St. Paul, Minnesota. Proceedings began at 9:00 a.m. each day and conclude no later than 5:00 p.m.

The Prairie Island Indian Community petitioned for a hearing, filing seven contentions challenging the Prairie Island ISFSI renewal application that Northern States Power Co. submitted on October 20, 2011.

At the prehearing conference, only attorneys representing the petitioner, the utility and the NRC staff were allowed to participate. Members of the public were allowed to view the proceeding.

### **Davis-Besse Hearing**

The Davis-Besse contention was filed in January 2012 by the following four intervenors in the hearing: Beyond Nuclear, Citizens Environment Alliance of Southwestern Ontario, Don't Waste Michigan, and the Green Party of Ohio. The November 2012 oral arguments considered whether the Board should admit the contention. The oral arguments were originally scheduled for May 18 but were postponed at the request of the intervenors.

During the November 2012 hearing, the Board also considered a motion by FirstEnergy, the plant's operator, to dismiss a separate contention challenging inputs to the operator's Severe Accident Mitigation Alternatives analysis.

The oral arguments were held in the Common Pleas Courtroom of the Lucas County Courthouse at 700 Adams Street in Toledo, Ohio. Arguments started at 9:00 a.m. and continued to 4:30 p.m. on November 5, resuming on November 6 as necessary. Additional information about the

## Federal Agencies and Committees *continued*

issues to be discussed and the format of the oral argument can be found in a Board Order issued on September 20, 2012.

Only lawyers for the intervenors, the NRC staff and FirstEnergy were allowed to participate in the hearing. The public and media were allowed to attend and observe.

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### ***National Academy of Sciences/U.S. Nuclear Regulatory Commission***

## **NRC Sponsoring NAS Effort to Conduct Pilot of Cancer Risk Study**

By press release dated October 23, 2012, the U.S. Nuclear Regulatory Commission announced that agency staff is implementing a National Academy of Sciences committee's recommendations to perform a pilot study of cancer risk in populations around six U.S. nuclear power plant sites and a nuclear fuel facility. The NRC is asking the Academy to carry out this effort, which will help the agency determine whether to extend the study to the remaining U.S. reactor and certain fuel cycle sites.

The pilot effort, described in the staff's update (SECY-12-0136) to the agency's five Commissioners, will examine each of the seven sites with two types of epidemiological studies. The first will examine multiple cancer types in populations living near the facilities; the second will be a case-control study of cancers in children born near the facilities.

The six reactor sites are:

- ◆ Dresden Nuclear Power Station in Morris, Illinois;
- ◆ Millstone Power Station in Waterford, Connecticut;
- ◆ Oyster Creek Nuclear Generating Station in Forked River, New Jersey;
- ◆ Haddam Neck (decommissioned) in Haddam Neck, Connecticut;
- ◆ Big Rock Point Nuclear Power Plant (decommissioned) in Charlevoix, Michigan; and,
- ◆ San Onofre Nuclear Generating Station in San Clemente, California.

The Dresden, Millstone and San Onofre sites include both operating reactors and a decommissioned reactor. The pilot effort will also study Nuclear Fuel Services in Erwin, Tennessee. The Academy recommended these sites because they provide a good sampling of facilities with different operating histories, population sizes, and levels of complexity in data retrieval from the relevant state cancer registries.

The NRC will work with the Academy to begin the pilot study process in the next three months. The NRC staff expects the effort will continue at least into 2014 and cost approximately \$2 million. The Academy will work with interested parties near the sites prior to gathering information and beginning the necessary analyses.

The overall aim of the NRC and Academy efforts is to provide a modern version of the 1990 U.S. National Institutes of Health – National Cancer Institute (NCI) report, "Cancer in Populations Living Near Nuclear Facilities." The NRC has used the 1990 NCI report as a primary resource when communicating with the public about cancer mortality risk in counties that contain or are adjacent to certain nuclear power facilities.

## Federal Agencies and Committees *continued*

In Phase 1 of the study, the Academy developed proposed methods for examining the most up-to-date cancer information in populations living near NRC-licensed nuclear facilities. The pilot studies will determine the feasibility of using these methods on the balance of the remaining operating nuclear power facilities and certain fuel cycle facilities in phase 2 of the project.

(Continued from page 1)

rule language. The NRC is not requesting comments on the regulatory basis document.

### Summary

The U.S. Nuclear Regulatory Commission (NRC) is proposing to amend its regulations that govern low-level radioactive waste disposal facilities to require new and revised site-specific analyses and to permit the development of criteria for waste acceptance based on the results of these analyses. These amendments will ensure that waste streams that are significantly different in terms of radiological characteristics (e.g., half-life) from those considered in the technical basis for the current regulations can be disposed of safely and meet the performance objectives for land disposal of low-level radioactive waste. These amendments will also increase the use of site-specific information to ensure that public health and safety would continue to be protected.

The NRC is publishing a second version of preliminary rule language and has revised the regulatory basis document that will support this rulemaking. NRC is taking this action to inform interested stakeholders of the current status of the NRC's activities and to solicit public comments on the preliminary rule language. The regulatory

basis document is being made available to inform stakeholder comments on the preliminary rule language. The NRC is not requesting comments on the regulatory basis.

### Discussion

The NRC is proposing to amend its regulations, in part 61 Title 10 of the *Code of Federal Regulations* (10 CFR), "Licensing Requirements for Land Disposal of Radioactive Waste," to require new and revised site-specific analyses and to permit the development of criteria for waste acceptance based on the results of these analyses. These amendments will ensure that waste streams that are significantly different in terms of radiological characteristics (e.g., half-life) from those considered in the technical basis for the current regulations can be disposed of safely and meet the performance objectives. These amendments will also increase the use of site-specific information to ensure that public health and safety would continue to be protected.

These changes would

- ◆ revise the existing site-specific analysis for protection of the general population to include a 10,000- year compliance period (i.e., performance assessment);
- ◆ add a new site-specific analysis for the protection of inadvertent intruders that would include a 10,000-year compliance period and a dose limit (i.e., intruder assessment);
- ◆ add a new long-term analysis for certain long-lived wastes that would include a post-10,000-year performance period; and,
- ◆ revise the pre-closure analysis to include updates to the performance assessment, intruder assessment, and long-term analyses.



