

LLW *notes*

Volume 29 Number 3 May/June 2014

U.S. Nuclear Regulatory Commission

NRC Seeks Comments re LLW Regulatory Program Strategic Assessment

On May 15, 2014, the U.S. Nuclear Regulatory Commission issued a *Federal Register* notice announcing that the agency is conducting an update to the Strategic Assessment of its low-level radioactive waste regulatory program. According to the notice, the objective of this assessment is to identify and prioritize activities that the staff can undertake to ensure a stable, reliable and adaptable regulatory framework for effective low-level radioactive waste management, while also considering future needs and changes that may occur in the nation's low-level radioactive waste management system.

In particular, NRC staff is seeking comments on anticipated developments to the low-level radioactive waste regulatory program in the next several years that would affect licensees and sited states, as well as actions that the NRC could take to ensure safety, security, and the protection of the environment.

Interested stakeholders have 60 days from the date of publication of the *Federal Register* notice to submit comments—i.e., comments are due by the close of business on July 14, 2014.

Specific Requests for Comments

NRC staff is requesting that persons consider and address the following questions as they develop and provide their remarks:

Regarding the Current National Low-Level Radioactive Waste Disposal Landscape

1. What changes are anticipated in the low-level radioactive waste area with regard to safety, security, and the protection of the environment?
2. As a result of those changes, what activities should remain on the list of proposed

(Continued on page 23)

In This Issue

Registration Continues for Fall 2014 LLW Forum Meeting—page 4

Amendments Issued re EnergySolutions' Clive Facility License—page 9

2015 Hodes Award Nominations Sought—page 13

US Ecology Completes Acquisition of the Environmental Quality Company—page 17

Inclusion of "Use Status" Encouraged for Sources in Long-Term Storage—page 28

COPYRIGHT POLICY

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.

This Copyright Policy is designed to provide a framework that balances the benefits of a broad sharing of information with the need to maintain control of published material.

1. LLW Forum, Inc., publications will include a statement that the material is copyrighted and may not be used without advance permission in writing from the LLW Forum.
2. When LLW Forum material is used with permission it must carry an attribution that says that the quoted material is from an LLW Forum publication referenced by name and date or issue number.
3. Persons may briefly summarize information reported in LLW Forum publications with general attribution (e.g., the LLW Forum reports that . . .) for distribution to other members of their organization or the public.
4. Persons may use brief quotations (e.g., 50 words or less) from LLW Forum publications with complete attribution (e.g., *LLW Forum Notes*, May/June 2002, p. 3) for distribution to other members of their organization or the public.
5. Members and subscribers may with written approval from the LLW Forum's officers reproduce LLW Forum materials one time per year with complete attribution without incurring a fee.
6. If persons wish to reproduce LLW Forum materials, a fee will be assessed commensurate with the volume of material being reproduced and the number of recipients. The fee will be negotiated between the LLW Forum's Executive Director and the member and approved by the LLW Forum's officers.

Low-Level Radioactive Waste Forum, Inc.

LLW Notes

Volume 29, Number 3 May/June 2014

Editors and Writers: Todd D. Lovinger and Cecilia Snyder and Sebastian Christian
Layout and Design: Rita Houskie, Central Interstate Low-Level Radioactive Waste Compact

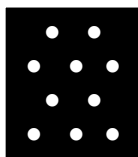
LLW Notes is published several times a year and is distributed to the Board of Directors of the Low-Level Radioactive Waste Forum, Inc. — an independent, non-profit corporation. Anyone — including compacts, states, federal agencies, private associations, companies, and others — may support and participate 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.

The LLW Notes is owned by the LLW Forum, Inc. and therefore may not be distributed or reproduced without the express written approval of the organization's Board of Directors.

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.

Table of Contents

| | |
|---|----|
| Federal Agencies and Committees (Cover Story) | 1 |
| NRC Seeks Comments re LLW Regulatory Program Strategic Assessment | 1 |
| Low-Level Radioactive Waste Forum, Inc. | 4 |
| Registration Continues for Fall 2014 LLW Forum Meeting | 4 |
| Low-Level Radioactive Waste Forum Meetings, <i>Fall 2014 and Beyond</i> | 5 |
| LLW Forum to Host Panel at Rad Waste Summit | 6 |
| States and Compacts | 7 |
| Central Interstate Compact Commission Holds Annual Meeting...7 | |
| Midwest Compact Commission Holds Annual Meeting | 9 |
| Amendments Issued re EnergySolutions' Clive Facility License ...9 | |
| Utah Radiation Control Board Holds May/June Meetings | 11 |
| 2015 Hodes Award Nominations Sought | 13 |
| Southeast Compact Commission Holds Annual Meeting | 15 |
| Texas Compact Commission Holds May Meeting | 16 |
| US Ecology Completes Acquisition of the Environmental Quality Company | 17 |
| Industry | 19 |
| News Briefs for Nuclear Power Plants Across the Country | 19 |
| Federal Agencies and Committees (continued) | 23 |
| FERC and NRC Discuss Grid Reliability and Reactor Issues | 23 |
| Inclusion of "Use Status" Encouraged for Sources in Long-Term Storage | 28 |
| Detailed Earthquake Risk Analysis Prioritized | 30 |
| Annual Report on Abnormal Occurrences Issued for FY 2013 | 31 |
| Proposed Procedures for New Reactor Pre-Operation Hearings | 32 |
| NRC Proposes to Amend Licensing, Inspection and Annual Fees Rules | 33 |
| NRC Hosts Vendor Oversight Workshop | 33 |
| Certification Rule for GE-Hitachi New Reactor Design | 34 |
| Obtaining Publications | 35 |



LLW
FORUM, INC.

Low-Level Radioactive Waste
Forum, Inc.
2657 Bayview Drive
Ft. Lauderdale, FL 33306
(754) 779-7551
FAX (754) 223-7452
EMAIL llwforuminc@aol.com
INTERNET www.llwforum.org

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.

Low-Level Radioactive Waste Forum, Inc.

Registration Continues for Fall 2014 LLW Forum Meeting

Denver, Colorado on October 30-31, 2014

Registration is open for the fall 2014 meeting of the Low-Level Radioactive Waste Forum, which will be held at the Embassy Suites Denver — Downtown Convention Center located in downtown Denver, Colorado on October 30-31, 2014.

The meeting is being co-sponsored by the Rocky Mountain Low-Level Radioactive Waste Board and the Midwest Interstate Low-Level Radioactive Waste Compact Commission.

The meeting documents—including bulletin and registration form—have been posted to the LLW Forum's web site at www.llwforum.org.

Attendance

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

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

Location and Dates

The fall 2014 LLW Forum meeting will be held in Denver on Thursday, October 30, 2014, from 9:00 am - 5:00 pm, and Friday, October 31, 2014, from 9:00 am - 1:00 pm.

The meeting will be held at:

Embassy Suites Denver — Downtown
Convention Center
1420 Stout Street
Denver, CO 80202
(800) 445-8667

The Embassy Suites Denver – Downtown Convention Center hotel, honored as one of the Top 25 U.S. Hotels by Trip Advisor in 2013, offers the perfect setting for business or pleasure. The hotel offers a gateway to Denver's lively downtown scene. Boasting a contemporary convention venue, the hotel is within walking distance of the best attractions in the downtown area.

Registration

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

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

Reservations

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

A limited block of hotel rooms has been reserved for Wednesday (October 29) and Thursday (October 30) for meeting attendees at the special, discounted rate of \$156 plus tax. A limited number of rooms may be available for 3 days before and after the meeting on a first-come, first-served basis.

To make a reservation, please call (800) 445-8667. The deadline for reserving a room at the discounted rate is October 8, 2014. Please ask for the Low-Level Radioactive Waste Forum block.

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

Low-Level Radioactive Waste Forum Meetings

Fall 2014 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.

