LLW*notes*

Volume 28, Number 5 September/October 2013

Northwest Compact/State of Utah

First Shipment of Disused Sources Arrives at Clive

One-Year Variance Began Upon Receipt

By letter dated September 19, 2013, Energy*Solutions* informed the Utah Division of Radiation Control (DRC) "that the first shipment of sealed sources for disposal under the variance is scheduled for receipt on Monday, September 30, 2013."

The shipment, which Energy*Solutions'* letter stated consisted of a single drum, began the one-year time limit on the sealed source variance for the Clive disposal facility.

The Variance

In a letter dated April 11, 2012, the Executive Secretary of the State of Utah's Radiation Control Board granted a variance to License Condition 16A for the disposal of Class A sealed sources at the Energy*Solution's* low-level radioactive waste disposal facility in Clive, Utah. The variance shall be for one year (365 days) starting from the receipt of the first shipment at the Clive facility, and as long as the commitments and additional conditions outlined below are followed. If any commitment or condition is not followed, the variance shall be suspended or terminated. For disposal of sealed sources beyond the 12 month variance, Energy*Solutions* will need to obtain approval through a license amendment of RML UT2300249.

Commitments In the variance request, Energy*Solutions* proposed certain commitments with which the DRC concurred as amended:

- Each individual source shall not exceed Class A low-level radioactive waste limits as defined in UAC R313-15-1009 (10 CFR 6l). Packages disposed under the variance will also not exceed Class A low-level radioactive waste limits as defined in UAC R3l3-15-1009 (10 CFR 61).

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In This Issue

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The Low-Level Radioactive Waste Forum, Inc. is dedicated to the goals of educating policy makers and the public about the management and disposal of low-level radioactive wastes, and fostering information sharing and the exchange of views between state and compact policy makers and other interested parties.

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.

Current members are allowed to distribute these written materials to a limited number of persons within their particular organization (e.g., compact commissioners, state employees, staff within a federal agency, employees in a commercial enterprise.) It has become clear, however, that there will be instances where members and subscribers wish to share LLW Forum materials with a broader audience of non-members.

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LLW Notes
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LLW Notes is published several times a year and is distributed to the Board of Directors of the Low-Level Radioactive Waste Forum, Inc. – an independent, non-profit corporation. Anyone – including compacts, states, federal agencies, private associations, companies, and others – may support and participate in the LLW Forum, Inc. by purchasing memberships and/or by contributing grants or gifts. For information on becoming a member or supporter, please go to our website at www.llwforum.org or contact Todd D. Lovinger – the LLW Forum, Inc.'s Executive Director – at (754) 779-7551.

Directors that serve on the Board of the Low-Level Radioactive Waste Forum, Inc. are appointed by governors and compact commissions. The LLW Forum, Inc. was established to facilitate state and compact implementation of the Low-Level Radioactive Waste Policy Amendments Act of 1985 and to promote the objectives of low-level radioactive waste regional compacts. The LLW Forum, Inc. provides an opportunity for state and compact officials to share information with each another and to exchange views with officials of federal agencies and other interested parties.

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LLW FORUM, INC.

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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.

Fall 2013 LLW Forum Meeting Held in Park City, Utah

October 21-23, 2013

The fall 2013 meeting of the Low-Level Radioactive Waste Forum, Inc. was held at the Marriott Hotel in Park City, Utah on October 22-23, 2013. The meeting included an optional site tour of the Energy*Solutions'* Clive facility on the afternoon of Monday, October 21, 2013—as well as a closed, members-only meeting of the LLW Forum's Board of Directors on Monday evening, October 21, for the receipt of a status report from the Disused Sources Working Group (DSWG).

Attendance

The fall 2013 meeting was attended by officials representing states, compacts, federal agencies, nuclear utilities, disposal operators, brokers/processors, industry, and other interested parties. The meeting provided 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 offered 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.

Agenda

The following items relating to low-level radioactive waste management and disposal were presented at the meeting:

- reports on new developments from states and compacts, federal agencies, industry representatives and other stakeholders;
- licensing, oversight and activities regarding the Waste Control Specialists' facility in Andrews County, Texas;
- the U.S. Nuclear Regulatory Commission's low-level radioactive waste program;
- potential changes to NRC's uniform low-level radioactive waste manifest guidance in NUREG/BR-0402;
- the U.S. Environmental Protection Agency's proposed rule to update the Protective Actions Guides and Planning Guidance for Radiological Incidents;
- industry perspectives on current low-level radioactive waste management issues;
- NRC's proposed rule language on implementing the requirements for a site-specific analysis for near-surface disposal of low-level radioactive waste;
- revisions to the Nuclear Fuel Cycle Standards in 40 *Code of Federal Regulations* Part 190;
- activities and initiatives at the U.S. Department of Energy;
- increased oil and gas development and the resultant Naturally Occurring Radioactive Material waste;
- management and disposition of disused sealed sources;
- cancer risk study being conducted by the National Academies of Sciences at the request of the NRC;
- enhancing the availability of Type B shipping casks to increase low-level radioactive waste management and disposition options;
- updates and developments at the US Ecology Richland low-level radioactive waste disposal facility;
- licensing and activities update regarding the Energy*Solutions'* Clive low-level radioactive waste disposal facility; and,
- initial efforts to update the Blue Ribbon Commission's recommendations regarding generic disposal standards for spent fuel and high-level radioactive waste.

Optional Site Tour

Interested meeting attendees participated in an optional tour of the Energy*Solutions* Clive facility the afternoon of Monday, October 21. The Clive facility is located approximately 80 miles west of Salt Lake City, just south of I-80.

Board of Directors' Meeting

There was also a closed meeting of the LLW Forum's Board of Directors on Monday evening, October 21. The purpose of the meeting was to receive a status report from the Disused Sources Working Group (DSWG). Only designated state and compact officials were invited to attend this closed session meeting.

For additional information, please contact Todd D. Lovinger, the LLW Forum's Executive Director, at (754) 779-7551 or go to www.llwforum.org.

LLW Forum Passes Resolution re Part 61 Rulemaking Initiative

From October 21-23, 2013, the Low-Level Radioactive Waste Forum (LLW Forum) held its fall meeting in Park City, Utah. (See related story, this issue.) During the course of the meeting, officials from the U.S. Nuclear Regulatory Commission gave a presentation on proposed rule language on implementing the requirements for a site-specific analysis for near-surface disposal of low-level radioactive waste. (See *LLW Notes*, August/September 2013, pp. 1, 32-38.)

Subsequently, on October 23, 2013, the LLW Forum's Board of Directors unanimously approved the following resolution:

As the U.S. Nuclear Regulatory Commission (NRC) is considering proposed revisions that would amend Part 61 of Title 10 of the Code of Federal Regulations (10 CFR), "Licensing Requirements for Land Disposal of Radioactive Waste;"

As, on January 19, 2012, the Commission directed NRC staff to expand the current limited-scope revision to Part 61 regarding site-specific analysis to bring a clearer risk-informed approach to Part 61 through extensive interactions with stakeholders to determine whether certain risk-informed approaches should be incorporated into the current rulemaking;

As, on July 18, 2013, NRC staff requested Commission approval to publish a proposed rule to amend 10 CFR Part 61 in the Federal Register that, among other things:

- *requires low-level radioactive waste disposal licensees and license applicants to conduct updated and new site-specific analyses and to permit the development of criteria for future low-level radioactive waste acceptance based on the results of these analyses;*

- *updates the existing technical analysis requirements for protection of the general population (i.e., performance assessment) to include a 10,000-year compliance period; adds a new site-specific technical analysis for the protection of inadvertent intruders (i.e., intruder assessment) that would include a 10,000-year compliance period and a dose limit; adds a new analysis for certain long-lived low-level radioactive waste (i.e., performance period analysis) that would include a post-10,000 year performance period; and, revises the technical analyses required at closure;*

- *adds a new requirement to develop criteria for the acceptance of low-level radioactive waste for disposal based on either the results of these technical*

analyses or on the existing low-level radioactive waste classification requirements in order to facilitate consideration of whether a particular disposal site is suitable for future disposal of depleted uranium (DU), blended low-level radioactive waste, or any other previously unanalyzed low-level radioactive waste stream; and,

- *proposes amendments to facilitate implementation and better align the requirements with current health and safety standards;*

As, upon publication of a proposed rule to amend 10 CFR Part 61, NRC's Office of Federal and State Materials and Environmental Management Program plans to continue engaging stakeholders and members of the public on possible changes to Part 61;

As states and compacts have primary responsibility for issues related to the management and disposal of low-level radioactive waste under the Low-Level Radioactive Waste Policy Act of 1980 and its 1985 amendments;

As all current operating low-level radioactive waste disposal facilities are located in and regulated by Agreement States;

As states and compacts have a primary and vested interest in and will be directly impacted by any proposed revisions to Part 61;

Now Wherefore Be it Resolved that the LLW Forum encourages NRC to directly communicate with and seek feedback specifically from representatives of the states with operating low-level radioactive waste disposal facilities on the proposed revisions to 10 CFR Part 61, and

Now Wherefore Be it Further Resolved that the LLW Forum encourages NRC to give enhanced consideration to feedback from representatives of the states with operating low-level radioactive waste disposal facilities on the proposed revisions to 10 CFR Part 61, and

Now Wherefore Be it Further Resolved that the LLW Forum encourages NRC to conduct a public comment period for a minimum of 90 days for the proposed revisions to 10 CFR Part 61.

The resolution was transmitted to NRC officials following the conclusion of the meeting.

For additional information, please contact Todd D. Lovinger, the LLW Forum's Executive Director, at (754) 779-7551 or go to www.llwforum.org.

LLW Forum Passes Resolution re Disused Sources

On October 21, 2013, the Board of Directors (Board) of the Low-Level Radioactive Waste Forum (LLW Forum) met in closed session in Park City, Utah to receive a status update on tentative findings and recommendations of the Disused Sources Working Group (DSWG).

Subsequently, on October 23, 2013, the LLW Forum's Board unanimously approved the following resolution:

As sealed sources provide many benefits to society, but having thousands of disused sources in storage across the country poses unnecessary and unacceptable national security risks as they could be used individually or in aggregate in radiological dispersal devices (dirty bombs) or radiation exposure devices;

As users are reluctant to declare their sources as disused or to get rid of them for a variety of reasons including potential future use, high cost of transportation and disposal, relative ease and low-cost of long-term storage;

As the 2005 Energy Policy Act (PL 09-58) tasked the executive branch to evaluate and provide recommendations relating to the security of radiation sources in the United States from potential terrorists threats—including acts of sabotage, theft, or use of a radiological dispersal device;

As Section 651(d) of the Act charges the Radiation Source Protection and Security Task Force (Task Force)—which is comprised of representatives from 14 federal agencies and 2 state organizations—with providing reports every 4 years to the Congress and the President containing recommendations for appropriate regulatory and legislative changes;

As, at the fall 2010 Low-Level Radioactive Waste Forum (LLW Forum) meeting, officials from the U.S. Department of Energy's (DOE) National Nuclear Security Administration/Global Threat Reduction Initiative (NNSA/GTRI) asked the LLW Forum to consider creating a working group to recommend a path forward for managing and disposing of disused unwanted radioactive sealed sources that potentially pose a national security concern;

As, on March 25, 2011, based on the recommendation of a Steering Committee, the LLW Forum passed a resolution forming the Disused Sources Working Group (DSWG) to address both front-end issues (i.e., support national security, improve regulation, potential options for recycle and reuse, existing and emerging production technologies, marketing and distribution systems, etc.) as well as the back-end issues (i.e., traditional and/or innovative disposition pathways);

As, over the course of the last 24 months, the DSWG has solicited input from a broad range of stakeholders—including manufacturers, distributors, recyclers, brokers and processors, users, state and compact officials, federal agencies (Department of Defense (DoD), DOE, and Nuclear Regulatory Commission (NRC)), Conference of Radiation Control Program Directors (CRCPD), Health Physics Society (HPS), Organization of Agreement States (OAS), and disposal facility operators—during 13 individual meetings;

As the DSWG is in the process of finalizing its findings and recommendations, after which it will present the final report to the LLW Forum Board of Directors (Board) at the spring 2014 meeting in Austin, Texas on March 17-18, 2014 and to the NNSA/GTRI by March 31, 2014;

Now Wherefore Be it Resolved that, upon approval of grant funding from NNSA, the LLW Forum will create a working group to educate stakeholders on the recommendations developed by the DSWG and encourage affected parties to take action to implement the recommendations;

Now Wherefore Be it Further Resolved that the working group will be 100% funded by NNSA including, but not limited to, reimbursement for travel expenses for working group members and LLW Forum staff, LLW Forum staff time, and contract support such that no LLW Forum funds or resources will be expended on working group activities without the express authorization of the organization's Executive Committee;

Now Wherefore Be it Further Resolved that the working group will seek to complete its work and produce a final report in a 24-month time frame;

Now Wherefore Be it Further Resolved that the working group may seek input from other stakeholders including, but not limited to, NRC, DOE, DoD, U.S. Environmental Protection Agency (EPA), NNSA/GTRI, CRCPD, OAS, Task Force, brokers and processors, waste disposal facility operators, and manufacturers and users of sealed sources; and,

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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.