## Federal Agencies and Committees *continued*

The NRC would also be adding a new requirement to develop criteria for the acceptance of waste for disposal based on either the results of these analyses or the existing waste classification requirements. While the existing regulatory requirements are adequate to protect public health and safety, these amendments would enhance the safe disposal of low-level radioactive waste. The NRC is also proposing additional changes to the regulations for disposal licensees to reduce ambiguity, facilitate implementation, and better align the requirements with current health and safety standards. This rule would affect low-level radioactive waste disposal facilities that are regulated by the NRC or the Agreement States.

In May, 2011, NRC published preliminary rule language (76 *Federal Register* 24831) and the associated regulatory basis document for public comment. Since then, the NRC staff received additional directions from the Commission in a Staff Requirements Memorandum to COMWDM-11-0002/COMGEA-11-0002 (ADAMS accession number ML120190360). The Commission directed staff to expand the limited-scope revision regarding site-specific analyses to bring a clearer, risk-informed approach to Part 61. Based on the Commission's direction, the NRC staff revised the regulatory basis document associated with this rulemaking and developed a second (November 2012) version of the preliminary rule language.

The NRC is inviting stakeholders to comment on the November 2012 preliminary rule language. The NRC is publishing the November 2012 preliminary rule language and its associated regulatory basis to provide increased awareness to interested stakeholders, inform stakeholders of the current status of the NRC's activities, and solicit public comments on the November 2012 preliminary rule language. The November 2012 preliminary rule language and its associated

regulatory basis document supersede the May 2011 versions.

The NRC will review and consider any comments on the November 2012 preliminary rule language received by January 7, 2013. Comments received after this date will be considered if it is practical to do so, but the NRC is able to assure consideration only for comments received on or before this date. Stakeholders will have additional opportunity to comment on the proposed rule when it is published in accordance with the provisions of the Administrative Procedures Act. The NRC will respond to all stakeholder comments in the Statements of Consideration for the final rule.

The NRC may post updates to the preliminary rule language on the Federal rulemaking Web site under Docket ID NRC-2011-0012. The *Regulations.gov* Web site allows members of the public to set-up email alerts so that they may be notified when documents are added to a docket. Users are notified via email at an email address provided at the time of registration for the notification. Directions for signing up for the email alerts can be found at <http://www.regulations.gov>. To do so, navigate to a docket folder you are interested in and then click the "Sign up for Email Alerts" link.

### Accessing Information

Please refer to Docket ID NRC-2011-0012 when contacting the NRC about the availability of information for the preliminary rulemaking document. Interested parties may access information related to this document, which the NRC possesses and are publicly available, by any of the following methods:

## Federal Agencies and Committees *continued*

- ♦ *Federal Rulemaking Web site:* Go to <http://www.regulations.gov> and search for Docket ID NRC-2011-0012.
- ♦ *NRC's Public Document Room (PDR):* Stakeholders may examine and purchase copies of public documents at the NRC's PDR, Room O1-F21, One White Flint North, 11555 Rockville Pike, Rockville, Maryland 20852.
- ♦ *NRC's Agencywide Documents Access and Management System (ADAMS):* Stakeholders may access publicly available documents online in the NRC Library at <http://www.nrc.gov/readingrm/adams.html>. To begin the search, select "ADAMS Public Documents" and then select "Begin Web-based ADAMS Search." For problems with ADAMS, please contact the NRC's Public Document Room (PDR) reference staff at (800) 397-4209, (301) 415-4737, or by email to [pdr.resource@nrc.gov](mailto:pdr.resource@nrc.gov). The ADAMS accession number for each document referenced in this notice is provided the first time that a document is referenced. The November 2012 preliminary rule language is available electronically under ADAMS Accession Number ML12311A444. The regulatory basis document that supports this rulemaking is available under ADAMS accession number ML12306A480.

### Submitting Comments

Comments on the November 2012 preliminary rule language should be submitted no later than January 7, 2013. Comments received after this date will be considered if it is practical to do so, but the NRC is able to assure consideration only for comments received on or before this date.

Stakeholders may access information and comment submissions related to the November

2012 preliminary rule language, which the NRC possesses and are publicly available, by searching on <http://www.regulations.gov> under Docket ID NRC-2011-0012.

Stakeholders may submit comments by any of the following methods:

- ♦ *Federal Rulemaking Web site:* Go to <http://www.regulations.gov> and search for documents filed under Docket ID NRC-2011-0012. Address questions about NRC dockets to Carol Gallagher at (301) 492-3668 or [Carol.Gallagher@nrc.gov](mailto:Carol.Gallagher@nrc.gov).
- ♦ *Mail comments to:* Secretary, U.S. Nuclear Regulatory Commission, Washington, DC 20555-0001, ATTN: Rulemakings and Adjudications Staff.
- ♦ *E-mail comments to:* [Rulemaking.Comments@nrc.gov](mailto:Rulemaking.Comments@nrc.gov). If you do not receive a reply e-mail confirming that NRC has received your comments, contact the agency directly at (301) 415-1677.
- ♦ *Fax comments to:* Secretary, U.S. Nuclear Regulatory Commission at (301) 415-1101.

Please include Docket ID NRC-2011-0012 in the subject line of your comment submission, in order to ensure that the NRC is able to make your comment submission available to the public in this docket.

The NRC cautions stakeholders not to include identifying or contact information that you do not want to be publicly disclosed in your comment submission. The NRC will post all comment submissions at <http://www.regulations.gov> as well as enter the comment submissions into ADAMS.

### Background

In May, 2011, the NRC published preliminary rule language (76 *Federal Register* 24831) and the associated regulatory basis document for public comment. Since then, the NRC staff received additional directions from the Commission in a Staff Requirements Memorandum to COMWDM-11-0002/ COMGEA-11-0002 (ADAMS accession number ML120190360). The Commission directed staff to expand the limited-scope revision regarding site-specific analyses to bring a clearer, risk-informed approach to Part 61. Based on the Commission's direction, the NRC staff revised the regulatory basis document associated with this rulemaking and developed a second (November 2012) version of the preliminary rule language. The November 2012 preliminary rule language and its associated regulatory basis document supersede the May 2011 versions.