Fall 2014 Meeting

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 scheduled to be held at the Embassy Suites Hotel in downtown Denver, Colorado on October 30-31, 2014.) *See related story, this issue.*)

Spring 2015 Meeting

The Southeast Compact Commission for Low-Level Radioactive Waste Management and the Central Interstate Low-Level Radioactive Waste Commission have agreed to co-host the spring 2015 meeting. The meeting location and dates will be announced once arrangements are finalized.

Fall 2015 Meeting

The LLW Forum is currently seeking volunteers to host fall 2015 meeting 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.

Exchange Monitor Annual Rad Waste Summit

LLW Forum to Host Panel at Rad Waste Summit

Sited State Perspectives on Part 61 Rulemaking Initiative

On September 3, 2014, the Low-Level Radioactive Waste Forum (LLW Forum) will host a panel at the Eighth Annual Rad Waste Summit to be held in Summerlin, Nevada. During the panel, representatives from each of the four sited states will provide perspectives on the U.S. Nuclear Regulatory Commission's proposed rule that would amend Part 61 of Title 10 of the *Code of Federal Regulations* (10 CFR), "Licensing Requirements for Land Disposal of Radioactive Waste."

LLW Forum-Sponsored Panel Session

The one hour and fifteen minute panel, which is scheduled to begin at 2:15 p.m. on Tuesday, will be moderated by LLW Forum Executive Director Todd Lovinger. The following individuals are scheduled as panelists:

- ◆ Brad Broussard of the Texas Commission on Environmental Quality;
- ◆ Earl Fordham of the Washington Department of Health;
- ◆ Susan Jenkins of the South Carolina Department of Health and Environmental Control;
- ◆ Rusty Lundberg of the Utah Department of Environmental Quality; and,
- ◆ Gary Robertson of the LLW Forum's Part 61 Working Group.

The Eighth Annual Rad Waste Summit is being hosted by Exchange Monitor Publications. The conference will be held at the JW Marriott Hotel in Summerlin, Nevada from September 2-5, 2014.

It will feature a working group session to discuss opportunities related to mitigating impacts of the suspension of Waste Isolation Pilot Plant (WIPP) operations.

For additional information about the LLW Forum-sponsored panel, please contact LLW Forum Executive Director Todd Lovinger at (754) 779-7551 or at llwforuminc@aol.com.

Part 61 Rulemaking Initiative

On July 18, 2013, NRC staff requested Commission approval to publish a proposed rule in the *Federal Register* that would amend 10 CFR Part 61. (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 low-level radioactive waste.

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.

(Continued on page 32)

Central Interstate Commission

Central Interstate Compact Commission Holds Annual Meeting

Releases Results of Generator Survey

On June 10, 2014, the Central Interstate Low-Level Radioactive Waste Commission held its annual meeting. The meeting—which was held at the Embassy Suites Hotel in Oklahoma City, Oklahoma—began at 9:00 a.m. CDT.

The purpose of the meeting was to take necessary action on reports, meeting minutes, export applications, export fee schedule (Rule 1), financial consultant contract, discussion about the future of the Commission and the results of the 2014 generator survey results, administrative budget, election of Chairman for fiscal year 2014-2015, and all other business that came before the Commission.

Meeting Agenda

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

- ♦ call to order and roll call
- ♦ general public comment period
- ♦ future and administrative funding of the Commission
 - discussion: report on inquiry to Midwest Commission Executive Director Stan York
 - discussion: results of 2014 generator survey
- ♦ reports
 - Commission Administrator
- ♦ ratify action taken
 - export applications approved
 - * July 2013
 - * August 2013
 - * September 2013
 - * October 2013
- * November 2013
- * January 2014
- * February 2014
- * March 2014
- * April 2014
- * May 2014
- ♦ meeting minutes
 - special teleconference on November 21, 2013
- ♦ financial consultant contract for fiscal year 2014-2015
- ♦ Commission and administrative budget
 - budget adjustments for fiscal year 2013 – 2014
 - export fee schedule (Rule 1) for fiscal year 2014 – 2015
 - administrative budget for fiscal year 2014 - 2015
- ♦ election of Commission Chairman for fiscal year 2014 – 2015
- ♦ confirm date and location for next Commission meeting
- ♦ executive session: personnel matters — Administrator review
- ♦ adjourn

2014 Generator Survey

On February 20, 2014, the Central Interstate Commission sent emails and letters to all of the low-level radioactive waste generators in the compact region who had filed export applications with the Commission in the past four years, requesting that they complete a short survey about their current management of low-level radioactive waste and seeking input on two options for the compact's future. Option 1 is to relocate Commission offices to a member state agency and reduce operations to the minimum needed to remain a legal entity. Option 2 is to dissolve the compact altogether. On April 15, 2014, a second correspondence was sent to solicit additional input on the survey.

In total, 74 generators were contacted and 18 replies were received – a 24% participation rate. In some cases, however, multiple individual

States and Compacts *continued*

generators are under the management of a single entity so that one response may cover multiple generators. Taking this into consideration, the actual participation rate may be in the 30% range.

Overall Conclusions The Central Interstate Commission outlined the following overall conclusions of the generator survey:

- ◆ It does not appear generators are currently having significant issues with management/disposal of their low-level radioactive waste. Five of the 10 questions dealt in some way with problems generators may be experiencing due to difficulties with management or disposal of their low-level radioactive waste. It is reasonable to surmise, if there were widespread problems, generators would be more likely to want to air those concerns when given the opportunity to do so. If this were the case, there may have been a much larger participation rate. Of the comments given, none suggested any major issues.
- ◆ Maintaining the compact structure and relocating Commission offices to one of the member state agencies seems to be preferred over dissolving the compact. Comments articulated reasons for maintaining the compact and issues that could arise if the compact were dissolved. Along with this, a significant number of respondents did not favor an increase in export fees.

General Observations The Central Interstate Commission outlined the following general observations from the generator survey:

- ◆ There does not appear to be a significant quantity of low-level radioactive waste in storage. This suggests generators are not currently experiencing major difficulty in finding disposal options. Nonetheless, one commenter noted they could have storage issues in the future (beyond five years) if there

is no place to dispose of low-level radioactive waste.

- ◆ The majority of generators use brokers to assist with disposal of their low-level radioactive waste, which is not unexpected. One commenter stated, “[t]he process is now so difficult and twisted that one must hire a broker to complete it. It’s worse than taxes.” Since each disposal site and each state with a disposal site may have differing requirements for disposal (not to mention differing requirements based on the specific material to be disposed), this is not an issue the Commission could alleviate.
- ◆ The Energy Solutions site in Clive, Utah appears to be the primary site used for low-level radioactive waste disposal. The WCS site in Andrews, Texas, though relatively new, is receiving low-level radioactive waste from a significant number of the respondents.
- ◆ Disposal costs appear to correlate well with the size of generator. One commenter noted that out-of-compact disposal costs are “ridiculous.”
- ◆ Overwhelmingly, respondents reported no difficulty with disposal of their low-level radioactive waste; however, comments suggest that some respondents had some historical problems that have since been rectified. Question 6 was designed to see if there were any direct impacts to business operations because of problems with management/disposal of low-level radioactive waste. Seventeen of the 18 respondents identified no impacts. While one respondent reported an impact, no comment was provided to explain. Nearly all generators reported they were experiencing no other issues related to management/disposal of low-level radioactive waste.

A copy of the Generator Survey is available by visiting the Central Interstate Commission’s web page at www.cillrwcc.org. For additional information, please contact the Commission at (402) 476-8247.

States and Compacts *continued*

Midwest Compact

Midwest Compact Commission Holds Annual Meeting

On June 11, 2014, the Midwest Interstate Low-Level Radioactive Waste Compact Commission held its annual meeting by telephone conference call from 10:00 a.m. – 12:00 p.m. CDT.