2013 Meetings

The State of Utah, Division of Radiation Control, recently hosted the fall 2013 meeting of the LLW Forum. The meeting was held on October 22-23, 2013 at the Marriott facility in Park City, Utah. (See related story, this issue.) On the afternoon of October 21, there was an optional site tour of the Energy*Solutions'* Clive facility for interested attendees as well. On the evening of October 21, there was a closed, members-only meeting of the LLW Forum's Board of Directors for the receipt of a status report from the LLW Forum's Disused Sources Working Group (DSWG).

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 and URENCO USA facilities for interested attendees as well. The meeting will be held at the Omni Hotel in Austin, Texas on March 17-18, 2014.

The Midwest Interstate Low-Level Radioactive Waste Compact Commission and the Rocky Mountain Low-Level Radioactive Waste Board have agreed to co-host the fall 2014 meeting in Denver, Colorado. The meeting is tentatively planned to be held at the Embassy Suites Hotel in downtown Denver, Colorado on October 30-31, 2014—although contractual arrangements are still being finalized.

Search for Volunteer Hosts for 2015 Meetings

The LLW Forum is currently seeking volunteers to host 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 (754) 779-7551 or at LLWForumInc@aol.com.

Central Interstate Commission

Central Interstate Compact Commission Holds Teleconference Meeting

On October 3, 2013, the Central Interstate Low-Level Radioactive Waste Commission held a special teleconference meeting.

Purpose

The purpose of the special teleconference meeting was to take necessary action on meeting minutes, new auditor proposal, authorize legal counsel to contact major generators regarding settlement fund interest, discussion from June 2013 meeting topics, and all other business to come before the Commission.

Agenda

The following items were on the draft agenda for the meeting:

- Call to Order and Roll Call
- Introduction – Chair
- Approve Minutes of June 12, 2013 Annual Meeting
  - Questions/Discussion by Commissioners
  - Questions/Discussion by Public
  - Roll Call Vote
- New Auditor Proposal
  - Questions/Discussion by Commissioners
  - Questions/Discussion by Auditor
  - Questions/Discussion by Public
  - Roll Call Vote
    - * Approve Auditor and Authorize Administrator to Negotiate Agreement
- Settlement Fund Interest
  - Questions/Discussion by Commissioners
  - Questions/Discussions by Public
  - Roll Call Vote Authorizing Legal Counsel to Contact Major Generator's Legal Counsel
- General Discussion from June Annual Meeting Topics
  - Arkansas: LLW Forum Membership
  - Commissioners: Report on Possible Relocation of Commission Offices to State Agencies
  - Other Topics
- Set Date/Time for November 2013 Special Phone Meeting
- Adjourn

An agenda, kept continuously, was available by contacting the Commission's Office or visiting their web page.

For additional information, please contact the Central Interstate Commission at (402) 476-8247 or at www.cillrwcc.org.

Northwest Compact / State of Idaho

Jeffrey Feeler Appointed to US Ecology's Board of Directors

On September 9, 2013, US Ecology, Inc. announced the appointment of Jeffrey Feeler to its Board of Directors. The appointment of Feeler, who serves as US Ecology's President and Chief Executive Officer, brings the number of directors to six. The other members of the Board of Directors include Chairman Stephen Romano, Victor Barnhart, Joe Colvin, Daniel Fox and Jeffrey Merrifield.

"We are pleased to have Jeff join our experienced Board," stated Romano. "His knowledge of the Company, thorough understanding of the environmental services industry and leadership skills will be a valuable addition."

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- Energy*Solutions* will not seek NRC approval to import foreign sources and will only manage and dispose of domestic sources.

- Shipments shall be certified in accordance with the Energy*Solutions'* Waste Characterization Plan Exhibit 2. Sources will be packaged in accordance with the U.S. Nuclear Regulatory Commission's (NRC's) 1995 final Branch Technical Position on Concentration Averaging and Encapsulation (CA BTP).

- Sources will be disposed in the Compact Waste Facility (CWF) in accordance with the most currently approved Construction Quality Assurance/Quality Control Manual requirements for CWF disposal and other applicable CWF criteria for disposal.

- Energy*Solutions* will review and approve each shipment before it is transported from the generator's or processor's facility.

- DRC will be notified at least seven (7) calendar days prior to scheduled receipt of the first shipment under the variance.

- The variance will have a term of one year (365 days) from the date the first shipment is received under the variance.

- Energy*Solutions* will track and report the total number, volume, and activity of sources received and the serial numbers or other unique identification number of each source disposed under the variance. A report will be due no later than three (3) months after the variance expiration date.

Additional Conditions After evaluation of Energy*Solutions'* request, the DRC determined to grant the variance to License Condition 16A with the following additional conditions:

- The sealed source or sources must be encased within the disposal containers with grout or concrete.

- Only sealed sources recovered as part of a round-up coordinated by the Conference of Radiation Control Program Directors' (CRCPD) Source Collection and Threat Reduction (SCATR) Program are authorized for disposal under the variance.

- The half-lives of the isotopes in the sources to be disposed are equal to the half-life of Cs-137 or less.

- The total number of curies shall be limited to 708,678 curies—which is equivalent to l% of the calculated total source term limit of the Class A North Embankment.

SCATR Cost-Share Opportunity

The SCATR Program, which is administered by CRCPD, is providing sealed source licensees in states which do not have access to an in-compact low-level radioactive waste disposal facility an opportunity to dispose of certain unwanted radioactive sealed sources. Only sources registered with Off-Site Source Recovery Project (OSRP) (http://osrp.lanl.gov/PickUpSources.aspx) are eligible for participation in this initiative.

To participate, licensees in Illinois, Indiana, Ohio, and New York were required to register eligible sources by May 30, 2013—as the initial collection took place in these four pilot states. Licensees in non-pilot states were required to register eligible sources by June 30, 2013.

Overview CRCPD is offering generators who participate in this limited-time opportunity financial assistance equal to 50% of the cost of collection, processing, and disposal.

- Class A qualifying sources will be disposed at the Energy*Solutions* Clive, Utah facility under a special one year license variance.

- Class B and C qualifying sources located at facilities participating in the Class A collection may also be collected and disposed with financial assistance at the Waste Control Specialists (WCS) CWF located in Andrews County, Texas.

This opportunity is supported by the Department of Energy's Global Threat Reduction Initiative (GTRI), the State of Utah Division of Radiation Control, Energy*Solutions*, and WCS.

Eligible Sources The collection for sealed source disposal at Clive will include a range of Class A sealed sources which meet the criteria specified below.

- Each source by itself must meet the definition of Class A waste as defined in 10 CFR 61.55:
  - The quotient of the current activity of the radionuclide in the source divided by the volume of the source cannot exceed the Class A limit as specified in 10 CFR 61.55 tables.
  - This includes any radionuclide not specifically listed in the 10 CFR 61.55 tables with a half‑life < 5 years.
  - Other restrictions may apply.

- Commonly used radionuclides and their approximate Class A activity limits which could qualify for the collection include those in Table 1 below.

Table 1: Commonly Used Radionuclides and Class A Limits

Isotope	Class A Limit	Isotope	Class A Limit	Isotope	Class A Limit
^{60}Co	700 microCi/cm3	^{125}I	700 microCi/cm3	^{192}Ir	700 microCi/cm3
^{137}Cs	1 microCi/cm3	^{109}Cd	700 microCi/cm3	^{65}Zn	700 microCi/cm3
^{153}Gd	700 microCi/cm3	^{133}Ba	unlimited	^{204}Tl	700 microCi/cm3
^{55}Fe	700 microCi/cm3	^{68}Ge	700 microCi/cm3	^{22}Na	700 microCi/cm3
^{57}Co	700 microCi/cm3	^{152}Eu	unlimited	^{54}Mn	700 microCi/cm3
^{210}Po	700 microCi/cm3	^{147}Pm	700 microCi/cm3	^{195}Au	700 microCi/cm3

Class B and C sources are also eligible for packaging and collection at the same time as the Class A collection is made under this opportunity. Class B and C sources will be separately processed, packaged, and disposed at WCS in Andrews County, Texas on a similar cost-share basis.

- Qualifying sources may include those that meet the Nuclear Regulatory Commission (NRC) definition for Class B and Class C radioactive waste. For waste classification purposes, the activity in a waste package may be averaged over the entire package in accordance with the NRC's 1995 CA BTP.

- Some radionuclides such as C-14 may have site-specific constraints.

Background

Prior to the granting of the April 2012 variance, License Condition l6A prohibited the disposal of sealed sources at the Clive facility. On August 2, 2011, however, Energy*Solutions* submitted to the DRC variance request (CDl l-0216) to RML UT 2300249.

In a meeting on August 18, 2011, Energy*Solutions* presented their request to DRC staff. The request was made in support of NNSA/ GTRI, whose OSRP recovers and disposes of certain unused sealed sources from civilian sites. In this regard, OSRP requested that certain sealed sources be authorized for disposal at Energy*Solutions'* Clive, Utah facility.

By letter dated October 13, 2011, the Executive Secretary requested additional information from the licensee. In particular, Energy*Solutions* was asked to provide information demonstrating that the requested variance complies with all requirements stated in Utah Administrative Code (UAC) R313-25-8(l). By letter dated November 7, 2011, the licensee provided information to address each individual requirement in UAC R3l3-25-8(1).

DRC staff evaluated Energy*Solutions* response and provided the following comments:

- UAC R313-25-8(1)(a): The DRC agrees that sealed sources were considered by NRC when developing radioactive waste classification criteria in 10 CFR 61 and therefore is not a unique waste stream. The variance request complies with this requirement.

- UAC R313-25-8(1)(b): The half-lives of the isotopes in the sources to be disposed is equal to the half-life of Cs-137 or less. Therefore the dose limits will not be reached. The variance request complies with this requirement.

- UAC R3l3-25-8(l)(c): To comply with this requirement, the DRC will allow l% of the calculated total source term limit (which equals 708,678 curies) of the Class A North Embankment CWF Cell which will ensure compliance with the requirement.

- UAC R313-25-8(1)(d): Sealed sources were considered by the NRC in developing l0 CFR 61. Additionally, sealed sources have been evaluated in the NRC's CA BTP. Therefore, the form of the waste (i.e., sealed sources verses bulk waste) does not constitute an unanalyzed condition. The variance request complies with this requirement.

For additional information on the Clive variance, please contact Rusty Lundberg at (801) 535-4257 or at rlundberg@utah.gov or John Lundquist at (801) 536-4250 or at jlundquist@utah.gov.

For additional information regarding the CRCPD cost-share opportunity, please call or email Russ Meyer at CRCPD at (512) 761-3822 or at rmeyer@crcpd.org.

Utah Seeks Public Comment re Dawn Mining Alternate Feed Request

On September 5, 2013, the Utah Department of Environmental Quality, Division of Radiation Control (DRC), announced that it is requesting public comment regarding a proposed Licensing Action by the DRC Director to amend the Energy Fuels Resources (USA) Inc. (EFRI) 11e.(2) Byproduct License No. RML UT1900479. That same day, a forty-five day public comment period for the proposed Licensing Action commenced by publication of a notice on the DRC's Web site and distribution by electronic mail server notification.

A public hearing was held on Wednesday, October 9, 2013, from 2:00 p.m. to 5:00 p.m. The DRC will finalize its review of the proposed License Amendment after (i) the completion of the 45-day public comment period, (ii) the holding of the public hearing, and (iii) a DRC analysis of the information received from the public during the comment period.

Proposed Amendment

The proposed License Amendment will allow EFRI to receive and process up to a total of 4,500 tons (dry weight) of uranium material as alternate feed material from the Dawn Mining Company Midnite Mine Site, located in Wellpinit, Washington. By letter dated April 27, 2011, EFRI—formerly Denison Mines (USA) Corp (DUSA)—submitted a request to the DRC to amend the company's byproduct license.

EFRI is requesting that the uranium material be authorized for receipt and processing at the White Mesa Mill as alternate feed material based on its uranium content. Byproduct (residuals) from the extraction of source material would be disposed within the Mill's active lined uranium tailings management/disposal cells.

Submitting Comments

Written comments should be directed either by correspondence to the Utah DRC mailing address at P.O. Box 144850, Salt Lake City, UT 84114-4850; street address at 195 North 1950 West, Salt Lake City, UT 84116; or by email to radpublic@utah.gov. Comments sent via email should be identified by putting the following in the subject line: "Public Comment on Energy Fuels Resources Dawn Mining Amendment request." All comments received within the comment period will be considered for inclusion in the final modified permit.

Public Hearing

A public hearing was held on Wednesday, October 9, 2013, from 2:00 p.m. to 5:00 p.m. The purpose of the public hearing was to take comment. The hearing included an opportunity for questions and answers. A hearing officer managed the hearing, and the hearing was recorded and transcribed.

Interested persons were requested to submit their questions to the Director at least 10 calendar days before the hearing (September 30, 2013). If a question that an interested person would like to ask relies on information that is not in the record, that information needed to be provided with the question. Those who submitted questions were allowed to follow up with additional questions based on the response provided. All questions submitted will be considered part of the record.

The public hearing was held in the DEQ board room, Room 1015, at the Utah Department of Environmental Quality, 195 North 1950 West, Salt Lake City Utah. All comments received within the comment period will be considered for inclusion in the final Licensing Action.