## NRC Releases Revised Part 61 Regulatory Analysis

On November 29, 2012, the U.S. Nuclear Regulatory Commission issued its "Regulatory Analysis for Proposed Revisions to Low-Level Waste Disposal Requirements (10 CFR Part 61)."

The document—which is intended to help commenters understand the rule language in its proper context—is now publicly available on the agency's web site at [www.nrc.gov](http://www.nrc.gov) using ML12306A480.

In early December 2012, a *Federal Register* notice was issued with the Regulatory Analysis

and the proposed Draft Rule Language. (See related story, this issue.)

### Background

*The following background information is taken directly from the "Regulatory Analysis for Proposed Revisions to Low-Level Waste Disposal Requirements (10 CFR Part 61)," dated November 29, 2012. Persons interested in additional information are directed to the full document.*

The Commission first published its licensing requirements for the disposal of commercial low-level radioactive waste in near-surface disposal facilities under Title 10 of the *Code of Federal Regulations* Part 61, "Licensing Requirements for Land Disposal of Radioactive Waste," in 1982 in the *Federal Register* (47 *Federal Register* 57446). In a 2009 staff requirements memorandum (SRM), SECY-08-0147, "Response to Commission Order CLI-05-20 Regarding Depleted Uranium," the Commission directed the staff to proceed with a limited rulemaking to 10 CFR Part 61 to specify an explicit requirement for a site-specific analysis or performance assessment for the disposal of depleted uranium (DU) and other long-lived isotopes in a near-surface disposal facility. The SRM also provided the technical requirements for such an analysis. Previously, such a performance assessment requirement did not explicitly exist in 10 CFR Part 61, but regulators still expected applicants and licensees to use such methods to demonstrate compliance with those regulations, as noted by the Commission in its "1995 Probabilistic Risk Assessment Policy Statement" (60 *Federal Register* 42627). In a second SRM (SRM-SECY-10-0043) dated April 7, 2010, "Blending of Low-Level Radioactive Waste," the Commission directed the staff to include blended LLW streams as part of this rulemaking initiative.

## Federal Agencies and Committees *continued*

Following the 2009 solicitation of public input on a low-level radioactive waste performance assessment (74 *Federal Register* 30175), NRC staff developed a technical basis (now called a “regulatory analysis”) document to support the rulemaking amendment (Agencywide Documents Access and Management System “ADAMS” Accession No. ML111040419). The agency shared the document with the NRC Agreement States, and proceeded to develop proposed rulemaking language. Following completion of draft preliminary rulemaking language (ML111150205), the NRC staff made the proposal publicly available in May 2011, and solicited stakeholder feedback (76 *Federal Register* 24831).

In connection with the proposed new performance assessment requirement itself, the staff also recommended the duration of the requisite analysis – or the time of compliance (TOC) – be specified at 20,000 years to account for the presence of large quantities of long-lived isotopes, such as DU, that might be disposed of in a near-surface disposal facility. In August 2011, the staff briefed the Advisory Committee on Reactor Safeguards (ACRS) on the preliminary proposed rulemaking language and the basis for the staff-preferred TOC, for which a Committee Letter Report was issued in September 2011 (ML11256A191).

In draft proposed rulemaking language made available in 2011, the staff recommended that licensees for currently operating low-level radioactive waste disposal facilities and future 10 CFR Part 61 applicants conduct site-specific performance assessments to demonstrate compliance with the regulatory requirement found in 10 CFR 61.41, “Protection of the General Population from Release of Radioactivity,” to protect the general public from radiation doses. The analyses would be used to identify if

additional restrictions or prohibitions concerning the disposal of certain low-level radioactive waste streams, such as DU, at a particular site, would be necessary. The NRC intends to incorporate specific parameters and assumptions for conducting requisite analyses into a separate guidance document that would be issued for public comment before the NRC finalizes the rulemaking amendments. With respect to DU and other low-level radioactive waste streams with long-lived isotopes, the specific technical requirements associated with disposal of such wastes would be developed through the rulemaking process.

In a third SRM, designated COMWDM-11-0002/COMGEA-11-0002, the Commission directed staff to seek stakeholder feedback on the following four potential revisions:

- (1) Whether licensees should be allowed to use International Commission on Radiation Protection (ICRP) dose methodologies in a site-specific performance assessment for the disposal of all low-level radioactive waste.
- (2) Whether the regulations should incorporate a two-tiered approach that establishes a compliance period that covers the reasonably foreseeable future and a longer period of performance that is not *a priori* and is established to evaluate the performance of the site over longer timeframes. The period of performance is developed based on the candidate site characteristics (waste package, waste form, disposal technology, cover technology and geo-hydrology) and the peak dose to a designated receptor.
- (3) Whether disposal facilities should be allowed to establish site-specific waste

acceptance criteria (WAC) based on the results of the site's performance assessment and intruder assessment.

(4) Whether the provisions of the revised proposed rule that require the site-specific performance assessments and the development of the site-specific WAC, should specify a compatibility category that ensures alignment between the States and Federal Government on safety fundamentals, while providing the States with the flexibility to determine how to implement these safety requirements.

The Commission directed staff to provide an expanded proposed rule to the Commission within 18 months to address the aforementioned revisions, as well as the staff's analysis of the issues and stakeholder feedback, including the pros and cons of the potential revisions. The current schedule for the submittal of the expanded proposed rule to the Executive Director for Operations is July 2013.

Consistent with the Commission's public outreach directive, the staff has sponsored public meetings dedicated to seeking stakeholder input on the Commission's proposal to risk-inform the 10 CFR Part 61 rulemaking, directly engaged NRC Agreement State representatives, and participated in certain other previously scheduled public events and professional meetings.

## NRC Publishes BTP on Import of Non-U.S. Origin Radioactive Sources

On October 22, 2012, the U.S. Nuclear Regulatory Commission published for public comment its proposed Branch Technical Position on the Import of Non-U.S. Origin Radioactive Sources.

Comments on the proposed rule—which was published at 77 *Federal Register* 64,437—were due by December 21, 2012. Comments received after this date will be considered if it is practical to do so. NRC plans to consider these stakeholder views in the development of a final Branch Technical Position (BTP).