The following items were on the meeting agenda:

- ◆ call to order/roll call
- ◆ review of minutes of the meeting of June 25, 2013
- ◆ consideration of accounting and legal services proposals
- ◆ review of the financial report
- ◆ Chair's report
 - Texas site
 - SCATR program
 - disused sources
- ◆ adoption of 2014 – 2015 budget
- ◆ election of Chair and Vice-Chair
- ◆ other business
- ◆ adjournment

The public was invited and encouraged to attend the meeting. Interested stakeholders were afforded an opportunity to participate on the call via offices in each of the member states.

For additional information, please contact Stan York, Chair and Executive Director of the Midwest Compact Commission, at (608) 267-4793 or at stan.york@tds.net.

Northwest Compact/State of Utah

Amendments Issued re EnergySolutions' Clive Facility License

On May 12, 2014, the Utah Department of Environmental Quality (DEQ), Division of Radiation Control (DRC), issued Amendment No. 16 to EnergySolutions' Clive facility Radioactive Material License UT 2300249.

License Amendment No. 16 incorporates minor changes and revisions to License Conditions 4, 22, 31, 32.E, 43, 73.A.iii, 73.A.iv, 73B, and 76. License Amendment No.16 also incorporates major changes and revisions to License Conditions 22, 39.E and 77.

The signed License Amendment No. 16, as well as the associated Statement of Basis and the Public Participation Summary, may be accessed on the Utah DRC's web page at <http://www.radiationcontrol.utah.gov/EnSolutions/licenses.htm>.

Changes to Radioactive Materials License

Amendment No. 16 includes the following changes to the Clive facility license:

- ◆ adds language to Condition 4 to indicate that the license is "Under Timely Renewal;"
- ◆ Condition 22 reduces the frequency of some of the routine radiological surveys from weekly to monthly and removes the rollover from the list;
- ◆ Condition 31 removes the word "Acting" from the term "Acting RSO;"
- ◆ Condition 32.E changes Radiation Safety Officer (RSO) to Corporate Radiation Safety Officer (CRSO);
- ◆ Condition 39.E removes the 40 mrem/hr limit and replaces it with the posting and dose limit

States and Compacts *continued*

requirements of a radiation area and a "High Radiation Area" that are found in *EnergySolutions* standard operating procedures (SOPs);

- ◆ changes Conditions 43 to state that construction of the clay liner for the Class A West (CAW) embankment between the Class A (CA) and Class A North (CAN) embankments, or receipt of waste volumes exceeding the total waste capacity of the CA and CAN embankments (minus the volumes generated during facility decommissioning) is prohibited until the licensee funds the financial surety for decommissioning of the CAW embankment as designed and approved;
- ◆ changes language in Condition 73.A.iii in regard to updates to the cost estimate for decommissioning the CAW embankment to ensure the cost estimate remains current in the event that the Director determines the CA and CAN embankment must be closed as a single embankment using the approved design of the CAW embankment and, in particular, requires that the cost estimate meet the requirements of License Condition 73;
- ◆ changes language in Condition 73.A.iv to require that the surety shall be based on the approved cost estimate for the CA and CAN embankments until the Director determines it is no longer feasible for the CA and CAN embankments to be closed separately; that, at that time, the surety shall be based on the approved cost estimate provided for License Condition 73.A.iii; that the update to the cost estimate for the CA and CAN embankments must include funding to move excess materials that have been placed outside of the approved CA design to the CAN embankment, as well as all other costs associated with closing the CA and CAN embankments separately; and, that the cost estimate must meet the requirements of License Condition 73;
- ◆ Condition 73.B changes the surety contingency value from 11% to 15% based on R313-22-35-3(g) and NUREG 1757, Volume 3;

- ◆ deletes from Condition 76 the parenthetical statement "but not including any part of that Account from returns on investment;" and,
- ◆ removes from Condition 77 the 40 mrem/hr limit and replaces it with the posting and dose limit requirements of a "Radiation Area" and a "High Radiation Area" that are found in *EnergySolutions* SOPs.

Background

On May 16, 2013, *EnergySolutions* submitted a "Request for Administrative Corrections to Radioactive Materials License UT2300249, Conditions 32.E and 76." Originally, the licensee had requested a change to License Condition 32.E in a letter dated October 24, 2012. However at that time, the DRC did not make the minor change to License Condition 32.E in identifying the CRSO versus the RSO as part of License Amendment No. 15. Both the DRC and *EnergySolutions* agreed to make these changes during the next license amendment.

On August 22, 2013, *EnergySolutions* submitted a request to modify License Conditions 22, 31, 39.E, and 77. The DRC reviewed the request and, in a meeting on September 4, 2013 with *EnergySolutions*, discussed and proposed revisions to the requested changes. Based on this meeting, on September 19, 2013, *EnergySolutions* submitted additional revisions to the initial request. The DRC has reviewed the additional revisions and determined that they would be adequate to meet occupational and public safety requirements.

In addition, based on correspondence regarding the 2013 annual surety review, the Director is proposing a revision to the language in License Condition 43. Specifically, License Condition 43 is under the license heading "Construction Activities" and the current language involves surety information. Therefore, for consistency, License Condition 43 has been revised and language has been added to License Condition 73.A which is under the license heading

States and Compacts *continued*

"Financial Assurance/Closure." The DRC added language in License Condition 73.A for clarity purposes regarding information that is required to be submitted as part of the annual surety report. Language for License Condition 43 stipulates funding must be provided prior to construction of clay liner between CA and CAN cells.

The Director has determined the changes to Condition 4, 31, 32.E, 43, 73.A.iii, 73.A.iv, 73.B, and 76 are minor, administrative in nature, provide more explicit language, do not include monitoring, or sampling, and is an increase in contingency costs affecting surety. Changes to Conditions 22, 39.E, and 77 are determined to be a reduction in monitoring, therefore are considered major in accordance with R313-17-2, and thus required a public comment period.

A thirty-day public comment period was held for Amendment No. 16 and a Public Participation Summary document was prepared. The Public Participation Summary documents the comments received and the Utah DRC's responses thereto.

For additional information, please contact John Hultquist of the Utah DEQ/DRC at (801) 536-4250.

Utah Radiation Control Board Holds May/June Meetings

The Utah Radiation Control Board held meetings on May 13, 2014 and June 10, 2014. The Board canceled a meeting that was previously scheduled for July 8, 2014.

The meetings, which were open to the public, were held at the Multi Agency State Office Building located at 195 North 1950 West in Salt Lake City, Utah.

May 2014 Meeting Agenda

The following items, among others, were on the May 2014 regular Board meeting agenda:

- I. Welcome
- II. Approval of the Minutes from the April 8, 2014 Board Meeting
- III. X-Ray Program
 - a. Mammography Imaging Medical Physicists (MIMPs) – Certification approval per UCA 19-3-103.5(2)(f)
- IV. Information Items
 - a. Other Items
- V. Next Scheduled Board Meeting:

Tuesday, June 10, 2014, 1:00 p.m.
Multi Agency State Office Building, Board
Conference Room #1015
195 North 1950 West
Salt Lake City, Utah

States and Compacts *continued*

June 2014 Meeting Agenda

The June 2014 meeting included both a working lunch meeting and a regularly scheduled Board meeting.