Challenges to Licensing Action

Under Utah Code Ann. Section 19-1-301.5, a person who wishes to challenge a Licensing

Action (permit/license amendment approval) must do so in an adjudicatory proceeding and may only raise an issue or argument that he or she has previously raised during the public comment period. Further, the issue or argument must be one that is supported by sufficient information or documentation to enable the director to fully consider the substance and significance of the issue.

A draft license, along with a Statement of Basis and Safety Evaluation Report (SER) describing the license changes and environmental analysis, are available on the Division website at http://www.radiationcontrol.utah.gov/Uranium_Mills/IUC/Denison_IUC/dawn_mining.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.

Proposed Amendment to Energy Fuels Resources Byproduct License

Public Meeting Held on October 16 in Blanding, Utah

In late September 2013, the Utah Department of Environmental Quality (DEQ), Division of Radiation Control (DRC), provided notice of an additional opportunity to provide comments regarding a proposed licensing action by the Utah DRC Director to amend the Energy Fuels Resources Inc. (EFRI) 11e.(2) Byproduct License (RML UT1900479).

License Amendment Request

If approved by the DRC, the license amendment request would allow EFRI to receive and process up to 4,500 tons (dry weight) of uranium material from the Dawn Mining Company Midnite Mine Site—which is located in Wellpinit, Washington. In a letter dated April 27, 2011, EFRI—formerly known as Denison Mines (USA) Corp (DUSA)—submitted a request to the DRC to amend the company's 11e.(2) byproduct license.

Additional Opportunity re Public Comment

On Wednesday, October 16, an additional public meeting was held beginning at 5:00 pm at the Blanding Arts and Events Center at 639 West 100 South in Blanding, Utah. The purpose of this public meeting was to receive written and oral comments regarding the proposed licensing action.

The draft license, along with a Statement of Basis and Safety Evaluation Report (SER) describing the license change(s) and environmental analysis, are available for review and/or copying at the DRC Office located at 195 North, 1950 West in Salt Lake City, Utah.

Background

On September 3, 2013, a forty-five day public comment period commenced by publication of a public notice on the DRC's webpage, and distribution by electronic mail server. The notice was also placed in the Salt Lake Tribune, the Deseret News, and the San Juan Record. Written comments will be accepted until the close of business on October 21, 2013.

The draft license, Statement of Basis, and Safety Evaluation Report are available at http://www.radiationcontrol.utah.gov/Uranium_Mills/IUC/Denison_IUC/dawn_mining.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.

Utah Radiation Control Board Holds Fall 2013 Meetings

The Utah Radiation Control Board held meetings on September10, 2013 and October 8, 2013. Both meetings were open to the public.

September 2013 Meeting

On September 10, 2013, 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 1:00 pm.

The following items, among others, were on the July 2013 meeting agenda:

I. Welcome

II. Minutes (Board Action)
   a. Approval of the Minutes from the July 9, 2013 Board Meeting

III. Certification Approval of Mammography Imaging Medical Physicist (MIMP) (Board Action)

IV. Administrative Rules
   a. 5-year Review Approval (Board Action)
      i. R313-21, General Licenses; R313-30, Therapeutic Radiation Machines; R313-38, Licenses and Radiation Safety Requirements for Well Logging
   b. H. B. 124 rulemaking
      i. Review and discussion of comments from informal/scoping comment period of preliminary draft proposed rule changes
         1. R313-14, Violations and Escalated Enforcement
         2. R313-25, License Requirements for Land Disposal of Radioactive Waste
   c. Petition for Rulemaking to R313-25-8 (Board Information)

V. Information Items
   a. Low-Level Radioactive Waste
      i. Low-Level Radioactive Waste Forum
         1. Fall 2013 Meeting at Park City, Utah (October 22-23, 2013)
   b. Depleted Uranium Performance Assessment Update
   c. Other Division Items
      i. Division of Radiation Control letter to the NRC Addressing the Implementation of 11e.(2) Byproduct Material Licensing Requirements of 274(o), Atomic Energy Act
   d. Nuclear Regulatory Commission (NRC) Activities
      i. Rulemaking Development for Changes to Federal Regulations Regarding Requirements for the Land Disposal of Radioactive Waste (10 CFR Part 61)

VI. Public Comment

VII. Next Scheduled Board Meeting: Tuesday, October 8, 2013 at 1:00 p.m.
Multi Agency State Office Building,
Conference Room 1015
195 North 1950 West
Salt Lake City, Utah

October 2013 Meeting

On October 8, 2013, the Utah Radiation Control Board held a working lunch and regularly scheduled meeting in the Multi Agency State Office Building at 195 North 1950 West in Salt Lake City, Utah. The meetings were open to the public.

Working Lunch Meeting Agenda The following items, among others, were on the working lunch meeting agenda:

I. Welcome

II. Review and discussion of Administrative Rulemaking Actions for Board meeting
  a. Final adoption of proposed changes to R313-28-80, Intraoral Dental Radiographic Systems
  b. Petition for Rulemaking – Requested changes to R313-25-8, Technical Analyses
    i. Report from Subcommittee
  c. Petition for Rulemaking – Requested changes to R313-22-33; R313-22-37; and, R313-70-5 (Board action at the November 12, 2013 meeting)
  d. Approval to proceed with rulemaking and public comment of proposed amendments to
    i. R313-14, Violations and Escalated Enforcement
    ii. R313-25, License Requirements for Land Disposal of Radioactive Waste
  e. Rulemaking schedule for adopting recent NRC final regulations

III. Other Items

Regular Board Meeting The following items, among others, were on the regular Board meeting agenda:

I. Welcome

II. Approval of the Minutes from the September 10, 2013 Board Meeting

III. Administrative Rulemaking
  a. Final approval of proposed changes to R313-28-80, Intraoral Dental Radiographic Systems (Proposed rule changes published in the August 15, 2013 issue of the *Utah State Bulletin*)
  b. Approve for rulemaking and public comment, proposed amendments to:
    i. R313-14, Violations and Escalated Enforcement
    ii. R313-25, License Requirements for Land Disposal of Radioactive Waste
  c. Action on Petition for Rulemaking for amendments to R313-25-8, Technical Analyses
    i. Report from Board Subcommittee

IV. Information Items
  a. Uranium Mills
    i. Energy Fuels Resources (White Mesa Mill) – Upcoming October public meetings for proposed license amendment regarding alternative feed from Dawn Mining
  b. Low-Level Radioactive Waste
    i. Low-Level Radioactive Waste Forum
      1. Fall 2013 Meeting – Park City, Utah (October 22-23, 2013); Energy*Solutions* Clive Facility Tour (October 21, 2013 – 11:30 a.m.)
    ii. Sealed Source Variance update
    iii. Depleted Uranium Performance Assessment update
  c. Other Division Items
    i. Activities Summary – 2013 Third Quarter Report
  d. Nuclear Regulatory Commission (NRC) Activities
    i. Rulemaking development for changes to federal regulations regarding requirements for the land disposal of radioactive waste (10 CFR Part 61)

V. Public Comment

VI. Next Scheduled Board Meeting: Tuesday, November 12, 2013 at 1:00 p.m.
Multi Agency State Office Building, Board Conference Room 1015
195 North 1950 West
Salt Lake City, Utah

Background

The 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.

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

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.

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Feeler, who joined US Ecology in July 2006, has over 20 years of business and financial management experience. Prior to joining US Ecology, he worked with MWI Veterinary Supply, Inc.; Albertson's, Inc.; Hewlett-Packard; and, PricewaterhouseCoopers LLP. Feeler is a Certified Public Accountant and has a BBA of Finance and BBA of Accounting from Boise State University.

US Ecology, 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, US Ecology is one of the oldest radioactive and hazardous waste services companies in the North America.

For additional information, please contact Joe Weismann of US Ecology at (208) 331-8400 or at jweismann@usecology.com.

Southeast Compact / State of Georgia

Georgia's Agreement State Regulatory Program Placed on Probation

On August 8, 2013, the U.S. Nuclear Regulatory Commission announced that it has approved placing the State of Georgia on probation for deficiencies in its Agreement State program—the first time the NRC has taken such action. According to NRC, this move does not affect oversight of nuclear reactors in Georgia, which remain under NRC authority, or state responsibilities related to emergency preparedness at reactor sites.

Georgia is one of 37 states that have entered into agreements with the NRC giving them authority to license and regulate certain nuclear materials users within their borders. The agency reviews these Agreement State programs regularly. Probation is an option for ensuring continued protection of public health and safety in cases where program weaknesses exist. The weaknesses identified in Georgia do not immediately threaten public health and safety.

The managers of Georgia's program are addressing the performance concerns. The program submitted an improvement plan that has been reviewed and approved by NRC staff. The NRC will remain closely involved with the state program managers as they implement improvements.

A review team comprised of technical staff from the NRC, North Carolina and Florida evaluated the Georgia program in October 2012. The team identified significant deficiencies throughout the program that, if left uncorrected, have the potential to impact public health and safety. The team observed a basic misunderstanding of several important safety and security

requirements, and it noted significant communication issues between staff and management that affected the program's safety culture and performance. Overall, the team identified a decline in performance since Georgia's last evaluation in 2008.

The problems identified relate largely to prioritization of work, specifically responding to incidents promptly and prioritizing inspections of licensees using radioactive materials with the greatest potential for harm. The team found numerous examples where tasks were not appropriately prioritized.

The review found Georgia's program to be compatible with the NRC regulatory program and "adequate but needs improvement." The team recommended, and an NRC management review board agreed, that Georgia's performance be found unsatisfactory for several performance indicators. The team made 11 specific recommendations to Georgia for improving performance.

Pending the Commission's decision, the state has been on "Heightened Oversight," a condition requiring increased interaction with NRC staff, preparation of a program improvement plan, bimonthly conference calls and periodic status reports. The NRC will continue to interact more frequently with the state program office during probation. The Georgia program will be evaluated again in January 2014.

The report on Georgia's agreement state program can be found at http://nrc-stp.ornl.gov/reviews/12ga_imp.pdf. For additional information, please contact Maureen Conley of the U.S. Nuclear Regulatory Commission at (301) 415-8200.

Southeast Compact

Southeast Compact Holds Long-Range Planning Workshop

October 8-9 in Atlanta, Georgia

On October 8-9, 2013, the Southeast Compact Commission for Low-Level Radioactive Waste Management held a Long-Range Planning Workshop to discuss the future of the Commission—including its vision, mission, goals, and priority activities—and to generate ideas to be included in a revised Strategic Plan.

The workshop was held at the Atlanta Airport Marriott in Atlanta, Georgia. It was scheduled from 1:00 pm – 6:00 pm on October 8 and from 9:00 am – 12:00 pm on October 9.

The workshop was open to the public. Interested parties were encouraged to attend and participate.

For additional information, please contact the Southeast Compact Commission at (919) 380-7780 or at secc@secompact.org.

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Now Wherefore Be it Further Resolved that the working group will produce a final report to be delivered to the LLW Forum's Board and NNSA/GTRI that may include, among other things, an outline of the path ahead, description of the stakeholders contacted, summary of the interactions and communications, overview of the responses, and explanation of any additional recommendations.

The resolution was transmitted to NNSA/GTRI officials following the conclusion of the meeting.

For additional information, please contact Todd D. Lovinger, the LLW Forum's Executive Director, at (754) 779-7551 or go to www.llwforum.org.

Southwestern Compact

Southwestern Compact Commission Hosts 67th Meeting

On October 4, 2013, the Southwestern Low-Level Radioactive Waste Commission hosted its 67th meeting beginning at 9:00 am PDT at the Hyatt Regency in Sacramento, California.

The following topics, among others, were on the meeting agenda:

- call to order
- roll call
- welcome and introductions
- statement regarding due notice of meeting
- reports, status and/or activity
  - Commission Chair
  - Executive Director
  - licensing agency
  - license designee
  - party states
- exportation actions
  - ratification of approved petitions
  - amend "Policy of the Southwestern Low-Level Radioactive Waste Commission Regarding Exportation of Various Low-Level Radioactive Waste Streams" to extend effective date
  - amend "Requirements for Exportation Petitions for Low-Level Radioactive Waste Disposal" to extend effective date
  - approve new petition forms: Energy*Solutions* and Waste Control Specialists
- discuss status of incompatibility issues
- Qal-Tek update/NRC regs—Appendix G
- financial audit report
- discuss letters of proposal for audit
- Executive Session pursuant to California Government Code §11126(a)(1) to discuss staff performance evaluations
- review and approve Executive Director's and Counsel's contracts
- annual Governor's report review
- amend fiscal year 2013-14 budget
- approve proposal for fiscal year 2014-15
- adopt annual fee schedules
- public comment
- election of officers
- future agenda items
- next meeting date and location
- adjournment

Commissioners in North Dakota and South Dakota participated in the meeting by teleconference.

Members of the public were invited to attend the meeting and comment on specific agenda items as the Commission considered them. The total public comment time on each agenda item was limited to 15 minutes. Written material was also accepted. A 15-minute public comment period was provided near the end of the meeting at which time members of the public were invited to bring before the Commission issues relating to low-level radioactive waste but which were not on the agenda.

For additional information, please contact Kathy Davis, Executive Director of the Southwestern Compact Commission, at (916) 448-2390 or at swllrwcc@swllrwcc.org.