*The proposed BTP is included in the Supplementary Section of the Federal Register notice and is also available in NRC's Agencywide Documents Access and Management System (ADAMS) under ML12278A170.*

### Summary

In 2010, the NRC published a final rule amending its regulations concerning export and import of nuclear equipment and material. Among other things, NRC added the phrase “of U.S. origin” to the first exclusion to the definition of “radioactive waste.” The phrase was added to the final rule in response to a public comment on the proposed rule to clarify the exclusion.

Since publication of the final rule, NRC staff has been engaged with industry in response to concerns raised regarding established industry practices and the need for guidance on implementation of the “U.S. origin” exclusion.

## Federal Agencies and Committees *continued*

### Branch Technical Position

*The following information is taken directly from the Federal Register notice issued on October 22, 2012. Persons interested in additional information should contact NRC directly.*

**Introduction** The NRC's regulations in 10 CFR Part 110, "Export and Import of Nuclear Equipment and Material," establishes the general and specific export and import licensing requirements for special nuclear, source, and byproduct material including radioactive waste. "Radioactive waste" is defined in 10 CFR 110.2 as "[a]ny material that contains or is contaminated with source, byproduct or special nuclear material that by its possession would require a specific radioactive material license in accordance with this Chapter [10 CFR Chapter I] and is imported or exported for the purposes of disposal in a land disposal facility as defined in 10 CFR Part 61, a disposal area as defined in Appendix A of 10 CFR Part 40, or an equivalent facility."

There are six exclusions in 10 CFR 110.2 to the definition of "radioactive waste." The sealed source exclusion (exclusion one) is defined as radioactive material that is "[o]f U.S. origin and contained in a sealed source, or device containing a sealed source, that is being returned to a manufacturer, distributor or other entity which is authorized to receive and possess the sealed source or the device containing a sealed source." Disused sources that satisfy an exclusion to the definition of "radioactive waste" may be imported under the general license in 10 CFR 110.27, which requires that the U.S. consignee be authorized to receive and possess the material under the relevant NRC or Agreement State regulations and that the importer satisfy the terms for the general license set forth in 10 CFR 110.50.

The NRC has developed this technical position to provide guidance to source manufacturers, distributors, or other entities on the NRC's application of the sealed source exclusion to imports into the U.S. of non-U.S. origin disused sources.

**Background** On July 28, 2010, the NRC published a final rule at 75 *Federal Register* 44,072 that amended several provisions in 10 CFR part 110 to improve NRC's regulatory framework for the export and import of nuclear equipment, material, and radioactive waste. The sealed source exclusion to the definition of "radioactive waste" was revised, in response to a comment, to confirm that the exclusion only applies to sources of "U.S. origin" being returned to an authorized domestic licensee. The addition of the term "U.S. origin" to the sealed source exclusion was consistent with the original intent of the exclusion, initially adopted in a 1995 rule.

In accordance with International Atomic Energy Agency (IAEA) Code of Conduct on the Safety and Security of Radioactive Sources and the IAEA supplemental Guidance on the Import and Export of Radioactive Sources, the NRC believed that encouraging return of disused sources to the country of origin would help prevent sources from becoming "orphaned" by facilitating responsible handling of sources at the end of their life cycle. (See "Import and Export of Radioactive Waste," 57 *Federal Register* 17859 dated July 21, 1992.) This proposed rule states, "the return of used or depleted sealed sources, gauges, and similar items to the U.S. or to another original exporting country for reconditioning, recycling or disposal may ... help ensure that such materials are handled responsibly and not left in dispersed and perhaps unregulated locations around the world".

## Federal Agencies and Committees *continued*

The NRC's willingness to embrace this policy was in large part informed by U.S. industry comments that there is a "widely accepted practice, usually rooted in a sales or leasing contract or other agreement, of returning depleted sealed radioactive sources, used gauges, and other instruments containing radioactive materials ... to the original supplier-manufacturer for recycle or disposal." (See 57 *Federal Register* 17864.)

Accordingly, central to the sealed source exclusion was the NRC's understanding, based on U.S. industry representations, that new and disused sources are routinely exchanged on a "one-for-one" basis—i.e., a new source is exchanged for a disused source—with the result that the number of disused sources imported is not greater than the number of new sources exported.

After the addition of "U.S. origin" to the sealed source exclusion in the 2010 rule, it came to the staff's attention that, while it remains a widespread industry practice to exchange new and disused sources on a "one-for-one" basis, in light of the current global supply market it is not always possible for a supplier to definitively ascertain the origin of a particular disused source that is exchanged for a new one before import and receipt of the disused source. With established customers, the disused sources will generally be of U.S. origin; however, for new customers, some of the sources initially being returned may not be of U.S. origin.

Once a source is imported and received, the manufacturer, distributor, or other entity technically has the ability to determine the source's origin. However, the only way for the supplier to accomplish this is by exposing its personnel to additional radiation doses. Specifically, the supplier must use a glove-box to take the source out of its casing to read the serial

numbers and correlate those numbers to different manufacturer's coding patterns.

**Regulatory Position** The NRC has construed the "U.S. origin" provision in the context of the industry's recent clarification of international source exchange practices. The NRC recognizes that in some circumstances it may not be feasible for the importer to determine the country of origin for disused sources it seeks to exchange prior to import. If, after a good faith effort, the U.S. manufacturer, distributor, or other entity cannot determine whether an imported disused source that has been exchanged for a new source is of U.S. origin without exposing personnel to additional doses, the source in question shall be deemed to be of U.S. origin for the purposes of the sealed source exclusion to the definition of "radioactive waste" in 10 CFR 110.2. This application of the sealed source exclusion is limited to disused sources imported into the United States that have been exchanged a new source in a foreign country on a "one-for-one" basis. Accordingly, it is the NRC's expectation that the number of disused sources imported by the manufacturer or distributor into the United States must not be greater than the number of new or refurbished sources exported by that manufacturer or distributor.

The NRC believes that this application of the sealed source exclusion reasonably balances the interests of public health and safety and international policy interests in responsible handling of sources at the end of their useful life. The approach preserves the fundamental policy rationale underlying the original exclusion—to prevent sources from being dispersed in unregulated locations around the world by facilitating a "one for one" exchange of U.S.-supplied new and disused sources—while achieving occupational doses to workers that are as low as reasonably achievable, as specified in 10 CFR 20.1101(b).