Working Lunch Meeting The following items, among others, were on the June 2014 working lunch meeting agenda:

- I. Welcome
- II. Administrative Rulemaking
 - a. Status Report from Board Subcommittee regarding proposed changes to R313-26, *Generator Site Access Permit Requirements for Accessing Utah Radioactive Waste Disposal Facilities*
 - b. Discussion—Comments received on the preliminary draft proposed changes to R313-17, *Administrative Procedures*; R313-24, *Uranium Mills and Source Material Mill Tailings Disposal Facility Requirements*, regarding public participation procedures for licensing uranium mills and radioactive byproduct material management per 42 U.S.C. §2021(o)(3)
 - c. Briefing—Recent changes to 10 CFR Part 37, *Physical Protection of Category 1 and Category 2 Quantities of Radioactive Material*, by the U.S. Nuclear Regulatory Commission (NRC)

III. Other Items

Regular Board Meeting The following items, among others, were on the June 2014 regular Board meeting agenda:

I. Welcome

II. Approval of the Minutes from the May 13, 2014 Board Meeting

III. Administrative Rulemaking

- a. Proposed changes to R313-26, *General Site Access Permit Requirements for Accessing Utah Radioactive Waste Disposal Facilities*—Possible evaluation by Board Subcommittee
- b. Review of comments received on the preliminary draft proposed changes to R313-17, *Administrative Procedures*; R313-24, *Uranium Mills and Source Material Mill Tailings Disposal Facility Requirements*, regarding public participation procedures for licensing uranium mills and radioactive byproduct material management per 42 U.S.C. §2021(o)(3)
- c. Briefing—Recent changes to 10 CFR Part 37, *Physical Protection of Category 1 and Category 2 Quantities of Radioactive Material*, by the NRC

IV. Information Items

- a. NRC—Activity Update
- b. Uranium Mills
 - i. Energy Fuels Resources—White Mesa Mill—status update
 - ii. Uranium One—Shootaring Canyon—status update
- c. Low-Level Radioactive Waste
 - i. Depleted Uranium Performance Assessment update
- d. Other Items

States and Compacts *continued*

V. Public Comment

VI. Next Scheduled Board Meeting:

Tuesday, July 8, 2014, 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.

The next Board meeting is scheduled for Tuesday, August 12, 2014. This meeting will begin at 1:00 p.m. in Conference Room 1015 within the Multi Agency State Office Building at 195 North 1950 West in Salt Lake City, Utah.

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.

Southeast Compact

2015 Hodes Award Nominations Sought *Deadline is July 30, 2014*

The Southeast Compact Commission for Low-Level Radioactive Waste Management is accepting nominations for the 2015 Richard S. Hodes, M.D. Honor Lecture Award—a program that recognizes an individual, company, or organization that contributed in a significant way to improving the technology, policy, or practices of low-level radioactive waste management in the United States. The award recipient will present the innovation being recognized at a lecture during the Waste Management '15 Symposium in Phoenix, Arizona. The award recipient will receive a \$5,000 honorarium and all travel expenses will be paid.

Nominations must be received by July 30, 2014.

Background

Dr. Richard S. Hodes was a distinguished statesman and a lifetime scholar. He was one of the negotiators of the Southeast Compact law, in itself an innovative approach to public policy in waste management. He then served as the chair of the Southeast Compact Commission for Low-Level Radioactive Waste Management from its inception in 1983 until his death in 2002.

Throughout his career, Dr. Hodes developed and supported innovation in medicine, law, public policy, and technology. The Richard S. Hodes, M.D. Honor Lecture Award was established in 2003 to honor the memory of Dr. Hodes and his achievements in the field of low-level radioactive waste management.

States and Compacts *continued*

Past Recipients

The following individuals and entities are past recipients of the Richard S. Hodes, M.D. Honor Lecture Award:

- ◆ W.H. “Bud” Arrowsmith (2004);
- ◆ Texas A & M University Student Chapter of Advocates for Responsible Disposal in Texas (2004 *honorable mention*);
- ◆ William Dornsife (2005);
- ◆ California Radioactive Materials Management Forum (2006);
- ◆ Larry McNamara (2007);
- ◆ Michael Ryan (2008);
- ◆ Susan Jablonski (2009);
- ◆ Larry Camper (2010);
- ◆ Christine Gelles (2011);
- ◆ Lawrence “Rick” Jacobi (2012);
- ◆ James Kennedy (2013);
- ◆ EnergySolutions, the Utah Department of Environmental Quality (UDEQ), the Conference of Radiation Control Program Directors (CRCPD), and the U.S. Department of Energy’s (DOE) Global Threat Reduction Initiative (2013 *honorable mention*); and,
- ◆ Electric Power Research Institute (2014).

The Award

The Richard S. Hodes Honor Lecture Award—established in March, 2003—is awarded to an individual, company, or organization that contributed in a significant way to improving the technology, policy, or practices of low-level radioactive waste management in the United States.

The award recipient will be recognized with a special plaque and an invitation to present a lecture about the innovation during the annual international Waste Management Symposium (WM '15). The 2015 symposium is sponsored by the University of Arizona and will be held in Phoenix, Arizona in the spring of 2015.

A special time is reserved during the Symposium for the lecture and the award presentation. The Southeast Compact Commission will provide the award recipient a \$5,000 honorarium and will pay travel expenses and per diem (in accordance with Commission Travel Policies) for an individual to present the lecture.

Criteria

The Richard S. Hodes Honor Lecture Award recognizes innovation industry-wide. The award is not limited to any specific endeavor—contributions may be from any type of work with radioactive materials (nuclear energy, biomedical, research, etc.), or in any facet of that work, such as planning, production, maintenance, administration, or research. The types of innovations to be considered include, but are not limited to:

- ◆ conception and development of new approaches or practices in the prevention, management, and regulation of radioactive waste;
- ◆ new technologies or practices in the art and science of waste management; and,
- ◆ new educational approaches in the field of waste management.

The criteria for selection include:

1. *Innovation*. Is the improvement unique? Is it a fresh approach to a standard problem? Is it a visionary approach to an anticipated problem?
2. *Safety*. Does the practice enhance radiation protection?
3. *Economics*. Does the approach produce significant cost savings to government, industry or the public?
4. *Transferability*. Is this new practice applicable in other settings and can it be replicated? Does it increase the body of technical knowledge across the industry?

States and Compacts *continued*

Eligibility

To be eligible for the award, the individual/group must consent to being nominated and must be willing to prepare and present a lecture about the innovation being recognized at the Waste Management Symposium. Individuals or organizations can nominate themselves or another individual, company, institution, or organization.

Nominations

To nominate yourself or another individual, company, or organization for this distinguished award, please contact:

Awards Committee
c/o Ted Buckner, Executive Director
Southeast Compact Commission
1230 SE Maynard Road
Suite 103
Cary, NC 27511
(919) 380-7780
(919) 380-7710 - FAX
tedb@secompact.org

or visit the Southeast Compact Commission's website at <http://www.secompact.org/>.

Both the Administrative Committee and Policy & Planning Committee met on June 9, which was followed by the 105th business meeting on June 10.

A reception honoring Kathryn Haynes on her retirement and 30 years of service and celebrating the Commission's 31st anniversary was also held on the evening of June 9.

Committee Meetings

Policy and Planning Committee The Policy and Planning Committee met at 1:00 p.m. on June 9. The committee considered drafting a new policy statement regarding the management of low-level radioactive waste, received a report from a representative of the Low-Level Radioactive Waste Forum (LLW Forum) on the activities of the organization's Disused Sources Working Group (DSWG), and discussed other matters as they came before the committee.

Administrative Committee Meeting The Administrative Committee met at 3:30 p.m. on June 9. The committee received an update on the Commission's investments, reviewed the Proposed Budget for FY 2014-15, and discussed other matters as they came before the committee.

Southeast Compact Commission Meeting

Overview The 105th business meeting of the Southeast Compact Commission for Low-Level Radioactive Waste Management began at 9:00 a.m. EDT on June 10, 2014. The Commission received committee reports, received a status report on the activities of the Texas Low-Level Radioactive Waste Disposal Compact Commission from a Texas Compact Commission representative, and conducted other business as it came before the Southeast Compact Commission.