Texas Compact / State of Texas

Texas Compact Commission Holds October Meeting

On October 2, 2013, the Texas Low-Level Radioactive Waste Disposal Compact Commission (Texas Compact Commission) held a regularly scheduled meeting in the Vermont State House in Montpelier, Vermont.

Vermont Governor Peter Shumlin addressed the Commission beginning at approximately 10:15 a.m.

Agenda

The following is an abbreviated overview of the agenda for the 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 and appointed officials in attendance;
- presentation by Entergy Vermont Yankee and Commissioners' questions and discussion related to the announcement of closure and decommissioning of the Vermont Yankee nuclear power plant;
- discussion of revisions to 31 Texas Administrative Code §675.21, §675.22 and §675.23 related to exportation and importation of waste;
- consideration of and possible action on requests for amendments to agreements for importation of low-level radioactive waste from Philotechnics, Ltd. and Exelon;
- consideration of and possible action on applications and proposed agreements for importation of low-level radioactive waste from Southern Nuclear Operating Company; Ecology Services, Inc.; PG&E Diablo Canyon; and, the Sacramento Municipal Utility District;
- receive reports from the Texas Commission on Environmental Quality (TCEQ) on the status of pending facility operator license amendment applications and any other matter TCEQ wishes to bring to the attention of the Texas Compact Commission;
- receive reports from Waste Control Specialists LLC (WCS) about recent site operations and any other matter WCS wishes to bring to the attention of the Texas Compact Commission;
- subject to such time constraints as may be established by the Chair, public comment on any matter within the Commission's purview;
- 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 Commission operations;
- discussion and possible changes of dates and locations of future Texas Compact Commission meetings; and,
- adjourn.

Background

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.

Texas Compact Commission meeting agendas may be found on the Commission's website at http://www.tllrwdcc.org/.

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 *or Robert Wilson, Chairman of the Texas Compact Commission, at (512) 820-2930 or at* bob.wilson@tllrwdcc.org.

Washington and South Carolina v. U.S. Nuclear Regulatory Commission

Federal Appellate Court Orders NRC to Continue Yucca Mountain Licensing

On August 13, 2013, U.S. Court of Appeals for the District of Columbia ruled that the U.S. Nuclear Regulatory Commission must make a decision on whether or not to issue a permit for the long-term storage of nuclear waste at the proposed Yucca Mountain facility in Nevada.

In a 2 to 1 decision, the federal appellate court ordered the Commission to decide whether to approve or reject the application for the storage project. "At this point, the Commission is simply defying a law enacted by Congress," stated the court's order, "and the Commission is doing so without any legal basis."

NRC Response

In response to the appellate court's decision, NRC announced that the agency was seeking public comments on how to spend the remaining $11 million in its budget for licensing the proposed Yucca Mountain high-level radioactive waste repository. The Commission gathered comments until September 30 to assist the agency in deciding how to move forward.

Despite the court's order requiring the resumption of licensing work, licensing for Yucca Mountain would require an estimated $99 million to complete and the U.S. Department of Energy would need additional funding before the site could go into operation.

Background

Yucca Mountain—which is located 100 miles northwest of Las Vegas—was chosen as the facility location to disposition nuclear waste accumulating at commercial reactors in 33 states. In 1987, Congress directed the DOE to dispose of waste in the mountain beginning in 1998.

However, political opposition to the plan has been relentless and DOE was unable to meet the deadline. On June 3, 2008, the DOE submitted a license application to the NRC seeking to construct a nuclear waste repository at Yucca Mountain, with a goal of opening the facility in 2017—a date that was later further delayed until 2020. (See *LLW Notes*, May/June 2008, pp. 35-36.) NRC accepted the application for review on September 8, 2013. (See *LLW Notes*, September/October 2008, pp. 16-17.)

In March of 2009, the Secretary of Energy announced plans to terminate the Yucca Mountain project. As a result, NRC has argued that the $11 million Congress appropriated for the permit application is insufficient and that Congress will not provide the additional funds necessary to complete the application. In addition, the NRC's Atomic Safety and Licensing Board suspended the application until there is enough money to make progress.

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

Three Mile Island Nuclear Plant On August 28, 2013, the U.S. Nuclear Regulatory Commission held a public meeting in Hershey, Pennsylvania to discuss the Post-Shutdown Decommissioning Activities Report for Three Mile Island, Unit 2. TMI-2 is a pressurized water reactor located in Londonderry Township, Pennsylvania. It has been permanently shut down since the accident at the facility on March 28, 1979. GPU Nuclear defueled the reactor vessel and decontaminated the facility and the plant is in a safe, stable condition known as post-defueling monitored storage. The formal transition of TMI-2 from post-accident cleanup to monitored storage required NRC approval, which was granted in 1993. The company submitted the Post Shutdown Decommissioning Activities Report on June 28, 2013. Written comments on the decommissioning report were accepted using Docket ID NRC-2013-0183 on the agency's Regulations.gov website through September 27, 2013.

Atlantic Compact/State of South Carolina

Oconee Nuclear Power Plant On August 28, 2013, NRC held a public meeting with Duke Energy officials to discuss the status of major projects at the Oconee nuclear power plant. The Oconee plant, operated by Duke, is located near Seneca, South Carolina—approximately 30 miles west of Greenville. The public was invited to the meeting, which was held at the NRC's Region II offices, and NRC officials answered questions from the public after the business portion of the meeting. Some portions of the meeting, however, were closed to the public due to the discussion of security-related information. The projects discussed included pending plant improvements designed to prevent or mitigate the effects of floods or tornadoes, as well as discussions about work related to the plant's transition to different fire protection standards and enhancements to improve Oconee's ability to cope with possible equipment failures.

Robinson Nuclear Plant On August 19, 2013, NRC held a regulatory conference at the NRC's Region 2 offices with Duke Energy to discuss the risk significance of an apparent violation related to the company's failure to perform adequate preventive maintenance on the dedicated shutdown diesel generator at the Robinson nuclear power plant. The Robinson plant, which is operated by Duke, is near Hartsville, South Carolina—approximately 28 miles northwest of Florence. During the conference, which was open to the public, NRC and Duke officials discussed the risk significance of the apparent violation—which was identified after the failure of the radiator fan belts and subsequent automatic shutdown of the dedicated shutdown diesel generator in October 2012. There was no actual event requiring the use of that diesel generator and it was repaired and returned to service. However, the fan belts were degraded, in part, because of inadequate inspection, maintenance and periodic replacement. The belt failures could have prevented the shutdown diesel generator from being available during a loss of power or a fire. Even though there was no threat to workers or people living near the plant, the NRC has preliminarily determined the finding is white, meaning it has low to moderate safety significance. The NRC uses color-coded

inspection finding to assess plant performance. The colors range from green (very low safety significance) to white, yellow and red (the highest safety significance). No decision on the final safety significance and any additional NRC actions were made at the conference. That decision will be announced at a later time. *The NRC inspection report with more details on the apparent violation is available on the NRC website at http://pbadupws.nrc.gov/docs/ML1318/ML13182A428.pdf.*

Central Interstate Compact/State of Louisiana

Waterford Nuclear Plant On September 12, 2013, NRC staff held an open house to discuss the agency's assessment of the Waterford 3 nuclear power plant's safety performance. During the open house, attendees were provided with an opportunity to hold one-on-one discussions with NRC staff members about the plant's performance and the agency's oversight of the facility. NRC staff on hand included the inspectors assigned to the plant on a full-time basis, and staff from the Region IV office in Arlington, Texas. The most recent assessment letter sent from the NRC to plant officials addresses the performance of the plant during 2012. Overall, Waterford 3 is operating safely. All performance indicators and inspection findings for the facility are green, or of very low risk. As a result, Waterford is receiving the NRC's normal level of oversight during 2013. The plant is located 25 miles west of New Orleans. *The most current assessment for Waterford 3 is available on the NRC website at www.nrc.gov.*

Central Midwest Compact/State of Illinois

Byron Nuclear Plant On August 14, 2013, NRC held a public meeting to discuss the agency's annual assessment of safety performance for the Byron nuclear power plant. The two-unit plant is operated by Exelon Generation Company and is located in Byron, Illinois—approximately 17 miles southwest of Rockford. The public was invited to observe the meeting, which was held at the Byron Station Training Building. After the business portion of the meeting, the public was provided the opportunity to talk with NRC staff members about the plant's 2012 performance and the agency's oversight of the facility. The NRC review concluded that the Byron facility operated safely in 2012. All performance indicators and inspection findings for the facility were green or of very low risk and would not cause the NRC to increase its oversight. As a result, Byron will continue to receive the NRC's normal level of oversight during 2013. Inspections are performed by two NRC Resident Inspectors assigned to the plant; inspection specialists from the Region III Office in Lisle, Illinois; and, specialists from the agency's headquarters in Rockville, Maryland. Among the areas of performance to be inspected this year by NRC inspectors are activities associated with underground piping, radiological safety, equipment designs, and emergency preparedness. *The annual assessment letter sent from the NRC Region III office to Exelon addresses the performance of the plant during 2012 and is available on the NRC website at www.nrc.gov.*

Midwest Compact/States of Minnesota and Wisconsin

Monticello Nuclear Plant On August 30, 2013, NRC announced that staff is increasing its oversight of the Monticello nuclear plant for failure to maintain an appropriate plan to protect against a potential flooding event. Monticello—which is operated by Northern States Power Co.—is located in Monticello, Minnesota, approximately 30 miles northwest of Minneapolis. "Even though there was no actual flooding event, this issue is of concern because flood protection procedures are extremely important. They require certain safety features be available and built within a specific timeframe to protect equipment from potential flood waters," said NRC Region III Administrator Cynthia Pederson. "We know the plant has made corrections to address this violation and we will review those changes to make sure the issues have been fully addressed."

As a result of flooding walk downs directed by the NRC in response to the accident at Fukushima, an NRC inspector identified a violation involving the failure of the plant to demonstrate flood protection features within the required timeframe. After the NRC reviewed details of the plant's flood protection strategy, the NRC staff concluded that Monticello did not have appropriate procedures in place and would not have been able to construct a protective wall and levee system within the required timeframe. The NRC staff has classified the violation as yellow, meaning it has substantial safety significance. The company has taken corrective actions to address the violation by updating plant procedures and by pre-staging the necessary material on-site, so that the protective wall and levee system could now be installed within the required timeframe stated in the plant's licensing basis. The NRC will conduct a supplemental inspection to provide assurance that the root cause and contributing causes are identified and understood, and to ensure the corrective actions are sufficient to prevent recurrence. The inspection will also provide an independent determination of whether safety culture issues contributed to this violation.

Point Beach Nuclear Plant On August 9, 2013, NRC announced that the agency is increasing its oversight of the Point Beach Nuclear Plant Units 1 and 2 for failures to ensure appropriate procedures were in place for a potential flood. Point Beach is operated by NextEra Energy and is located in Two Rivers, Wisconsin—approximately 13 miles northeast of Manitowoc. An NRC inspector identified the violation during an inspection conducted from January to March 2013. The violation involved the failure of the plant to have procedures to prescribe how to protect safety-related equipment in the turbine building and pump house from potential lake flooding. NRC staff held a regulatory conference in July 2013 to discuss the risk significance of the preliminary finding. After reviewing the NRC inspection and information presented by the company, the NRC staff concluded the violation should be classified as "white," meaning it has a low to moderate safety significance. The company has taken corrective actions to address the violation and has additional actions planned in order to prevent recurrence. NRC will conduct a supplemental inspection to ensure that the root cause and contributing causes are identified and understood, and that corrective actions are sufficient.

Northwest Compact/State of Hawaii

U.S. Army Sites On October 23, 2013, NRC issued a license to the U.S. Army authorizing the possession of depleted uranium (DU) at two sites in Hawaii. The Army trained with the Davy Crockett weapons system at the two sites in the 1960s. This system included DU "spotting rounds," used to assist with targeting accuracy. The license allows the Army to possess up to 275 pounds of DU at Schofield Barracks on Oahu and the Pohakuloa Training Area on the island of Hawaii. It provides for NRC inspections and requires the Army to implement a radiation safety plan and a physical security plan. The Army must also provide an air and plant sampling plan for NRC review within 90 days. The NRC must review sampling results before deciding whether to lift existing restrictions on activities that would disturb the DU. The license does not authorize the Army to use the DU or decommission the sites without additional review and approval by the NRC. A license allowing the Army to manufacture and distribute the DU spotting rounds, issued by the NRC's predecessor (the Atomic Energy Commission) expired in 1978. Under the earlier license, the Army distributed the spotting rounds to a number of Army installations for testing, training and deployment. Each round contained about six ounces of DU. The Army told the NRC in November 2006 it had discovered DU fragments at the Schofield Barracks. Following that discovery, the Army reviewed old records and determined the Davy Crockett system was tested at other installations. The Army has enough DU at these sites that, under the Atomic Energy Act and NRC regulations, it is required to have a possession license. The Army submitted a license

application in November 2008. The initial license covers only the DU at the Hawaiian sites. In the future, the Army plans to amend the license to address DU at the other sites, including Forts Benning and Gordon (Georgia); Forts Campbell and Knox (Kentucky); Fort Carson (Colorado); Fort Hood (Texas); Fort Lewis, currently called Joint Base Lewis-McChord, and the Yakima Training Center (Washington); Fort Bragg (North Carolina); Fort Polk (Louisiana); Fort Sill (Oklahoma); Fort Jackson (South Carolina); Fort Hunter Liggett (California); Fort Greeley (Alaska); Fort Dix (New Jersey); and, Fort Riley (Kansas).