## Federal Agencies and Committees *continued*

The NRC expects U.S. manufacturers, distributors, and suppliers to inform their customers about U.S. import licensing requirements for disused sources. It is recommended that U.S. importers retain copies of their communications with their foreign customers regarding U.S. import requirements. The U.S. importer at all times must comply with the specific license requirement for disused sources known to be of non-U.S. origin prior to import into the United States. A good faith effort by the importer may include communication of U.S. import requirements with its foreign customers, examination of a photograph of the source the customer seeks to exchange, and other relevant information related to the disused sources' origin.

Consistent with 10 CFR 110.53, the NRC may inspect the licensee's records, premises and activities pertaining to its exports and imports to ensure compliance with the sealed source exclusion to the definition of "radioactive waste" by trying to determine source origin (from user paperwork and communication) before an import occurs.

NRC plans to distribute this position to all Agreement States and material licensees. Additionally, the NRC has coordinated this position with the U.S. Department of Energy's National Nuclear Security Administration/Global Threat Reduction Initiative (NNSA/GTRI). One of GTRI's programs repatriates sources from around the world that are in unsafe or insecure locations. The NRC does not have import licensing jurisdiction when U.S. companies import disused sources on behalf of NNSA's GTRI program. Therefore, the licensing requirements in Part 110 would not apply to such imports.

**Implementation** This technical position reflects the current NRC staff position on acceptable use

of the general license for import of disused radioactive sources. Therefore, except in those cases in which the source manufacturer or distributor proposes an acceptable alternative method for complying with the definition of "radioactive waste" in Section 110.2, the guidance described herein will be used in the evaluation of the use of the general import license for disused sources.

### Submitting Comments

Comments on the proposed rule—which was published at 77 *Federal Register* 64,437—were due by December 21, 2012. Comments received after this date will be considered if it is practical to do so. NRC plans to consider these stakeholder views in the development of a final BTP.

The NRC will post all comment submissions at <http://www.regulations.gov> as well as enter the comment submissions into ADAMS.

### Background

As a result of 77 *Federal Register* 2,924, "Notice of Public Meeting and Request for Comment on the Branch Technical Position on the Import of Non-U.S. Origin Radioactive Sources," published January 20, 2012, five comment letters were received for consideration by the NRC. At that time, the BTP was a working draft document with the intent of using feedback to enhance the document for publication of the revised proposed BTP for formal public comment.

Of the comments made on the original draft BTP, most were comments on the existing rule rather than in the guidance that the BTP provides. The NRC response to these informal comments can be found on the agency's web site using accession number ML1255A106. Most of the comments did not oppose the underlying policy rationale and justification for the BTP's proposal to construe



“non-U.S. origin” disused sources as “U.S. origin” for the purpose of the first exclusion to the definition of “radioactive waste” under certain circumstances. Instead, the comments appear to request NRC to revise or clarify the existing exclusions.

Therefore, NRC did not consider these comments to be within the scope of the BTP. As a result of these comments, there are no substantive changes to the draft BTP. However, minor editorial changes were made to the draft BTP to provide greater clarity.

This proposed BTP does not change the regulations in 10 CFR Part 110, but rather clarifies what is meant by “U.S. origin” and details how the NRC interprets this exclusion to the definition of “radioactive waste.”

*Additional information and comment submissions related to this document may be accessed by searching on <http://www.regulations.gov> under Docket ID NRC-2012-0008.*

*For additional information, please contact Jennifer Tobin Wollenweber of the Office of International Programs at the U.S. Nuclear Regulatory Commission at (301) 415-2328 or at [Jennifer.Tobin@nrc.gov](mailto:Jennifer.Tobin@nrc.gov).*

## NRC Returning to Normal Coverage Following Hurricane Sandy

On October 30, 2012, the U.S. Nuclear Regulatory Commission issued a press release announcing that the agency was beginning to return to normal inspection coverage for nuclear power plants in the Northeastern United States in the path of Hurricane Sandy. Heightened coverage continued for a while thereafter at Oyster Creek—a plant in Lacey Township, New Jersey—that remained in an “Alert” due to high water levels in its water intake structure.

In addition to the event at Oyster Creek, three reactors experienced trips, or shutdowns, during the storm including Nine Mile Point 1 in Scriba, New York; Indian Point 3 in Buchanan, New York; and, Salem Unit 1 in Hancocks Bridge, New Jersey. All safety systems responded as designed.

At Oyster Creek, the Alert—the second lowest of four levels of emergency classification used by the NRC—remained in effect as plant operators waited for the water intake levels to drop to pre-designated thresholds. The water level rose due to a combination of a rising tide, wind direction and storm surge. Oyster Creek was shut down for a refueling and maintenance outage prior to the storm and the reactor remains out of service. Water levels began to subside to more normal levels after the storm, but the plant remained in an Alert status until there was enough confidence levels would remain at more normal levels. Offsite power at the plant was restored following the storm.

Meanwhile, three plants—Millstone 3 in Connecticut, Vermont Yankee in Vermont, and

Limerick in Pennsylvania—reduced power in advance of or in response to the storm. Millstone 3's power was reduced to about 70 percent in advance of the storm to minimize potential impacts on its circulating water system due to the storm. Vermont Yankee reduced power to 89 percent in response to a request from the grid operator due to the loss of a transmission line in New Hampshire. Limerick Unit 1's power was reduced to about 50 percent and Limerick Unit 2's to about 25 percent in response to low electrical demands on the grid because of storm-related power outages.

Besides potentially affected nuclear power plants, the NRC also monitored any possible impacts on nuclear materials sites it oversees but did not identify any concerns.

NRC inspectors were onsite at all of the nuclear power plants expected to experience the greatest effects of the storm. Those inspectors were tasked with independently verifying that operators were following relevant procedures to ensure plant safety before, during and after the storm.

The NRC coordinated with other federal and state agencies prior to the restart of the affected plants.

impact statement (EIS) to support the rulemaking to update the Commission's Waste Confidence Decision and Rule.