Southeast Compact Commission Holds Annual Meeting

On June 9-10, 2014, the Southeast Compact Commission for Low-Level Radioactive Waste Management held its annual meeting at the Renaissance Concourse Hotel – Atlanta Airport, which is located at One Hartsfield Centre Parkway in Atlanta, Georgia.

States and Compacts *continued*

Meeting Agenda The following is an agenda for the business meeting:

- ♦ call to order and introductory remarks (Michael Mobley, Chair)
- ♦ establishment of quorum (Debra Shults, Vice Chair)
- ♦ approval of minutes from December 3, 2013 and February 14, 2014 (Commissioners)
- ♦ comments pertaining to agenda items only (General Public)
- ♦ report from the Executive Director (Ted Buckner, Executive Director)
- ♦ report from the Treasurer (Herbert Wheary, Secretary-Treasurer)
- ♦ state reports and liaison reports (Commissioners)
- ♦ new business
 - status report on activities of the Texas Compact Commission (Leigh Ing, Executive Director of the Texas Compact Commission)
 - report of the Policy and Planning Committee (John Lanza, Committee Chair)
 - report of the Administrative Committee (Paul Burks, Committee Chair)
 - other new business (Commissioners)
- ♦ election of officers (Commissioners)
- ♦ comments (General Public)
- ♦ adjournment

Texas Compact

Texas Compact Commission Holds May Meeting

On May 15, 2014, the Texas Low-Level Radioactive Waste Disposal Compact Commission (Texas Compact Commission) held a regularly scheduled meeting. The meeting, which began at 9:30 a.m. CDT, was held in Room E1.028 at the Texas State Capitol located at 1100 Congress Avenue in Austin, Texas.

Meeting 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, elected officials and press;
- ♦ public comment;
- ♦ 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 Duke Energy, NextEra and Tennessee Valley Authority;
- ♦ consideration of and possible action on applications and proposed agreements for importation of low-level radioactive waste from Studsvik, Thomas Gray & Associates, and Exelon;
- ♦ receive reports from the Texas Department of State Health Services (TDSHS) on the regulatory authority of TDSHS and any other matter TDSHS wishes to bring to the attention of the Texas Compact Commission;

States and Compacts *continued*

- ♦ 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;
- ♦ 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 as authorized by the Texas Open Meetings Act, Chapter 551, Texas Government Code.

Texas Compact Commission meetings are open to the public.

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.

State of Michigan

US Ecology Completes Acquisition of the Environmental Quality Company

On June 19, 2014, US Ecology announced the completion of its previously announced acquisition of the Environmental Quality Company (EQ)—a fully-integrated environmental services and waste management company with facilities throughout the Eastern United States that is based in Wayne, Michigan—for \$465 million.

The acquisition was funded with cash on hand and borrowings under a new \$540 million credit facility made up of \$415 million in 7-year term debt and a \$125 million 5-year revolving line of credit.

Acquisition

EQ is a comprehensive solutions provider offering a broad line of environmental services including treatment and disposal of hazardous wastes, recycling, field and industrial services and total waste management. EQ's facilities include one hazardous waste permitted landfill located outside of Detroit, Michigan; 13 waste treatment and recycling facilities; and, 21 dedicated service centers. EQ employs over 1,250 employees and services more than 6,000 active customers.

"The acquisition of EQ aligns perfectly with our strategy of leveraging high quality treatment, disposal and recycling assets and complementary service businesses to drive growth," commented Jeff Feeler, President and CEO of US Ecology. "EQ broadens our geographic footprint by adding a fifth hazardous waste landfill and a network of 18 treatment facilities serving the eastern half of the United States including many of the

States and Compacts *continued*

country's key industrial centers. It further enhances our competitive position by adding a well-established field and industrial services business, allowing us to penetrate a much broader portion of the overall environmental market than in the past. With a solid stream of recurring revenue and national customer base, the combined company offers cross-selling opportunities and operational efficiencies that we believe will deliver compelling value to both our customers and our stockholders for years to come."

Appointment of EQ Officials

The Company also announced that David Lusk, formerly President and CEO of EQ, was appointed to the Board of Directors of US Ecology. Lusk brings more than 25 years of industry experience, having previously worked for eight years as EQ's Vice President of Operations at Michigan Disposal Waste Treatment Plant and Wayne Disposal Hazardous Waste Landfill before joining Republic Waste Industries as Vice President of Midwest Operations. He returned as a senior EQ Executive in 1995. Lusk was later promoted to Chief Executive, successfully leading the organization through a period of sustained revenue and earnings expansion leading up to this acquisition. Lusk holds B.S. degrees in Chemistry and Cellular and Molecular Biology from the University of Michigan and has a M.B.A. from Eastern Michigan University.

In addition, Mario Romero, Vice President of Operations of EQ, was named US Ecology's Executive Vice President of Field and Industrial Services. Romero joined EQ in 2009 from WOW Energy where he was President, CEO and co-founder. He brings more than 30 years of experience in the environmental, energy and industrial services industries, holding executive positions at Energis LLC, Safety-Kleen Corp., Philip Services Corp. and the GNI Group, Inc. Romero holds an M.B.A. from the University of Chicago and a Masters and B.S. in Chemical Engineering from Illinois Institute of Technology. Romero is a Professional Engineer in the State of

Illinois, a member of the American Institute of Chemical Engineers and has served as Director on several private company boards.

Background

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

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

For additional information, please contact Alison Ziegler of Cameron Associates at (212) 554-5469 at Alison@CameronAssoc.com or go to www.usecology.com.

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.

Atlantic Compact/State of Connecticut

Millstone Nuclear Plant On June 2, 2014, the U.S. Nuclear Regulatory Commission initiated a Special Inspection at the Millstone nuclear power plant in response to an unplanned outage of both operating reactors on May 25 and complications that occurred at Millstone Unit 3 as it was being shut down. The plant is located in Waterford, Connecticut and operated by Dominion Nuclear Connecticut Inc. A five-member team performed the inspection. Focus areas included the effectiveness of Dominion's response to the event, equipment performance and the company's evaluations of what occurred during the dual-unit shutdown. At 7:15 a.m. on May 25, an "Unusual Event"—the lowest of four levels of emergency classification used by the NRC—was declared by Millstone when the Units 2 and 3 reactors shut down due to the loss of off-site power. The units safely shut down and there were no impacts on plant workers or on public health and safety. The declaration was terminated at 2:14 p.m. following the restoration of off-site power, which occurred at 12:56 p.m. The cause of the off-site power loss was subsequently determined to be an electrical fault that interrupted the flow of energy from a high-voltage power line, one of three off-site lines that provide power to the site. Millstone Unit 2 did not experience any significant complications

as it was shutting down. However, several complications occurred at Millstone Unit 3. Specifically, there was an unexpected loss of non-safety instrument air at Unit 3 following the loss of off-site power. This led to the inability to establish a normal reactor coolant system drain flow path and resulted in the opening of the tank's rupture disk. Also, a relief valve on the unit's volume control tank lifted, causing the primary drains transfer tank to overflow inside the auxiliary building. In addition to these problems, the NRC team reviewed the operation of the unit's turbine-driven auxiliary feedwater pump during the event. The inspection team will document its findings and conclusions in a report to be issued within 45 days after the end of the review.