Southeast Compact/States of Alabama and Georgia

Browns Ferry Nuclear Plant On August 23, 2013, NRC outlined a list of actions committed to by the Tennessee Valley Authority intended to ensure the continued improvement of the utility's Browns Ferry nuclear plant. After those actions are completed by TVA and inspected by the NRC, the agency will reevaluate its increased oversight stemming from a high safety significance (red) inspection finding finalized in 2011. The Browns Ferry plant is near Athens, Alabama—approximately 32 miles west of Huntsville. The NRC sent a confirmatory action letter to TVA that confirms the list of Tier 1 actions which TVA committed to in an August 9 letter to the agency. There are 10 Tier 1 actions scheduled to be completed by November 30, 2013. Those actions include improvements in safety culture, the corrective action program, the safety system reliability plan, work management process and a procedure upgrade project. Once this group is completed, the NRC will determine the appropriate level of oversight. The second group of longer-term actions, detailed by TVA in its August 9 letter and focused on sustained excellent performance and long-term success criteria, are scheduled to be completed by December 15, 2014—though some are scheduled for completion as early as May 2014. "The confirmatory action letter gives TVA a clear set of commitments and expectations, and ensures they understand what they must do to continue to safely operate the plant," said Victor McCree, NRC Region II Administrator. "Browns Ferry has improved its safety performance, but it must continue to improve and sustain a high performance level." The red finding was issued due to the failure of a low-pressure coolant injection valve at Browns Ferry in the fall of 2010. That valve is part of a system relied upon for core cooling during certain accident scenarios. Even though the valve was promptly repaired after its condition was discovered, under the NRC's oversight process a red finding has high safety significance and results in intensive NRC inspection and oversight. A 23-person NRC team completed an intensive supplemental inspection at the plant in May 2013. The supplemental inspection, which was divided into three parts, began in 2011 following the red finding.*The confirmatory action letter is available via the NRC website at www.nrc.gov using accession number ML13232A105.*

Vogtle Nuclear Plant In early September 2013, Georgia power regulators voted to wait until completion of the first unit before addressing any cost overruns at reactors that are under construction at the Vogtle nuclear power plant. In a unanimous decision, the Georgia Public Service Commission (PSC) approved an agreement allowing Southern Co.—which owns 45.7 percent of the project—to delay its request to increase the project budget and recover the cost from ratepayers. In the meantime, Southern Co. will continue to supply regular reports on project expenses and construction progress to the PSC. In March 2013, Southern Co. told the Georgia PSC that its share of the project's cost was projected to come in 8.6 percent above the original amount approved by the state. In particular, Southern Co. cited the delayed federal approval of the Westinghouse AP1000 reactor design and the pace of fabricating "certain structures comprising the nuclear island." Southern Co. now expects completion of Unit 3 in the fourth quarter of 2017.

Southwestern Compact/State of California

San Onofre Nuclear Generating Station In late September 2013, NRC announced that the agency has preliminarily determined that the inadequate design of the steam generators at San Onofre Nuclear Generating Station was a violation of low to moderate safety significance. The preliminary finding is identified in an inspection report documenting the NRC's assessment of Southern California Edison's response to a Confirmatory Action Letter (CAL) issued on March 27, 2012. The CAL documented actions that Edison agreed to take in response to the Jan. 31, 2012, steam generator tube leak at its Unit 3 reactor. The NRC conducts inspections in order to verify that the commitments made in the licensee's response to a CAL have been completed. Such inspections can lead to findings such as those cited in this instance. In addition, NRC has issued a Notice of Nonconformance to Mitsubishi Heavy Industries for problems associated with the design of the steam generators. Mitsubishi has 30 days in which to respond in writing. The company can contest the notice, or provide additional information explaining corrective actions they have taken or plan to take to address the nonconformance. The NRC has preliminarily determined that the inadequate computer modeling that led to the deficient design of the steam generators is a white finding of low to moderate safety significance in Unit 3. A green finding was issued for Unit 2 because its tubes did not lose integrity. Two minor violations were also identified associated with the review of proposed changes to limit plant power to 70 percent. Edison has 10 days in which to notify the NRC of its intentions of whether it will accept the violation, request a regulatory conference or submit information in writing before a final determination is made on the proposed violation.

State of Michigan

Cardiology Practice On September 9, 2013, NRC staff issued a $1,000 civil penalty and confirmatory order to the Bradley D. Bastow cardiology practice in South Haven, Michigan for violations in the safe use of radioactive material. The violations were identified during an NRC special inspection and an investigation looking into the handling of radioactive material used for diagnostic medical tests. The NRC staff concluded that the company failed to adhere to certain NRC safety requirements which include conducting appropriate contamination surveys; making sure survey instruments are properly calibrated; conducting regular inventories of sealed radioactive sources; keeping accurate records; and, keeping accurate and complete records. The confirmatory order and the $1,000 fine were issued as a result of the Alternative Dispute Resolution process, which uses a mediator to assist the NRC and a licensee to reach an agreement when there are differences regarding an enforcement action. The company agreed to abide by the conditions of the order requiring a number of actions to ensure the NRC's concerns will be addressed. Some of the commitments include: making sure all equipment listed on the NRC license is calibrated and operable; having the company's radiation safety officer complete medical radiation safety officer refresher training; increasing the frequency of radiation safety program reviews; making sure everyone involved in NRC-regulated activities at the office understands NRC safety requirements and feels free to raise safety concerns; and, making sure that the documentation of NRC-regulated activities, including those required by the confirmatory order, is complete, accurate and clear. The medical practice agreed to address these issues according to the timelines established in the order and to notify the NRC in writing upon completion of specific actions. *The NRC's confirmatory order, inspection report and choice letter summarizing the results of the NRC's investigation are available on the NRC's website at www.nrc.gov.*

State of Nebraska

Fort Calhoun Nuclear Plant On August 27, 2013, NRC met with officials from the Omaha

Public Power District (OPPD) to hear the licensee's strategic plans to ensure long-term performance improvement at the Fort Calhoun nuclear plant. The plant is located 19 miles north of Omaha, Nebraska. No restart decision was made at the meeting. Instead, the NRC's goal was to understand the proposed actions aimed at ensuring long-term performance improvement if a restart decision is granted. During the meeting—which was held in the NRC's Region IV office in Arlington, Texas—OPPD officials briefed NRC staff on its Fort Calhoun Station plan for sustained improvement and enhancements it believes will provide improved long-term performance post restart. The action plans involve enhancements to safety culture, corrective actions, design basis documents, procedures and other operating programs. There have been ongoing NRC inspections at the site looking at the short-term recovery actions prior to a restart decision. OPPD's plan offers the first glimpse at detailed long-term plans to sustain performance improvement. Subsequently, on September 24, 2013, NRC held a public meeting with OPPD officials to discuss status of the recovery efforts underway at the Fort Calhoun nuclear plant. During the meeting, the public was provided an opportunity to ask questions on topics related to the NRC's oversight and inspections at Fort Calhoun; NRC provided an update on its inspection and oversight activities at the site; and, OPPD provided the current status of actions it's taken to address the items on the restart checklist. Fort Calhoun entered into the NRC's increased oversight category in 2011 after it shut down for a refueling outage. The outage was extended due to historic Missouri River flooding followed by an electrical fire and other restart complications.

State of New Hampshire

Seabrook Nuclear Plant On October 9, NRC conducted a public open house and meeting to discuss work being done by the Seabrook nuclear power plant's owner to address concrete degradation at the Seabrook, New Hampshire facility. The open house allowed for one-on-one discussions between members of the public and NRC staff on the subject. The subsequent formal meeting on the topic between the NRC staff and representatives of Seabrook's owner, NextEra, included an opportunity for audience members to ask questions of NRC staff. The concrete degradation at Seabrook is caused by alkali silica reaction, or ASR. This is a chemical combining of 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.) The result of the reaction is a gel, which can expand and cause micro-cracks in the concrete. After the ASR problem was identified at the plant in 2010, the NRC in May 2012 issued a Confirmatory Action Letter (CAL) to NextEra confirming that it would complete a variety of actions in response to the condition. Since that time, the agency has performed inspections to ensure NextEra was meeting the commitments specified in the CAL. In an inspection report issued on August 9, the NRC determined that NextEra had met all of the commitments contained in the CAL. However, the NRC is continuing to provide focused oversight of the company's concrete degradation testing program being conducted at the University of Texas – Austin, as well as of the on-site monitoring of ASR progression in the plant's concrete structures. Based on reviews completed to date, the NRC has found that an acceptable basis has been established to ensure that the continued operability of Seabrook's concrete structures will be maintained. The results of the testing program at the University of Texas will be used to determine the long-term resolution of the ASR issues.

State of New York

Nine Mile Nuclear Plant On November 1, 2013, NRC will conduct a Regulatory Conference with Constellation Energy Nuclear Group, LLC to discuss an apparent violation at the Nine Mile Point 1 nuclear power plant preliminarily

determined to be "greater than green." The meeting is scheduled to begin at noon at the NRC's Region I Office, at 2100 Renaissance Boulevard in King of Prussia, Pennsylvania. It will be open to the public, with an opportunity for any member of the public attending to ask questions of NRC staff before it is concluded. The violation to be discussed stems from an event on April 16 at Nine Mile Point 1, which is operated by Constellation and located in Scriba, New York. Following the shutdown of the reactor for a planned refueling and maintenance outage, flow from the plant's shutdown cooling system—used at such times to circulate water through the nuclear fuel and keep it properly cooled—was inadvertently and temporarily lost due to a combination of maintenance activities, an unplanned loss of a DC electrical power bus (system) and the subsequent improper restoration of the DC bus. A Regulatory Conference is held, if requested by a plant owner, to discuss an inspection finding and its safety significance. It will also give Constellation an opportunity to clarify any issues raised in the NRC inspection report. No decision will be made at the conference on the apparent violation or any enforcement action. Those decisions will be made by NRC officials at a later time.

Exelon

Exelon Not Planning Nuclear Plant Closures in Near Term

During a report on second-quarter earnings, Exelon executives stated that they expect that a plan to take over operation of Constellation Energy Nuclear Group's (CENG's) reactors would result in cost savings. In addition, the executives stated that smaller plants in Exelon's fleet are not at immediate risk of closure.

EDF and Constellation, which was acquired by Exelon last year, founded CENG. According to company officials, integrating the five CENG reactors into the Exelon fleet is expected to save $50 million to $70 million while allowing for better talent development.

In response to a question about the viability of Exelon's nuclear fleet overall, company executives replied, "We have worked hard over the last couple of years to continue to focus on costs to maintain some of the viability of the smaller units. ...There is nothing on the chopping block right now. It is constant work to look at cost, and it's constant work to look at regulatory structure. And if it does not improve, we'll be talking more about those facilities."

The company also said that refueling Clinton annually will keep it viable in the future, adding that the company plans to continue to closely monitor New York power regulations, which affect CENG's Ginna and Nine Mile Point plants.

The company also noted that Exelon's reactor fleet had a capacity factor of 92.8 percent in the second quarter.

FirstEnergy

NRC Staff Meets with FirstEnergy re Performance of Nuclear Plants

On September 24, 2013, the U.S. Nuclear Regulatory Commission and FirstEnergy Nuclear Operating Co. (FENOC) senior managers held a meeting to discuss topics related to the performance of the company's fleet of nuclear power plants. FENOC operates the Beaver Valley plant in Shippingport, Pennsylvania; the Davis-Besse plant near Oak Harbor, Ohio; and, the Perry plant in Perry, Ohio.

The meeting was held at the Embassy Suites-Pittsburgh Airport hotel in Coraopolis,

Pennsylvania. During the session, which was open to the public, FENOC provided updates on activities and issues involving its plants.

"We have interactions with the companies that operate U.S. nuclear power plants throughout the year, but this type of meeting allows for a briefing on a broad range of topics in a single setting, with key agency managers in attendance," NRC Region I Administrator Bill Dean said. "We welcome this opportunity to engage FENOC on the latest developments at its three sites."

This was a Category 1 meeting—meaning a session with one company to discuss particular regulatory issues regarding specific facilities. Following the business portion of the meeting, members of the public were provided with an opportunity to discuss FENOC plant performance topics and the role of the agency in ensuring safe plant operation with NRC staff.

The agenda for the meeting is available on the NRC's website at www.nrc.gov.

Federal Emergency Management Agency (FEMA) and U.S. Nuclear Regulatory Commission (NRC)

Preliminary Draft Changes to Emergency Preparedness Criteria

From October 29-31, 2013, Federal Emergency Management Agency (FEMA) and U.S. Nuclear Regulatory Commission (NRC) staff met with the public, state organizations and industry representatives to discuss proposed draft revisions to the joint NRC/FEMA document on emergency planning for nuclear power plants.

The meeting was held in Room T2B3 at the NRC's White Flint North complex at 11555 Rockville Pike in Rockville, Maryland. The meeting ran from 10:00 a.m. – 5:00 p.m. on Tuesday, October 29 and Wednesday, October 30. The meeting ran from 1:00 – 5:00 p.m. on Thursday, October 31.