As part of the scoping process, NRC held two webcast public meetings on November 14, 2012, as well as two webinars on December 5 and 6, 2012. Meeting notices were posted on the NRC's public meeting website at <http://www.nrc.gov/public-involve/public-meetings/index.cfm> approximately two weeks before each meeting date. The meeting notices contained additional information—including agendas, teleconference phone line details, and information on how to access and participate in the webinars. This information was also provided on the NRC's Waste Confidence public website at <http://www.nrc.gov/waste/spent-fuel-storage/wcd.html>, which is being updated regularly with new public documents and information regarding the waste confidence EIS and rule.

*A copy of NRC's Federal Register notice on the Waste Confidence Decision and Rule can be found at <https://federalregister.gov/a/2012-26295>.*

### Background

The Waste Confidence Decision and Rule represent the Commission's generic determination that spent nuclear fuel can be stored safely and without significant environmental impacts for a period of time after the end of the licensed life of a nuclear power plant (in 1984 and 1990 the time period was 30 years after the end of the license, and in 2010 it was increased to 60 years). This generic analysis is reflected in section 51.23 of Title 10 of the *Code of Federal Regulations* (10 CFR), which is intended to satisfy the NRC's National Environmental Policy Act (NEPA) obligations

## Scoping Period Opens re Waste Confidence Decision

In late October 2012, the U.S. Nuclear Regulatory Commission published a *Federal Register* notice (77 *Federal Register* 65137) announcing a scoping period and providing additional details about upcoming public meetings and webinars plans to an environmental

## Federal Agencies and Committees *continued*

with respect to post-licensed-life storage of spent nuclear fuel. Historically, the Waste Confidence Decision has consisted of five findings and a technical basis for each finding.

The Waste Confidence Decision and Rule were first adopted in 1984. The Decision and Rule were amended in 1990, reviewed in 1999, and amended again in 2010. In response to the 2010 Decision and Rule, the States of New York, New Jersey, Connecticut, and Vermont, and several other parties challenged the Commission's NEPA analysis in the Decision, which provided the regulatory basis for the Rule. On June 8, 2012, the D.C. Circuit Court found that some aspects of the 2010 Decision did not satisfy the NRC's NEPA obligations and vacated the Decision and Rule.

In particular, the Court concluded that the Waste Confidence Rulemaking is a major Federal action necessitating either an EIS or an Environmental Assessment (EA) that results in a Finding of No Significant Impact. In vacating the 2010 decision and rule, the Court identified three specific deficiencies in the analysis:

1. Related to the Commission's conclusion that permanent disposal will be available "when necessary," the Court held that the Commission did not evaluate the environmental effects of failing to secure permanent disposal;
2. Related to the storage of spent fuel on site at nuclear plants for 60 years after the expiration of a plant's operating license, the Court concluded that the Commission failed to properly examine the risk of spent fuel pool leaks in a forward-looking fashion; and,
3. Also related to the post-licensed-life storage of spent fuel, the Court concluded that the Commission failed to properly examine the consequences of spent fuel pool fires.

Waste Confidence, though applicable only to the period after the licensed life of a reactor, is part of the basis for agency licensing decisions on new reactor licensing, reactor license renewal, and independent spent fuel storage installation licensing. The Commission has decided that no final licenses will be issued until a new Waste Confidence Decision and Rule are in effect. The NRC is now preparing a revised Decision and Rule to address the issues identified by the Court. The referenced *Federal Register* notice is the first step in that process.

In a rulemaking, the Commission must consider the effect of its actions on the environment in accordance with NEPA. Section 102(1) of NEPA requires that policies, regulations, and public laws of the United States be interpreted and administered in accordance with the policies set forth in NEPA. It is the intent of NEPA to have Federal agencies consider environmental issues in their decision-making processes. To fulfill its responsibilities under NEPA, the NRC is preparing an EIS to support the potential update to the Waste Confidence Decision and Rule.

The Commission's regulations in 10 CFR 51.26, "Requirement to publish notice of intent and conduct scoping process," contain requirements for conducting a scoping process prior to preparation of an EIS. These requirements include, among other things, preparation of a notice of intent in the *Federal Register* regarding the EIS and indication that the scoping process may include holding a public scoping meeting.

### **Scoping Process for Environmental Impact Statement**

The *Federal Register* notice states that it is intended:

## Federal Agencies and Committees *continued*

1. To inform the public that the NRC staff will be preparing an EIS as part of revising the Waste Confidence Decision and Rule; and,
2. To provide the public with an opportunity to participate in the environmental scoping process as defined in 10 CFR 51.29.

It represents the first opportunity for stakeholder participation in the Waste Confidence Decision and rule update following the June 2012 remand, and it occurs before the NRC has determined results or recommendations for the update. Additional opportunities for public participation will occur during the public comment period for the draft EIS, the revised Waste Confidence Decision, and the proposed Rule. Notices of these public participation opportunities will be published in the *Federal Register*.

NRC intends to gather the information necessary to prepare an EIS to evaluate the environmental impacts of the storage of spent nuclear fuel after cessation of reactor operations. This EIS will form the technical basis for the revision of the Waste Confidence Decision and Rule. Possible scenarios to be analyzed in the EIS include temporary spent fuel storage after cessation of reactor operation until a repository is made available in either the middle of the century or at the end of the century, and storage of spent fuel if no repository is made available by the end of the century. The affected environment may include a set of general characteristics and associated ranges to bound the environmental analysis of spent fuel storage throughout the United States. It is important to note that the environmental analysis in the EIS and the update of the Waste Confidence Decision and rule are generic activities. NRC states that “The EIS and update of the Decision and rule are therefore not the appropriate forums to consider site-specific issues or concerns.”