Central Interstate Compact/State of Arkansas

Arkansas One Nuclear Plant On June 24, 2014, NRC announced that the agency has determined that two inspection findings at the Arkansas Nuclear One facility that were issued in connection with a 2013 heavy equipment handling incident are "yellow," or of substantial safety significance. The plant—which is located in Russellville, Arkansas—is operated by Entergy Operations, Inc. Workers were moving a 525-ton component out of the plant's turbine building during a maintenance activity when a temporary lifting assembly collapsed on March 31, 2013, causing the component to fall, damaging plant equipment, killing one person and injuring eight others. Unit 1 was in a refueling outage at the time, with all of the fuel still in the reactor vessel, safely cooled. Entergy officials declared a Notice of Unusual Event, the lowest of four emergency classifications used by the NRC, because the incident caused a small explosion inside electrical cabinets. The damaged equipment caused a loss of off-site power. Emergency diesel generators were relied upon for six days to supply power to cooling systems. The falling turbine component damaged electrical cables and equipment needed to route power from an alternate AC power source to key plant systems at both units. This condition increased risk to the plant because alternate means

of providing electrical power to key safety-related systems was not available using installed plant equipment in the event the diesels failed. Unit 2, which was operating at full power, automatically shut down when a reactor coolant pump tripped due to vibrations caused by the heavy component hitting the turbine building floor when it fell. Unit 2 never completely lost off-site power, and means existed to provide emergency power using the diesel generators. NRC Resident Inspectors responded to the site the day the incident occurred. The NRC conducted an Augmented Team Inspection, prepared a detailed chronology of the event, evaluated the adequacy of licensee actions in response to the incident, and assessed the factors which may have contributed to the incident. Worker safety issues are the responsibility of the Occupational Safety and Health Administration, which conducted an independent inspection of the incident. The NRC determined that the lifting assembly collapse resulted from the licensee's failure to adequately review the assembly design and ensure an appropriate load test in accordance with its procedures or approved standards. The Augmented Team Inspection report documented information gathered from the initial inspection and identified areas for further inspection follow-up. On May 9, 2013, the NRC held a public meeting in Russellville to discuss the team's findings. From its follow-up inspections, the NRC identified the preliminary red and yellow findings documented in a March 24 inspection report. NRC held a regulatory conference with Entergy officials on May 1, and after considering information provided by the licensee determined that yellow findings were appropriate to characterize the risk significance of the event for both Unit 1 and 2. The NRC will determine the appropriate level of agency oversight and notify Entergy officials of the decision in a separate letter.

Central Midwest Compact/State of Illinois

Quad Cities Nuclear Station On May 5, 2014, NRC announced the selection of Rob Murray as

the new Senior Resident Inspector at the Quad Cities nuclear power plant in Cordova, Illinois—approximately 20 miles northeast of Moline. The nuclear power facility is operated by Exelon Generation Co., LLC. Murray joined the NRC in 2008 as a reactor engineer in Region III. Prior to joining the agency, he served six years as a submarine officer in the U.S. Navy. Murray holds a Bachelor's Degree in Electromechanical Engineering from Loras College and an MBA from Webster University. Most recently, he was the Resident Inspector at the Duane Arnold nuclear plant in Palo, Iowa. Each commercial nuclear power plant site in the United States has at least two NRC Resident Inspectors who monitor day-to-day operations at the plant. The NRC Resident Inspectors at Quad Cities can be reached at (309) 654-2227.

Zion Nuclear Power Plant On May 28, 2014, NRC proposed a \$17,500 civil penalty against ZionSolutions LLC for the Zion nuclear power plant, for security-related violations stemming from a routine agency security inspection. The NRC conducted the inspection between June 2013 and February 2014. Agency inspectors looked at the security requirements for the permanently shut-down plant, conducted an onsite inspection and reviewed licensee-identified security violations. The plant took corrective actions to address the security violations, but to emphasize the importance of taking prompt and comprehensive corrective actions for the violations the NRC has proposed a \$17,500 civil penalty. Details about security-related violations are not made public. A copy of the Enforcement Action will be posted on the Agency-wide Documents Access and Management System (ADAMS) at the NRC website at www.nrc.gov. Zion Nuclear Power Station was the third dual-reactor nuclear power plant in the Commonwealth Edison (ComEd) network and served Chicago and the northern quarter of Illinois. The plant was built in 1973, and the first unit started producing power in December, 1973. The second unit came online in September 1974. This power generating station is located on 257 acres of Lake Michigan shoreline,

in the city of Zion, Illinois. It is approximately 40 miles north of Chicago, Illinois and 42 miles south of Milwaukee, Wisconsin. The Zion Nuclear Power Station was retired on February 13, 1998. The plant had not been in operation since February 21, 1997 after a control-room operator inserted the control rods too far during a shut-down of Reactor 1 and then withdrew the control rods without following procedures or obtaining supervisory permission. Reactor 2 was already shut down for refueling at the time of the incident.

Southeast Compact/States of Alabama and Florida

Browns Ferry Nuclear Plant On May 1, 2014, NRC staff issued a white inspection finding to the Tennessee Valley Authority for violations at the Browns Ferry nuclear power plant related to emergency plan staffing in the control room. In addition, NRC issued an order confirming actions TVA is taking to address associated violations. TVA's Browns Ferry plant is located near Athens, Alabama—approximately 32 miles west of Huntsville. The NRC found that TVA failed to maintain staffing levels in accordance with the plant's radiological emergency plan and that the issue had low to moderate safety significance. TVA officials agreed with that determination. Two violations related to the staffing inspection finding involved the failure to provide complete and accurate information on the issue and the failure to request a license amendment for the staffing changes. TVA requested the NRC's Alternative Dispute Resolution process for those violations. The ADR process uses a neutral mediator with no decision-making authority to assist the NRC and licensees in reaching an agreement when there are differences regarding an enforcement action. An ADR session between the NRC and TVA was held on April 3 and the NRC order is the result of an agreement reached during that session. The order documents a number of corrective actions taken or planned by TVA. Those actions at the Browns Ferry site and TVA's other two nuclear plants include new

procedures for submitting license information to the NRC and for verifying changes and compliance, reviews of the processes involved and a sharing of the information with other nuclear plant operators.

University Nuclear and Diagnostics LLC On May 15, 2014, NRC announced that the agency has issued an Order barring the Chief Technical Officer of University Nuclear and Diagnostics LLC (UND) from participating in NRC-licensed activities for three years. While performing contract work for an NRC licensee, the officer engaged in deliberate misconduct causing the licensee to violate NRC regulations. The agency also issued a Severity Level III Notice of Violation to UND—which is based in Davie, Florida and licensed by the state to use diagnostic nuclear material. The violation requires the company to provide the NRC with a response outlining the actions that it has taken to correct the violations. The violations occurred while the company was implementing a nuclear medicine program for an NRC license holder in South Haven, Michigan. In particular, the NRC staff determined that the officer and other UND employees failed to conduct appropriate contamination surveys, make sure survey instruments were properly calibrated, and conduct regular inventories of sealed radioactive sources. The company also falsified records and surveys while the official provided false information to the NRC. The NRC's prohibition order directs the officer to cease all activities involving NRC-licensed activities and notify the NRC for a year following the three-year prohibition period if he becomes involved in NRC-licensed activities. The NRC's prohibition order (ML14126A742) and notice of violation (ML14125A346) are available at www.nrc.gov.

State of Michigan

Fermi Nuclear Plant On May 7, 2014, NRC announced that the agency had received an application from DTE Electric Co. to renew the operating license for the Fermi 2 nuclear power

plant in Michigan. DTE filed the application, which is now available for public inspection on the NRC web site, on April 30, 2014. It seeks to renew the license for an additional 20 years of operation. Fermi 2, a boiling water reactor located in Monroe County, Michigan, is currently licensed to operate through March 20, 2025. NRC staff is currently reviewing the application to determine if it is sufficiently complete to begin the agency's extensive safety and environmental reviews. If the application is determined to be complete, the staff will docket it and publish a notice of opportunity to request an adjudicatory hearing before the NRC's Atomic Safety and Licensing Board. The application and information about the license renewal process are available on the NRC website.