During the meeting, NRC and FEMA staff reviewed draft guidance related to emergency classification, notifying the public about an emergency and protective actions. The agenda included opportunities for public comment and questions, as well as interaction with the agencies' writing teams.

The agencies are working together to update "Criteria for Preparation and Evaluation of Radiological Emergency Response Plans and Preparedness in Support of Nuclear Power Plants." The multi-year process for revising this guidance will incorporate what's been learned since it was published in 1980. The draft stakeholder revision documents are available on the regulations.gov website using Docket ID FEMA-2012-0026. The agencies expect to issue the draft guidance for formal public comment in late 2014.

For additional information, please contact Scott Burnell of the NRC at (301) 415-8200.

National Academy of Sciences (NAS)

National Academy of Sciences Starts Cancer Risk Pilot Study

By press release dated September 23, 2013, it was announced that the National Academy of Sciences (NAS) has started the initial planning step of a U.S. Nuclear Regulatory Commission-sponsored pilot study of cancer risks in populations around six U.S. nuclear power plants and a nuclear fuel-cycle facility. NRC asked the Academy to carry out this pilot to help the agency determine whether to extend the study to additional U.S.

reactors and fuel-cycle facilities. Information about the study was presented during an agenda session at the LLW Forum meeting in Park City, Utah on October 21-13, 2013.

NAS staff will be holding meetings in the next few months regarding the pilot study, with meeting information being posted on the Academy website 10 business days before a meeting. The pilot study, described in NRC staff's update (SECY-12-0136) to the agency's five Commissioners, will examine cancer risks around each of the seven nuclear sites using two types of epidemiological studies. The first will examine multiple cancer types in populations of all ages living near the nuclear sites. The second will be a record-linkage-based case-control study of cancers in children born near the sites. The six nuclear power plants are:

- Dresden Nuclear Power Station in Morris, lllinois;
- 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 (permanently shut down) in San Clemente, California.

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

The NAS study aims to update and improve information on potential cancer risks around nuclear sites from 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 risks in counties that contain or are adjacent to nuclear sites.

For additional information regarding the NAS cancer risk pilot study, please contact Scott Burnell at (301) 415-8200.

U.S. Nuclear Regulatory Commission

Report Issued re Alternatives for Handling LLW Spent Ion Exchange Resins

On September 27, 2013, the U.S. Nuclear Regulatory Commission published a *Federal Register* notice (78 *Federal Register* 59,729), announcing the publication of a Final Report titled, *"Final Comparative Environmental Evaluation of Alternatives for Handling Low-Level Radioactive Waste Spent Ion Exchange Resins from Commercial Nuclear Power Plants."*

Overview

In the comparative environmental evaluation presented in the Final Report, the alternatives are described and potential environmental impacts of the alternatives are:

- identified for a range of resource or impact areas (e.g., air quality, ecological resources, public and occupational health, transportation, waste management, water resources); and,
- compared in terms of their relative potential effects on human health and the environment.

For reasons discussed in the report, the six alternatives are generic and not location-specific, and the comparative environmental evaluation of the alternatives is largely qualitative. An exception is that potential transportation impacts are assessed both quantitatively and qualitatively.

Furthermore, NRC states that the evaluation is based on conservative, often bounding assumptions regarding the alternatives and various aspects of the analysis. This approach is consistent with the assessment of generic, non-location-specific alternatives, for which exact data and information would not be available. Consequently, the staff used its professional knowledge, experience, and judgment to establish reasonable technical considerations, estimations, and approximations with regard to how the alternatives were described, would be implemented, and would potentially affect human health and the environment. NRC states that staff also took care not to underestimate potential environmental effects and instead worked to bind the possible range of outcomes in most cases. Thus, NRC believes that the potential impacts of the six alternatives, if implemented in actual practice, would be expected to be of lesser magnitude than described in the report.

Ion exchange resins are powdered or small, bead-like materials used at commercial nuclear power plants to capture radioactive contaminants dissolved in water used in plant operations. Over time, the ion exchange resins lose their ability to remove the contaminants from the water and the resins become "spent" and must be removed and replaced. Spent ion exchange resins are managed as low-level radioactive waste and are classified as Class A, B, or C when shipped for disposal, depending on the concentrations and radioactivity levels of radionuclides present.

At this time, all 65 U.S. commercial operating nuclear power plants (which currently include 104 operating nuclear reactors at 65 locations) can dispose of their Class A low-level radioactive waste spent ion exchange resins, and potentially have access to a disposal facility for their Class B and C low-level radioactive waste spent ion exchange resins. NRC notes, however, that the scope of the evaluation presented in the Final Report was established at an earlier time when the majority of nuclear power plants had no access, or limited access, to Class B and C disposal.

Low-level radioactive waste processing and waste disposal companies are exploring alternatives for managing Class B and C concentration spent ion exchange resins. One of these alternatives is to use a centralized processing facility to blend small volumes of higher-activity Class B and C concentration spent ion exchange resins with larger volumes of low activity Class A concentration spent ion exchange resins to produce Class A waste. Potential environmental impacts of this alternative, as compared to potential impacts of the other alternatives, are described in the report.

Specifically, the six alternatives evaluated by NRC in the Final Report include:

- Alternative 1A—Direct disposal of blended Class A, B, and C spent ion exchange resin low-level radioactive waste from a central processing facility where mechanical mixing would be used to blend the spent ion exchange resins to produce Class A waste;
- Alternative 1B—Direct disposal of blended Class A, B, and C spent ion exchange resin low-level radioactive waste from a central processing facility where thermal processing would be used to blend the spent ion exchange resins to produce Class A waste;
- Alternative 2—Direct disposal of the Class A, B, and C spent ion exchange resin (without blending);
- Alternative 3—Direct disposal of the Class A spent ion exchange resins, with long-term onsite storage of the Class B and C concentration spent ion exchange resins at the nuclear power plants (including construction to expand the existing waste storage facilities at the nuclear power plants), followed by

disposal of the Class B and C spent ion exchange resins at the end of the long-term storage period;

- Alternative 4A—Direct disposal of the Class A spent ion exchange resins, with volume reduction (by thermal processing) of the Class B and C concentration spent ion exchange resins, followed by long-term storage of the volume-reduced Class B and C concentration spent ion exchange resins (including construction of a storage facility at an existing low-level radioactive waste disposal site), and then disposal at the end of the long-term storage period; and,
- Alternative 4B—Direct disposal of the Class A spent ion exchange resins, with volume reduction (by thermal processing) of the Class B and C concentration spent ion exchange resins, then disposal of the volume-reduced Class B and C spent ion exchange resins.

The comparative environmental evaluation is based on a number of assumptions. For example, the baseline for the evaluation is current land use. This means that, with the exception of the construction of the long-term waste storage facilities considered in Alternatives 3 and 4A, the evaluation assumes that no new spent ion exchange resins handling, processing, and disposal facilities will be constructed and, therefore, does not revisit the impacts of construction of any of these facilities. In addition, the evaluation assumes that these facilities operate under licenses from the NRC or an Agreement State, and that all activities conducted in the alternatives would be in compliance with all applicable federal, state, and local legal and regulatory requirements.

Additionally, each alternative is considered individually in the evaluation (i.e., each alternative is assumed to be implemented at the exclusion of all the other alternatives). There is no mix of alternatives, and all spent ion exchange resins generated at all 65 nuclear power plants are assumed to be managed under each alternative. The NRC staff recognizes that Agreement State requirements and other factors could prevent some nuclear power plants from using some alternatives, and that in actual practice, all spent ion exchange resins generated at all 65 nuclear power plants would not be managed under any single alternative. Therefore, the assumption that all spent ion exchange resins are managed under each alternative results in conservative estimates of the potential impacts of each alternative.

According to NRC, the assumptions used in this evaluation are reasonable and consistent with SECY-10-0043, Option 2, which established the basis for the comparative environmental evaluation.

NRC notes that the potential environmental effects of the six alternatives were evaluated for the following resource or impact areas: air quality, ecological resources, historic and cultural resources, noise, public and occupational health, soil, transportation, waste management, and water resources. The following resource and impact areas were eliminated from detailed consideration for reasons discussed in the report: accidents and other off-normal conditions, environmental justice, geology and minerals, land use, socioeconomics, and visual and scenic resources. In addition, to the extent practicable, the evaluation of potential environmental impacts identifies and accounts for generally accepted impact mitigation measures in each resource or impact area that would typically be employed in general industry practice. In accordance with the standard of significance that has been established by the NRC for assessing environmental impacts, using the standards of the Council on Environmental Quality's regulations in 40 CFR 1508.27 as a basis, each impact for each alternative was assigned one of the following three significance levels:

- Small: The environmental effects are not detectable or are so minor that they would neither destabilize nor noticeably alter any important attribute of the resource.

- Moderate: The environmental effects are sufficient to noticeably alter, but not destabilize important attributes of the resource.
- Large: The environmental effects are clearly noticeable and are sufficient to destabilize important attributes of the resource.

The evaluation concludes that the potential environmental impacts of all six alternatives in all resource and impact areas would be small, with the exception of potential impacts on historic and cultural resources from construction of long-term waste storage facilities in Alternatives 3 and 4A, which could be small to moderate. Reasons for the mostly small impacts, by resource or impact area, are discussed in the report.

Background

In the Final Report, NRC staff identifies and compares potential environmental impacts of six alternatives for managing low-level radioactive waste spent ion exchange resins generated at commercial nuclear power plants. The comparative environmental evaluation was conducted consistent with Option 2 in the NRC staff's paper for the Commission, SECY-10-0043, titled "Blending of Low-Level Radioactive Waste." SECY-10-0043 identified policy, safety, and regulatory issues associated with low-level radioactive waste blending, provided options for an NRC blending position, and proposed that the NRC staff revise the Commission position on blending to be risk-informed and performance based. Option 2 of SECY-10-0043, which was approved by the Commission, instructed staff on addressing blending in the rulemaking setting; this is not a licensing action.

Additionally, in consideration of stakeholder concerns expressed regarding potential environmental impacts associated with the blending of certain low-level radioactive waste, NRC staff also proposed that "…disposal of blended ion exchange resins from a central processing facility would be compared to direct disposal of the resins, onsite storage of certain wastes when disposal is not possible and further volume reduction of the Class B and C concentration resins." The Final Report addresses this comparison of ion exchange resins waste handling alternatives. The six alternatives evaluated in the report include the four identified by the NRC staff in SECY-10-0043, plus two additional alternatives that represent variations on the disposal of blended ion exchange resins from a central processing facility and volume reduction of the Class B and C concentration resins alternatives. The assumptions and methodologies used in the staff's evaluation and the evaluation results are documented in the report.

On September 20, 2012, NRC staff published a notice in the *Federal Register* (77 *Federal Register* 58,416) requesting public comments on the *"Draft Comparative Environmental Evaluation of Alternatives for Handling Low-Level Radioactive Waste Spent Ion Exchange Resins from Commercial Nuclear Power Plants."* In the Draft Report, NRC staff identified and compared potential environmental impacts of six alternatives including options involving blending, long-term storage, direct disposal, and volume reduction of LLRW spend ion exchange resins.

The 120-day public comment period ended on January 18, 2013. The NRC received comments from six commenters in response to the notice. Appendix B of the Final Report presents all of the comments received and the NRC staff's response to each of those comments.

The Final Report has been prepared in consideration of all the comments received, and includes revisions to the Draft Report based on some of these comments.

NRC's Federal Register notice and Final Report are available online via (1) the NRC's Blending of Low-Level Radioactive Waste web site at http://www.nrc.gov/waste/llw-disposal/llw-pa/llw-blending.html; (2) the Federal Rulemaking web site at http://www.regulations.gov searching for

Docket ID NRC-2012-0218; and, (3) ADAMS at www.nrc.gov under Accession No. ML13263A276.

For additional information, please contact Stephen Lemont of the NRC's Office of Federal and State Materials and Environmental Management Programs at (301) 415-5163 or via email at Stephen.Lemont@nrc.gov. Please refer to Docket ID NRC-2012-0218.

Red-Line/Strike-Out Documents Available re 10 CFR Parts 20 and 61 Proposed Rule Language Changes

In early October 2013, the U.S. Nuclear Regulatory Commission announced the availability of red-line/strikeout documents of 10 CFR Parts 20 and 61 proposed rule language changes in SECY-13-0075. At the request of stakeholders, NRC staff prepared the red-line/strikeout documents comparing the existing 10 CFR Parts 20 and 61 regulations with the rule language changes proposed by the staff in SECY-13-0075.

NRC stresses that the red-line/strike-out documents are provided for information only and are not official docketed documents. As a result, the NRC is not seeking comments on them.

"The proposed rule language in the red-line/strikeout documents has not been reviewed or approved by the Commission and may change based on the Commission's final deliberation on the staff's proposed rule package," states NRC staff. "The staff cannot guarantee these documents will correspond to any rule language that the Commission may eventually approve for publication for public comment. When, and if, the Commission approves any proposed rule language, these documents will be updated, as necessary, to correspond with the Commission approved proposed rule language."