NRC will first conduct a scoping process for the EIS and thereafter will prepare a draft EIS and draft Waste Confidence Decision and proposed Rule for public comment. Participation in this scoping process by members of the public and local, State, Tribal, and Federal government agencies is encouraged. The scoping process for the draft EIS will be used to accomplish the following:

- a. Define the proposed action that is to be the subject of the EIS;
- b. Determine the scope of the EIS and identify the significant issues to be analyzed in depth—including potential spent fuel storage scenarios for evaluation, such as availability of a delayed permanent repository towards the end of the century;
- c. Identify and eliminate from detailed study those issues that are peripheral or that are not significant. Also note that analysis of environmental impacts for this effort would be principally intended to provide input to decision-making for updating the Waste Confidence Decision and Rule and would not involve analysis of site-specific issues;
- d. Identify any environmental assessments and other EISs that are being or will be prepared that are related to but are not part of the scope of the EIS being considered;
- e. Identify other environmental review and consultation requirements related to the proposed action;
- f. Indicate the relationship between the timing of the preparation of the environmental analyses and the Commission's tentative planning and decision-making schedule;
- g. Identify any cooperating agencies and, as appropriate, allocate assignments for preparation and schedules for completing

## Federal Agencies and Committees *continued*

the EIS to the NRC and any cooperating agencies. No cooperating agencies are involved at this time;

- h. Describe how the EIS will be prepared, including any contractor assistance to be used. The NRC will prepare a draft EIS in accordance with its regulations in 10 CFR Part 51. The NRC is obtaining contractor assistance in preparation of the EIS; and,
- i. Obtain public input on potential locations for future public meetings on the draft EIS.

The NRC invites the following entities to participate in the scoping process:

- a. Any Federal agency that has jurisdiction by law or special expertise with respect to any environmental impact involved, or that is authorized to develop and enforce relevant environmental standards;
- b. Any affected State and local government agencies, including those authorized to develop and enforce relevant environmental standards;
- c. Any affected Indian tribe; and,
- d. Any person who requests or has requested an opportunity to participate in the scoping process.

### Submitting Comments

Public comments on the scope of the Waste Confidence environmental review will be accepted through January 2, 2013.

Comments submitted in writing or in electronic form will be posted on the Federal rulemaking Web site at <http://www.regulations.gov>. Please include Docket ID NRC-2012-0246 in the subject line of your comment submission. Because comments will not be edited to remove any identifying or contact information, the NRC

cautions against including any information in submissions that is not intended to be publicly disclosed.

Comments may be submitted by any of the following methods:

- ♦ *Federal Rulemaking Web site:* Go to <http://www.regulations.gov> and search for Docket ID NRC-2012-0246. Address questions about NRC dockets to Carol Gallagher at (301) 492-3668 or [atCarol.Gallagher@nrc.gov](mailto:atCarol.Gallagher@nrc.gov).
- ♦ *Mail comments to:* Cindy Bladey, Chief, Rules, Announcements, and Directives Branch (RADB), Office of Administration, Mail Stop: TWB-05-B01M, U.S. Nuclear Regulatory Commission, Washington, DC 20555-0001.
- ♦ *Fax comments to:* RADB at (301) 492-3446.

Any interested party may submit comments on the scope of the Waste Confidence environmental review. The NRC staff is able to ensure consideration only for comments received on or before the due date. NRC states that there will be no extensions to this comment period; however, to the extent practical staff will consider comments received after January 2, 2013. Interested parties will be given additional opportunities to comment on any draft EIS and proposed rule that are prepared as part of this effort.

### Next Steps

At the conclusion of the scoping process, the NRC will prepare a summary of the determinations and conclusions reached on the scope of the environmental review, including the significant issues identified, and will make this summary publicly available. The staff will then prepare and issue for comment the draft EIS, and update to the Waste Confidence

Decision, and proposed Rule, which will be the subject of separate *Federal Register* notices and a series of public meetings at different locations throughout the country. After receipt and consideration of comments on the EIS and proposed Rule, the NRC will prepare a final EIS and rule, which will also be available to the public.

*For additional information, please contact Sarah Lopas, NEPA Communications Project Manager, Office of Nuclear Material Safety and Safeguards, NRC, at (301) 415-3425 or at Sarah.Lopas@nrc.gov.*

### Solar Flare Issues Raised in Rulemaking Petition to be Examined

On December 18, 2012, the U.S. Nuclear Regulatory Commission announced that the agency has determined its rulemaking process can appropriately consider a petition on maintaining the safety of used nuclear fuel at U.S. reactors if an extreme solar flare disables the electrical grid.

The petition, filed by Thomas Popik on March 14, 2011, suggests a massive solar flare could potentially disable large portions of the U.S. electrical grid for an extended period of time. The petition further suggests that nuclear power plants would then run out of fuel to power the emergency systems that maintain pools of water where used nuclear fuel is kept safe. Popik's petition asked the NRC to amend its regulations so that U.S. reactors would have backup spent fuel pool systems capable of operating automatically for two years without fuel resupply.

The NRC posted the petition online and took comments through early summer 2011. The staff has examined the comments and available information to analyze Popik's assumptions and proposed solution. The staff's analysis took into account how several agencies have an impact on both the electrical grid and responding to natural disasters. The analysis also considered existing research into solar flare effects on the grid, as well as into protecting transformers and other critical grid infrastructure, along with ongoing NRC efforts to implement lessons learned from the Fukushima nuclear accident.

The staff's analysis concludes the NRC rulemaking process can appropriately handle further examination of the issues in Popik's petition. The first step will be monitoring the progress of several Fukushima-related activities designed to enhance plants' abilities to keep spent fuel pools safe. If the staff concludes these activities fall short of resolving the petition's concerns, the agency will work to develop a technical basis for the petition's suggested rule change. If such a basis cannot be established, the NRC will update the public on why the petition's suggestions were not adopted.

## Obtaining Publications

### To Obtain Federal Government Information

#### by telephone

- DOE Public Affairs/Press Office ..... (202) 586-5806
- DOE Distribution Center ..... (202) 586-9642
- EPA Information Resources Center ..... (202) 260-5922
- GAO Document Room ..... (202) 512-6000
- Government Printing Office (to order entire *Federal Register* notices) ..... (202) 512-1800
- NRC Public Document Room ..... (202) 634-3273
- Legislative Resource Center (to order U.S. House of Representatives documents) ..... (202) 226-5200
- U.S. Senate Document Room ..... (202) 224-7860

#### by internet

- NRC Reference Library (NRC regulations, technical reports, information digests, and regulatory guides). ..... [www.nrc.gov](http://www.nrc.gov)
- EPA Listserve Network • Contact Lockheed Martin EPA Technical Support at (800) 334-2405 or email (leave subject blank and type help in body of message). ..... [listserv@unixmail.rtpnc.epa.gov](mailto:listserv@unixmail.rtpnc.epa.gov)
- EPA • (for program information, publications, laws and regulations) ..... [www.epa.gov](http://www.epa.gov)
- U.S. Government Printing Office (GPO) (for the Congressional Record, *Federal Register*, congressional bills and other documents, and access to more than 70 government databases). ..... [www.access.gpo.gov](http://www.access.gpo.gov)
- GAO homepage (access to reports and testimony) ..... [www.gao.gov](http://www.gao.gov)