State of New York

Indian Point Nuclear Plant On April 29, 2014, NRC issued an order barring a former chemistry manager at the Indian Point nuclear power plant from taking part in NRC-licensed activities for one year. The enforcement action is based on the former manager's deliberate fabrication of testing information for fuel oil intended for use in the plant's emergency diesel generators. The NRC also issued a Severity Level III Notice of Violation to Entergy, which owns and operates Indian Point. The plant is located in Buchanan (Westchester County), New York. In the notice, the NRC identifies two violations by the company, including (1) operating Unit 2 and 3 without being in compliance with technical specifications for the fuel oil and (2) the failure of its former chemistry manager to initiate a condition report, or otherwise notify the plant's operations department, such that Entergy could promptly inform the NRC of the condition. "Because Entergy independently identified this issue and has taken timely and comprehensive corrective actions, the NRC is not issuing a civil penalty to the company over this matter," NRC Region I Administrator Bill Dean said. "However, the enforcement action against ... (the former chemistry manager) and the Notice of

Violation issued to the company underscore the need for all nuclear power plant employees to act in a manner consistent with their obligation to fully and faithfully perform their duties at all times." The NRC's enforcement action against the former chemistry manager took into consideration that he was prosecuted by the U.S. Department of Justice, convicted of a felony, sentenced to 18 months of probation and fined \$500. The sentence was issued in January 2014 and was based on an investigation by the NRC Office of Investigations that found that the former chemistry manager deliberately failed in February 2012 to check on the amount of particulate matter in the emergency generator diesel fuel. Further, he then created records indicating he had conducted the tests and that the fuel met NRC requirements. Despite the negligence, subsequent NRC reviews determined the generators still would have been able to perform their function due to the conservative nature of the particulate matter limits and because of filters used to purify the fuel. Under the NRC order, the former chemistry manager would have to notify the NRC prior to seeking employment involving activities licensed by the agency.

Federal Energy Regulatory Commission

FERC and NRC Discuss Grid Reliability and Reactor Issues

On May 28, 2014, the Federal Energy Regulatory Commission (FERC) and U.S. Nuclear Regulatory Commission held a joint meeting at NRC headquarters in Rockville, Maryland.

The public portion of the meeting began at 9:00 a.m. and was followed by a closed door meeting. During the meeting, staff members from both agencies and the North American Electric Reliability Corporation briefed FERC and NRC Commissioners on topics including grid reliability, nuclear power plant license renewals and dam safety.

A webcast was provided of the joint meeting.

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

(Continued from page 1)

activities developed during the 2007 Strategic Assessment, and are these activities appropriately prioritized in order to ensure safe and secure low-level radioactive waste disposal, improve the effectiveness of NRC's regulations, and assure regulatory stability and predictability while allowing flexibility in disposal options? What new activities should be added?

Regarding the Current Low-Level Radioactive Waste Disposal Regulatory System

1. As a result of the new national landscape, what are your key safety concerns relative to low-level radioactive waste disposal?
2. What vulnerabilities or impediments, if any, are in the current regulatory approach toward low-level radioactive waste disposal in the U.S. that need to be addressed in order to strengthen the NRC's ability to ensure safe and secure low-level radioactive waste disposal, improve the effectiveness of its regulations, and assure regulatory stability and predictability while allowing flexibility in disposal options?
3. What actions could be taken by the NRC and other federal and state authorities, as well as by private industry and national scientific and technical organizations, to optimize management of low-level radioactive waste? Which of the following actions are most likely to yield benefits?
 - a. changes in regulations;
 - b. changes in regulatory guidance;
 - c. changes in industry practices; and,
 - d. other (name).
4. Are there additional actions (regulatory and/or industry initiated) that can/should be taken regarding specific issues such as:
 - a. storage, disposal, tracking and security of Greater-than-Class-C (GTCC) waste (particularly sealed sources);

Federal Agencies and Committees *continued*

- b. extended storage of low-level radioactive waste;
- c. disposal options for low-activity waste/very low level waste;
- d. on-site disposal of low-level radioactive waste; and,
- e. other (name).

5. What unintended consequences might result from the potential changes identified in response to questions 3 and 4?

Potential Alternative Futures

The following revised disposal scenarios are proposed for incorporation in the updated Strategic Assessment. Are there recommendations to improve the proposed disposal scenarios?

“Optimistic” Scenario Assumptions

All aspects for management of waste from the back end of the fuel cycle are continuously available, including uninterrupted commercial disposal capacity for all Class A, B, and C low-level radioactive waste and from all waste generators. Some limited competition results in disposal costs that are considered reasonable for most waste generators. Though most waste that arise from 11e.(3) and 11e.(4) of the Atomic Energy Act of 1954, as amended, byproduct material is disposed at the Richland, Washington disposal facility, some are disposed elsewhere. Greater-than-Class-C low-level radioactive waste disposal is available at a U.S. Department of Energy (DOE) facility licensed by the NRC. There is a regulatory framework and process in place for low-activity waste that enables safe disposal in an efficient manner. A variety of low activity waste disposal options keeps the average cost of disposal low for this type of waste. There is little need for extended storage of low-level radioactive waste or for new innovations regarding treatment of low-level radioactive waste, including volume reduction or use of nonradioactive surrogates. There are no

significant events involving safety, security, or protection of the environment, and therefore little or no negative press. Implementation of the 10 CFR Part 61 limited rulemaking has occurred with the appropriate compatibility designation.

“Realistic” Scenario Assumptions

Class A, B, and C low-level radioactive waste have clear paths forward for disposal. Small quantities of relatively high activity low-level radioactive waste are stored at industrial, medical, and research facilities and at nuclear power plants. Limited quantities of waste that arise from 11e.(3) and 11e.(4) of the Atomic Energy Act of 1954, as amended, byproduct material can be disposed at the Richland, Washington disposal facility. A small percentage of GTCC—mainly sealed sources—continues to be moved out of the commercial sector into DOE storage, but a disposal facility for GTCC waste is still many years away. Orphan waste is identified in an ad hoc fashion, and a path forward for disposition/disposal becomes more limited. Disposal options for low-activity waste are few, and approvals continue to be on a case-by-case basis that takes significant time to obtain approval. The low-level radioactive waste regulatory framework is relatively stable, but necessarily reactive to certain circumstances, such as development of new technology, external events and innovations in waste processing, stabilization, and storage technology. The 10 CFR Part 61 limited rulemaking has been promulgated.

“Pessimistic” Scenario Assumptions

Disposal capacity for all types of low-level radioactive waste is severely constrained and costs of disposal are prohibitively high for many generators. Consequently, there are significant increases in both the volume and activity of low-level radioactive waste held in long-term storage. Disposal options for low-activity waste are severely constrained, and there are no prospects for development of a GTCC disposal facility in the near-to-medium term. Beneficial uses of

Federal Agencies and Committees *continued*

radioactive material in research, medical care and industrial applications decrease because of escalating uncertainties (both in disposal options as well as costs). Escalating costs become the driver for significant innovations in processing and storage technology. The public becomes concerned about potential safety impacts of low-level radioactive waste storage as it becomes increasingly aware of its widespread use by licensees. Decommissioning of some nuclear power plants is postponed, or different decommissioning strategies are used due to high disposal costs, uncertain disposal availability and conflicting public and/or political pressures. The promulgation and/or implementation of the 10 CFR Part 61 limited rulemaking has been significantly delayed.

Interagency Communication and Cooperation

1. Based on your observations of what works well and not-so-well, domestically and/or internationally, with regard to the management of radioactive and/or hazardous waste, what actions can the NRC and other federal regulatory agencies take to improve their communication with affected and interested stakeholders?
2. What specific actions can NRC take to improve coordination with other federal agencies so as to obtain a more consistent treatment of radioactive wastes that possess similar or equivalent levels of biological hazard?

Submitting Comments

Interested stakeholders may submit comments by any of the following methods:

Federal Rulemaking Web Site: Go to <http://www.regulations.gov> and search for Docket ID NRC-2014-0080.