The red-line/strike-out documents can be found on NRC's Site-Specific Analysis Rulemaking (Unique Waste Streams) Website at http://www.nrc.gov/about-nrc/regulatory/rulemaking/potential-rulemaking/uw-streams.html.

For additional information, please contact Andrew Carrera of the NRC's Division of Intergovernmental Liaison and Rulemaking, Office of Federal and State Materials and Environmental Management, at (301) 415-1078 or at Andrew.Carrera@nrc.gov.

Background

On July 18, 2013, NRC staff requested Commission approval to publish a proposed rule in the *Federal Register* that would amend Part 61 of Title 10 of the *Code of Federal Regulations* (10 CFR), "Licensing Requirements for Land Disposal of Radioactive Waste." (See *LLW Notes,* July/August 2013, pp. 1, 32-38.)

The proposed amendments would revise 10 CFR Part 61 to require low-level radioactive waste disposal licensees and license applicants to conduct updated and new site-specific analyses and to permit the development of criteria for future low-level radioactive waste acceptance based on the results of these analyses. According to NRC staff, these amendments would ensure that low-level radioactive waste streams that are significantly different from those considered during the development of the current regulations will be disposed of safely and meet the performance objectives for land disposal of LLRW.

The proposed rule would update the existing technical analysis requirements for protection of the general population (i.e., performance assessment) to include a 10,000-year compliance period; add a new site-specific technical analysis for the protection of inadvertent intruders (i.e.,

intruder assessment) that would include a 10,000-year compliance period and a dose limit; add a new analysis for certain long-lived low-level radioactive waste (i.e., performance period analysis) that would include a post-10,000 year performance period; and revise the technical analyses required at closure.

NRC would also add a new requirement to develop criteria for the acceptance of low-level radioactive waste for disposal based on either the results of these technical analyses or on the existing low-level radioactive waste classification requirements. This would facilitate consideration of whether a particular disposal site is suitable for future disposal of depleted uranium (DU), blended low-level radioactive waste, or any other previously unanalyzed low-level radioactive waste stream. Additionally, the NRC is proposing amendments to facilitate implementation and better align the requirements with current health and safety standards. This rule would affect low-level radioactive waste disposal licensees and license applicants that are regulated by the NRC or the Agreement States.

The proposed rule (SECY-13-0075) can be found in the NRC's Agencywide Documents Access and Management System (ADAMS) using accession number ML13129A268. The following enclosures were submitted along with the proposed rule: a draft Federal Register notice (ML13129A262); draft regulatory analysis (ML13129A264); and, summary of stakeholder feedback (ML13129A266).

To locate the proposed rule and enclosures on NRC's web site, please go to www.nrc.gov and click on "Adams Public Documents" on the right-hand column. Then, click on "Begin Web-Based ADAMS Search." When you open that page, click on "Advance Search" tab near the top. Then, for "document properties" enter "Accession Number" as the property, "is equal to" as the operator, and the specific ML number for the desired document.

Meeting re Part 61 Revisions and LLW Strategic Assessment Updates

March 7, 2014 in Phoenix, Arizona

The U.S. Nuclear Regulatory Commission (NRC) will conduct a public meeting on Friday, March 7, 2014—immediately following the annual Waste Management 2014 Conference. The meeting will be held from 8:00 a.m. – 1:00 p.m. at a location to be determined in Phoenix, Arizona. Registration is from 7:30 a.m. – 8:00 a.m. The purpose of the public meeting is to discuss potential changes to the agency's Part 61 rule and its future efforts to update the NRC's Strategic Assessment of its LLW Regulatory Program.

On July 18, 2013, NRC staff requested Commission approval to publish a proposed rule in the *Federal Register* that would amend Part 61 of Title 10 of the *Code of Federal Regulations* (10 CFR), "Licensing Requirements for Land Disposal of Radioactive Waste." (See *LLW Notes*, July/August 2013, pp. 1, 32-38.) The staff is proposing to revise Part 61 in response to Commission direction and stakeholders' comments.

The staff is also seeking comments on developments that would affect the Low-Level Radioactive Waste Regulatory Program in the next 5 to 7 years, including changes to the national landscape in the low-level radioactive waste area that would affect licensees and sited states in the context of safety, security, and the protection of the environment.

All are welcome to attend, including waste generators, processors, disposal facility operators, states, low-level radioactive waste compacts, advocacy groups and members of the public. Although this meeting is not a part of the WM 2014 Conference, it is being held the day after the conference ends in an effort to facilitate

attendance and participation by members of the waste industry and other stakeholders who have an interest in the subject.

For questions or additional information, please contact Gregory Suber of the NRC at Gregory.Suber@NRC.gov.

Public Comment Period Initiated re Waste Confidence

The U.S. Nuclear Regulatory Commission is seeking public comment on a proposed rule and supporting environmental study on the effects of extended storage of spent nuclear fuel beyond the licensed operating life of commercial reactors. In this regard, on September 13, 2013, NRC's Waste Confidence Directorate published the following three notices in the *Federal Register:*

- Proposed Waste Confidence Rule for Public Comment at https://federalregister.gov/a/2013-21708;
- Notice of Availability for the Waste Confidence Draft Generic Environmental Impact Statement (DGEIS) at https://federalregister.gov/a/2013-21715; and,
- Environmental Protection Agency's Notice of Availability of the Waste Confidence DGEIS at https://federalregister.gov/a/2013-22363.

Overview

The proposed rule, known as "waste confidence," would replace a similar provision in NRC's environmental regulations that was vacated last year by the U.S. Court of Appeals for the District of Columbia Circuit. The rule does not authorize extended storage of spent fuel at reactor sites – a separate license is required for that. Rather, waste confidence is a generic finding of the environmental impacts of storing spent fuel for extended periods beyond the licensed operating life of reactors. The Waste Confidence DGEIS forms the regulatory basis for the proposed rule. The draft statement was distributed on September 6 and is available on the NRC's Waste Confidence webpage. The proposed rule was also made available on this page following publication.

Comment Period

The publication of these three notices started the 75-day public comment period on the Waste DGEIS (http://pbadupws.nrc.gov/docs/ML1322/ML13224A106.pdf) and proposed rule. The public comment period ends on Wednesday, November 27, 2013. Comments received after November 27, 2013, will be considered as practicable. However, the NRC can only guarantee consideration of comments received on or before November 27, 2013.

Submitting Written Comments

In addition to presenting oral comments at any of the twelve planned public meetings, interested stakeholders may submit written comments on the DGEIS and proposed rule as follows:

- e-mail comments to Rulemaking.Comments@nrc.gov, citing Docket ID No. NRC–2012–0246;
- Online at www.regulations.gov using Docket ID No. NRC–2012–0246 (direct link to comment submission: http://www.regulations.gov/#!submitComment;D=NRC-2012-0246-0361);
- mail comments to Secretary, U.S. Nuclear Regulatory Commission, Washington, DC 20555-0001 (ATTN: Rulemakings and Adjudications Staff);
- fax comments to Secretary, U.S. Nuclear Regulatory Commission, at (301) 415-1101, citing Docket ID No. NRC–2012–0246; and,
- hand-deliver comments to 11555 Rockville Pike, Rockville, Maryland 20852 between

7:30 a.m. and 4:15 p.m. EST on federal workdays (telephone 301/415-1677).

The NRC gives all comments equal weight, no matter who submits them or how they are submitted.

Background

The proposed rule was developed to replace a provision in NRC's environmental regulations that was updated in 2010 but struck down last year by the U.S. Court of Appeals for the District of Columbia Circuit. Following the court ruling, the Commission directed the staff to develop a new rule and GEIS on the extended storage of spent fuel beyond a reactor's licensed life.

Previous versions of the proposed rule and draft statement were made publicly available in July. The current versions incorporate additional material and editorial changes directed by the Commission in a Staff Requirements Memorandum dated August 5, 2013.

For information regarding the twelve (12) associated meetings that have been scheduled nationwide this autumn, and how to register to attend these meetings, please see related story in this issue or go to the Waste Confidence Public Involvement webpage at http://www.nrc.gov/waste/spent-fuel-storage/wcd/pub-involve.html.

For additional information on submitting comments, please contact Sarah Lopas of the NRC at (301) 287-0675 or Sarah.Lopas@nrc.gov.

Meetings Scheduled re Waste Confidence Proposed Rule & Draft GEIS

Draft Environmental Study Available for Pre-Comment Period Review

On September 5, 2013, the U.S. Nuclear Regulatory Commission announced that staff will hold twelve (12) meetings nationwide this autumn to receive public comment on a proposed rule on the extended storage of spent nuclear fuel at closed reactor sites and the draft environmental study that supports the rule. The goal of these meetings is to ensure that the NRC's review is comprehensive, open, and inclusive and will inform the next phase of the agency's work.

The following day, the agency released an early draft of the environmental study for review by interested stakeholders in advance of the official start of the public comment period on September 13, 2013. (See related story, this issue.)

Meeting Dates and Locations

During twelve public meetings, the NRC Waste Confidence Directorate staff will present a short overview of the draft GEIS and proposed rule, after which interested parties and members of the public will then be invited to present oral comments on the documents. All twelve meetings will be transcribed, and transcripts will be added to the official record for consideration in preparing the final GEIS and rule.

The meetings were initially scheduled for the following dates and cities:

- October 1 at NRC headquarters in Rockville, Maryland;
- October 3 at the Crowne Plaza International Airport Convention Center in Denver, Colorado;

- October 7 at the Courtyard by Marriott in San Luis Obispo, California;
- October 9 at the Sheraton Resort & Spa in Carlsbad, California;
- October 15 at the Hilton Garden Inn in Perrysburg, Ohio;
- October 17 at the Minneapolis Marriott Southwest in Minnetonka, Minnesota;
- October 24 at the Marriott Hotel in Oak Brook, Illinois;
- October 28 at the Radisson Hotel & Suites in Chelmsford, Massachusetts;
- October 30 at the Westchester Marriott in Tarrytown, New York;
- November 4 at the Hilton University Place in Charlotte, North Carolina;
- November 6 at the Hyatt Regency at the International Airport in Orlando, Florida; and,
- November 14 at NRC headquarters in Rockville, Maryland.

NRC had to reschedule some of the above-referenced meetings due to the government shutdown in the first part of October.

The regional meetings will be held from 7:00 - 10:00 p.m. local time, and will be transcribed. The meetings at NRC headquarters will run from 2:00 – 5:00 p.m. EST, and will be webcast as well as transcribed. NRC staff members will be available for informal discussions an hour before each meeting.

Meeting details and registration instructions are also available on the Waste Confidence Public Involvement webpage at http://www.nrc.gov/waste/spent-fuel-storage/wcd/pub-involve.html#schedule.

As the public meetings get underway, the Waste Confidence Directorate will be adding meeting notices, the NRC presentation, transcripts, and meeting summaries on the public website at http://www.nrc.gov/waste/spent-fuel-storage/wcd/pub-involve.html.

Meeting Registration

Interested stakeholders may register for the meetings by email at WCRegistration@nrc.gov or by phone at (301) 287-9392. The Waste Confidence Directorate requests that registrants include name, affiliation or organization if appropriate, location of the meeting to be attended, and requests for accessibility accommodations if necessary. Also, registrants are asked to please note whether or not they would like to provide oral comments. Registration will be confirmed by phone or email.

Stakeholders that are interested in providing oral comments at the meetings are encouraged to register at least three (3) days prior to the meeting; however, registration will be accepted at the meeting. Please note that individual oral comments may be limited by the time available, depending on the number of persons who register.

Stakeholders that are unable to attend a meeting in person are encouraged to consider participating in one of the NRC headquarters meetings which will be webcast and accessible through a moderated teleconference line.

Additional information on how to register for any of the public meetings may be found via the instructions at http://www.nrc.gov/waste/spent-fuel-storage/wcd/pub-involve.html#schedule.

Monthly Status Teleconference Information

The transcript and meeting summary for the August 14 monthly status teleconference are now available as follows:

- The transcript for the August teleconference is located at http://pbadupws.nrc.gov/docs/ML1323/ML13231A172.pdf (ADAMS Accession No. ML13231A172).
- The meeting summary for the August teleconference is located at http://pbadupws.nrc.gov/docs/ML1323/ML13234A111.pdf (ADAMS Accession No. ML13234A111).

The next Waste Confidence monthly status update teleconference is scheduled for Thursday, September 12, from 1:30 p.m. to 2:30 p.m. EDT. Interested stakeholders may participate by calling (800) 857-2553 and providing the operator with passcode 3682386.

- The meeting notice and agenda for the September 12 monthly status teleconference is located at http://pbadupws.nrc.gov/docs/ML1323/ML13234A172.pdf (ADAMS Accession No. ML13234A172).

Background Information

The proposed rule was developed to replace a provision in NRC's environmental regulations that was updated in 2010 but struck down last year by the U.S. Court of Appeals for the District of Columbia Circuit. Following the court ruling, the Commission directed the staff to develop a new rule and GEIS on the extended storage of spent fuel beyond a reactor's licensed life.

For additional information about the upcoming release of the draft GEIS and proposed rule and associated comment period, please contact Sarah Lopas of the NRC at (301) 287-0675 or at Sarah.Lopas@nrc.gov.

Meeting re Expedited Transfer of Spent Fuel to Dry Cask Storage

On September 18, 2013, the U.S. Nuclear Regulatory Commission held a public meeting to discuss the agency's activities regarding whether spent nuclear fuel should be transferred sooner from pools to dry casks.