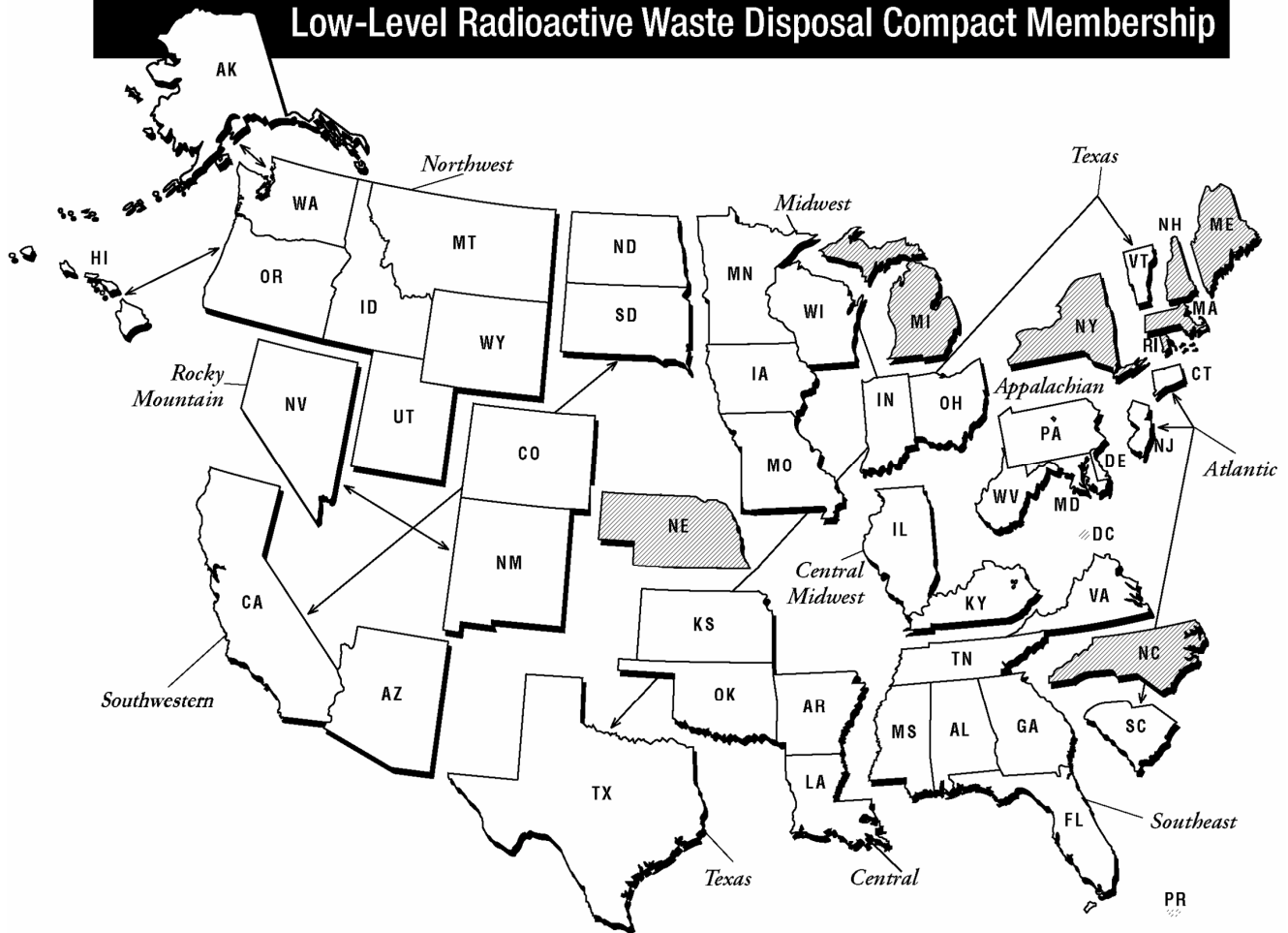
**To access a variety of documents through numerous links, visit the website for the LLW Forum, Inc. at [www.llwforum.org](http://www.llwforum.org)**

#### Accessing LLW Forum, Inc. Documents on the Web

*LLW Notes*, *LLW Forum Contact Information* and the *Summary Report: Low-Level Radioactive Waste Management Activities in the States and Compacts* are distributed to the Board of Directors of the LLW Forum, Inc. As of March 1998, *LLW Notes* and membership information are also available on the LLW Forum website at [www.llwforum.org](http://www.llwforum.org). The *Summary Report* and accompanying Development Chart have been available on the LLW Forum website since January 1997.

As of March 1996, back issues of these publications are available from the National Technical Information Service at U.S. Department of Commerce, 5285 Port Royal Road, Springfield, VA 22161, or by calling (703) 605-6000.

## Low-Level Radioactive Waste Disposal Compact Membership



### Appalachian Compact

Delaware  
Maryland  
Pennsylvania  
West Virginia

### Atlantic Compact

Connecticut  
New Jersey  
South Carolina

### Central Compact

Arkansas  
Kansas  
Louisiana  
Oklahoma

### Central Midwest Compact

Illinois  
Kentucky

### Northwest Compact

Alaska  
Hawaii  
Idaho  
Montana  
Oregon  
Utah  
Washington  
Wyoming

### Midwest Compact

Indiana  
Iowa  
Minnesota  
Missouri  
Ohio  
Wisconsin

### Rocky Mountain Compact

Colorado  
Nevada  
New Mexico

*Northwest accepts Rocky Mountain waste as agreed between compacts*

### Southeast Compact

Alabama  
Florida  
Georgia  
Mississippi  
Tennessee  
Virginia

### Southwestern Compact

Arizona  
California  
North Dakota  
South Dakota

### Texas Compact

Texas  
Vermont

### Unaffiliated States

District of Columbia  
Maine  
Massachusetts  
Michigan  
Minnesota  
Nebraska  
New Hampshire  
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North Carolina  
Puerto Rico  
Rhode Island