The Meeting

The meeting, which was scheduled to run from 10:00 am – 5:00 pm, was held in the Commissioners Hearing Room at the agency's headquarters in Rockville, Maryland. During the meeting, NRC staff updated the public on the agency's assessment of whether to require expedited transfer of spent fuel to dry cask storage and the use of the agency's draft spent fuel pool study and other resources in the staff's assessments. Members of the public were provided with an opportunity to ask the staff clarifying questions.

NRC scheduled the meeting in response to the high level of interest expressed at an August 22 public meeting on the expedited transfer of spent fuel. The scope of this meeting also included the draft spent fuel pool study, which was issued in June 2013. (See *LLW Notes*, July/August 2013, pp. 49-50.)

Background

NRC initiated a spent fuel study following the March 2011 Fukushima nuclear accident, where the spent fuel pools survived a strong earthquake. The study considered a spent fuel pool similar to those at Fukushima and 23 other U.S. reactors, and an earthquake several times stronger than what the pool's design considered. The study examined both a "full" spent fuel pool and one with less fuel and more spacing between individual fuel assemblies, as well as emergency procedures for adding water to the pool in the unlikely event that the earthquake causes the pool to lose water.

"Our detailed analysis showed that even a very strong earthquake has a low probability of damaging the pool studied to the point of losing water," said Brian Sheron, Director of the NRC's Office of Nuclear Regulatory Research. "The draft study also shows that even if this particular pool was damaged, the fuel could be kept safely cool in all but a few exceptional circumstances.

We'll use the final study to inform further analysis of U.S. spent fuel pools."

In cases where the analysis led to fuel damage, the draft study concluded existing emergency procedures would keep the population around the plant safe. Those emergency measures could mean relocating people from a large area of potentially contaminated land. The study also examined the potential benefits of moving all spent fuel older than five years (and therefore easier to cool) into storage casks within five years. For the scenarios examined, the study concluded faster fuel transfer to casks would not provide a significant safety benefit for the plant studied. The NRC will incorporate public comments and use the final study in a broader regulatory analysis of the spent fuel pools at U.S. operating nuclear reactors as part of its Japan Lessons-Learned activities.

For additional information, please contact Scott Burnell of the NRC at (301) 415-8200 or Kevin Witt of the NRC at (301) 415-2145.

NRC Holds Meeting re Faster Transfer of Spent Fuel to Dry Casks

On August 22, 2013, U.S. Nuclear Regulatory Commission staff held a public meeting to discuss ongoing analysis of spent fuel transfer with the public in Rockville, Maryland. The staff, as part of the NRC's response to the 2011 Fukushima nuclear accident, has been examining potentially faster transfer of spent fuel into "dry cask" facilities.

During the meeting, which was held in the Commission Hearing Room of the NRC's White Flint complex, NRC staff described their ongoing analysis on whether faster transfers should be required. The analysis is based in part on a recent draft report comparing the effects of a very strong earthquake on one type of fully loaded spent fuel pool versus the same pool with a minimal amount of spent fuel.

During the meeting, interested groups and the public were provided the opportunity to ask questions and provide feedback on the staff's analysis.

For additional information, please contact Kevin Witt of the NRC at (301) 415-2145 or at kevin.witt@nrc.gov.

License Renewals Continue to Move Forward

On August 20-21, 2013, NRC held public meetings near the Byron and Braidwood nuclear power plants in Illinois to discuss the agency's environmental reviews of the plants' proposed license renewal. On each date, during two separate two-hour sessions, NRC staff explained the review process and accepted comments from the public about the scope of the reviews.

Exelon Generation Company filed an application, dated May 29, seeking to renew the operating licenses of the two plants for an additional 20 years of operation. The Braidwood Nuclear Station (located 20 miles southwest of Joliet) and the Byron Nuclear Station (located 17 miles southwest of Rockford) each have two pressurized-water reactors. The current operating licenses for Braidwood expire on October 17, 2026 for Unit 1 and on December 18, 2027 for Unit 2. The licenses for Byron expire October 31, 2024 for Unit 1 and on November 6, 2026 for Unit 2.

Exelon, in submitting a single application to cover both plants, cited extensive similarities in the systems, structures and components of each that

are analyzed in a license renewal review. The NRC will conduct separate environmental reviews because of differences in environmental and cultural resources surrounding the plants. Written comments from members of the public on the scope of the environmental reviews were accepted via the federal government's rulemaking website at www.regulations.gov using Docket ID NRC-2013-0178 for Byron and Docket ID NRC-2013-0169 for Braidwood through September 27, 2013.

Under NRC regulations, a nuclear power plant's original operating license may last up to 40 years. License renewal may then be granted for up to an additional 20 years, if NRC requirements are met. To date, NRC has approved license extension requests for 73 reactor units. In addition, NRC is currently processing license renewal requests for several other reactors.

Currently no final licensing decisions for reactors, including license renewal, will be made by the Commission until the waste confidence rule is completed. (See related story, this issue.)

For a complete listing of completed renewal applications and those currently under review, go to http://www.nrc.gov/reactors/operating/licensing/renewal/applications.html.*

NRC Holds Meeting re Cumulative Effects of Regulation

On September 19, 2013, U.S. Nuclear Regulatory Commission staff held a public meeting to discuss how the agency can gather new information on accounting for the combined effect of multiple regulatory actions. The meeting was held at the agency's headquarters in Rockville, Maryland.

The Commission recently directed the staff to continue efforts aimed at ensuring the agency can "consider more completely the overall impacts of multiple rules, orders, generic communications, advisories, and other regulatory actions on licensees and their ability to focus effectively on items of greatest safety import." The Commission also directed the staff to include opinions from those interested in the topic, write up any recommendations and report them to the Commission by March 2015.

The meeting focused on efforts to obtain nuclear industry case studies on the accuracy of cost and schedule estimates in NRC regulatory analyses. Industry and public interest groups were invited to comment on the effort and the public was invited to take part in the discussion.

Seating was limited at the meeting, which included teleconference and webinar access.

For additional information, please contact Tara Inverso of the NRC at (301) 415-1024 or tara.inverso@nrc.gov or David McIntyre of the NRC at (301) 415-8200 or david.mcintyre@nrc.gov.

NRC Statement re Inspector General Audit of Environmental Reviews

On August 21, 2013, the U.S. Nuclear Regulatory Commission released a statement expressing its appreciation to the Office of the Inspector General (OIG) for its audit of the agency's process for environmental reviews in accordance with the National Environmental Policy Act (NEPA). The OIG conducted the audit in response to the NRC staff's proactive recommendation that it examine whether the NRC has conducted its environmental reviews efficiently and effectively in accordance with the agency's mission.

The statement read in part as follows:

> The agency is and has been in full compliance with the National Environmental Policy Act of 1969 and the NRC's implementing regulations when preparing Environmental Impact Statements and Supplemental Environmental Impact Statements.
>
> Nevertheless, protecting public health and safety and the environment are cornerstones of the NRC's mission. Adequate, transparent environmental reviews under NEPA are important to the NRC in fulfilling this mission. The agency will therefore carefully review the OIG's recommendations and consider whether any enhancements are needed to regulations, guidance, and/or staff practice that might further strengthen the agency's environmental review process, and maintain public trust in the NRC.

For additional information, please contact the NRC at (301) 415-8200.

FY13 Nuclear Education Grants Awarded by NRC

In fiscal year 2013, the U.S. Nuclear Regulatory Commission awarded more than $14 million in grants to academic institutions through the Nuclear Education Program. The grants are used for scholarships, fellowships, trade school and community college scholarships and faculty development.

Congress authorized the NRC, through the Nuclear Education Program, to provide federal funding opportunities to qualified academic institutions to encourage careers and research in nuclear, mechanical and electrical engineering, health physics and related fields to meet expected future workforce needs. This fiscal year, the NRC awarded 48 grants to 36 higher education institutions, including minority serving institutions, located in 24 states. These grants will help to develop a future workforce capable of designing, constructing, operating and regulating the next generation of nuclear facilities.

"This program encourages students to pursue careers and research in the nuclear sector, providing them with the expertise to keep our nuclear facilities and materials safe and secure in the future," said NRC Chairman Allison Macfarlane. "As a safety regulator with an academic background, I highly value our agency's efforts to support this worthwhile effort."

The NRC announces grant opportunities on www.Grants.gov, which helps the public find and apply for federal funding opportunities. A panel of NRC staff and expert reviewers from academia and industry reviews all the grant proposals. The panel composition is diverse, with most reviewers having both experience reviewing proposals for government agencies and advanced credentials in nuclear engineering, health physics, radiochemistry or related disciplines. Each panelist has to certify that they do not have any conflict of interests for the proposals they evaluate.

With the award of the FY13 grants, the NRC Nuclear Education Program has awarded nearly $107 million since the program began in 2007.

The complete list of grants awarded, along with more information on the NRC's Nuclear Education Program, is posted on the NRC's website at http://www.nrc.gov/about-nrc/grants.html. For additional information, please contact Maureen Conley of the NRC at (301) 415-8200.

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**

- 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). .....**listserver@unixmail.rtpnc.epa.gov**

- EPA • (for program information, publications, laws and regulations) .....**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**

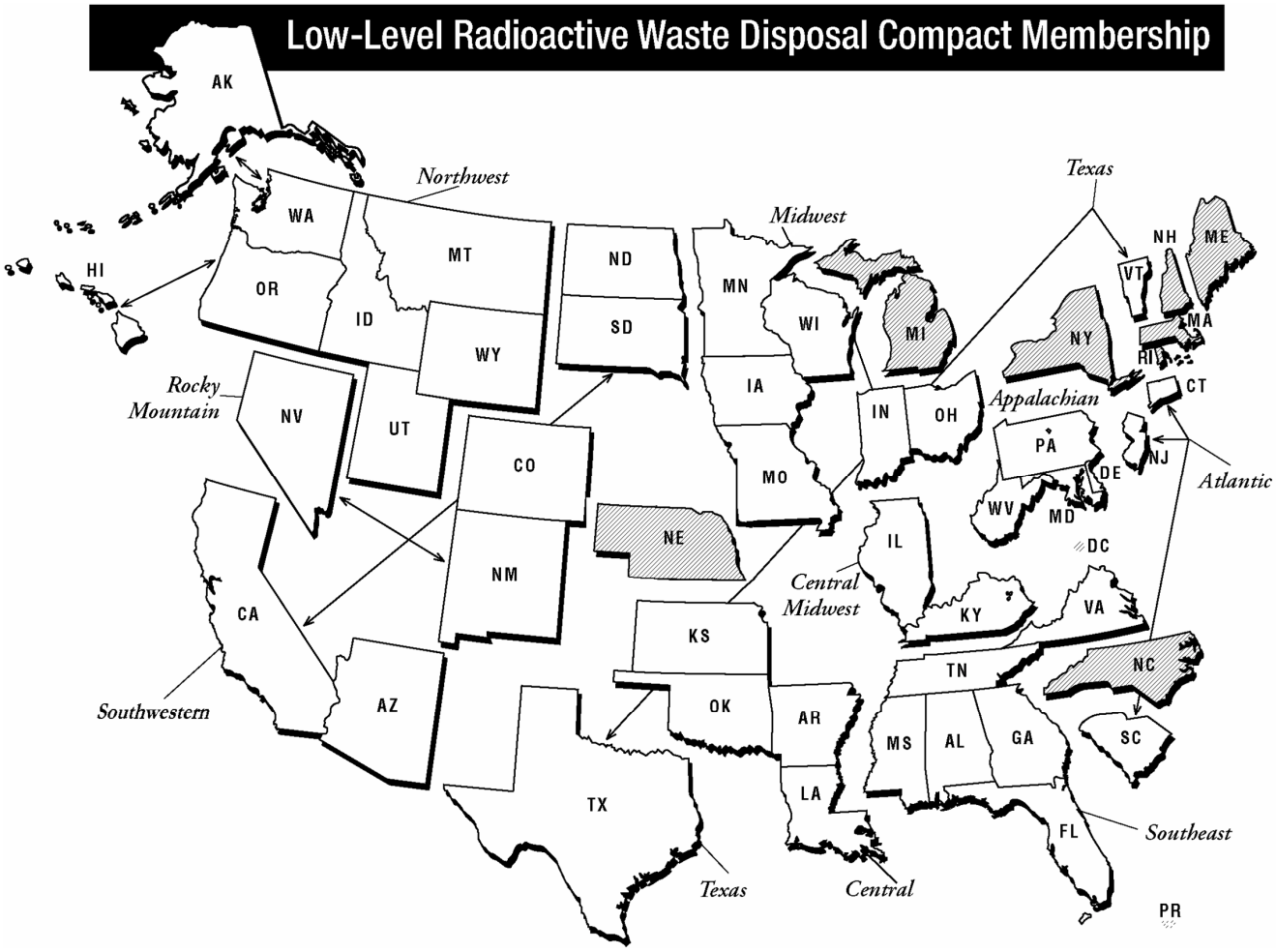
- GAO homepage (access to reports and testimony) .....**www.gao.gov**

To access a variety of documents through numerous links, visit the website for the LLW Forum, Inc. at 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. 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.



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

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