Mail: Cindy Bladey, Office of Administration, Mail Stop: 3WFN-06-44M, U.S. Nuclear Regulatory Commission, Washington, DC 20555-0001.

Please include Docket ID NRC-2014-0080 in the subject line of your comment submission.

NRC is accepting comments until the close of business on July 14, 2014.

Background

In 2007, due to developments in the national program for low-level radioactive waste disposal, as well as changes in the regulatory environment, the NRC's low-level radioactive waste program faced new challenges and issues. New technical issues related to protection of public health and the environment and security emerged. These challenges and issues included

1. the desire of industry for greater flexibility and reliability in low-level radioactive waste disposal options;
2. increased storage capacity for Class B and Class C low-level radioactive waste because of the limited access of the Barnwell, South Carolina disposal facility in 2008 to out-of-compact waste generators;
3. the potential need to dispose of large quantities of power plant decommissioning waste, as well as depleted uranium from enrichment facilities;
4. the limited resources in the NRC low-level radioactive waste program;
5. increased security concerns related to storing low-level radioactive waste in general and sealed radioactive sources in particular as a result of the September 11, 2001, terrorist attack; and,
6. new waste streams that may be generated (for example, by the next generation of nuclear reactors and the potential reemergence of nuclear fuel reprocessing in the United States).

Federal Agencies and Committees *continued*

Based on these challenges and issues, the NRC staff conducted a Strategic Assessment of the NRC's regulatory program for low-level radioactive waste in 2007. The NRC staff provided a description of the results of the Strategic Assessment in SECY-07-0180, "Strategic Assessment of Low-Level Radioactive Waste Regulatory Program" (ADAMS Accession No. ML071350291). The objectives of the Strategic Assessment were to identify and prioritize the NRC staff's activities and continue to:

1. ensure safe and secure low-level radioactive waste disposal;
2. improve the effectiveness, efficiency, and adaptability of the NRC's low-level radioactive waste regulatory program; and,
3. ensure regulatory stability and predictability, while allowing flexibility in disposal options.

After considering extensive stakeholder input suggesting a variety of activities to include in the Strategic Assessment, the NRC staff developed a list of 20 activities responsive to identified programmatic needs. The staff evaluated these activities and assigned them priorities of high, medium, or low. These ranged from narrowly focused activities such as updating low-level radioactive waste storage guidance to broader activities such as suggesting legislative changes to Congress to improve the low-level radioactive waste national program.

In addition, the staff in the 2007 Strategic Assessment not only considered the low-level radioactive waste system as it currently exists, but also considered how the low-level radioactive waste regulatory program might change with time. The staff developed three scenarios, or "alternative futures," categorized as optimistic, realistic, and pessimistic. These scenarios are described in Appendix B of SECY-07-0180. The "optimistic future" scenario was one in which the staff envisioned a continuous expansion of safe, secure and moderately priced disposal capacity for the entire spectrum of low-level radioactive

waste. The "realistic future" scenario was characterized by a significant curtailment of disposal capacity and continued cost escalation for much of the spectrum of low-level radioactive waste, while the "pessimistic future" scenario presumed a virtual elimination of disposal capacity for low-level radioactive waste in the not too distant future. Accordingly, when the staff analyzed the proposed activities to determine their priority, their responsiveness to each of the future scenarios was one of the factors considered.

The NRC staff has completed two of its high priority activities identified in the 2007 Strategic Assessment; i.e., updating guidance for low-level radioactive waste storage, and evaluating the disposal of depleted uranium and the measures needed to ensure its safe disposal. Regarding the activity related to the disposal of depleted uranium, the NRC staff analyzed the impacts of near-surface disposal of large quantities of depleted uranium to determine if §61.55(a) of Title 10 of the *Code of Federal Regulations* (10 CFR), needed to be changed to assure that large quantities of depleted uranium are disposed of in a manner that meets the performance objectives of 10 CFR Part 61. While the NRC staff concluded that large quantities of depleted uranium can be disposed of in a near-surface disposal facility under certain conditions and still meet the performance objectives of 10 CFR Part 61, the NRC staff proposed changing the existing regulations to incorporate those conditions. The NRC staff is proceeding with a rulemaking to amend 10 CFR Part 61 to specify a requirement for a site-specific analysis for the disposal of large quantities of depleted uranium. A proposed rule is expected to be published in 2015. The NRC staff continues to work on three additional activities; i.e., finalizing a procedure for the review of low-activity waste disposal in Resource Conservation and Recovery Act facilities not licensed by the NRC, revising 10

Federal Agencies and Committees *continued*

CFR Part 61, and revising the 1995 Concentration Averaging and Encapsulation Branch Technical Position.

After seven years, progress has been made in completing these activities. However, the national low-level radioactive waste program continues to evolve. NRC staff has determined that as a result of that continued evolution, it will need to make changes to the 2007 Strategic Assessment before continuing completion of the other specified activities.

In order to set the direction for the NRC's low-level radioactive waste regulatory program in the next several years, the NRC staff will begin developing an updated Strategic Assessment of the NRC's low-level radioactive waste program. As part of that effort, the staff is proposing to revise the alternative future disposal scenarios specified in the 2007 Strategic Assessment. The new assessment will provide opportunities for stakeholder engagement. The objectives of this updated Strategic Assessment remain the same as the 2007 Strategic Assessment—i.e., to identify and prioritize activities that the staff can undertake to ensure a stable, reliable and adaptable regulatory framework for effective low-level radioactive waste management, while also considering future needs and changes that may occur in the nation's commercial low-level radioactive waste management system. As part of this assessment, the NRC staff is soliciting public comment on what changes, if any, should be made to the current low-level radioactive waste program regulatory framework, as well as specific actions that the staff might undertake to facilitate such changes.

On March 7, 2014, the NRC held a workshop to gather information on the update to the NRC's 2007 Strategic Assessment of the low-level radioactive waste regulatory program in Phoenix, Arizona. The NRC also conducted a Webinar on June 17 and plans to conduct a second Webinar on July 8. The NRC staff intends to utilize the information gathered from the workshop and

Webinars, as well as the comments received in response to the May 15 *Federal Register* notice, to update its Strategic Assessment of the agency's low-level radioactive waste regulatory program.

The “Strategic Assessment of Low-Level Radioactive Waste Regulatory Program” and “Transcript of Public Workshop on Low-Level Radioactive Waste Disposal Rulemaking and Strategic Assessment of Low-Level Radioactive Waste” are available in ADAMS at <http://www.nrc.gov/reading-rm/adams.html> under Accession Nos. ML071350291 and ML14086A540. The documents may also be found on the federal rulemaking web site at <http://www.regulations.gov> by searching for Docket ID NRC-2014-0080.

For additional information, please go to <http://www.nrc.gov/waste/llw-disposal/llw-pa/llw-strategic-assessment.html>.

For additional information, please contact Melanie C. Wong of the NRC's Office of Federal and State Materials and Environmental Management Programs at (301) 415-2432 or at Melanie.Wong@nrc.gov.

Inclusion of “Use Status” Encouraged for Sources in Long-Term Storage

On May 12, 2014, the U.S. Nuclear Regulatory Commission issued Regulatory Issue Summary 2014-04 to encourage licensees, on a voluntary basis, to submit additional information pertaining to sources that are identified as being in long-term storage in the National Source Tracking System (NSTS). In particular, NRC is encouraging licensees to include the “use status” of their sealed sources – i.e., whether or not their sources are in use or have become disused. NRC provided the RIS to the Agreement States for their information and for distribution to their licensees, as appropriate.

The reporting of “use status” for disused sources in the NSTS was a recommendation made by the Low-Level Radioactive Waste Forum’s (LLW Forum’s) Disused Sources Working Group (DSWG). In this regard, DSWG Recommendation 6 states as follows:

The NRC and Agreement States should enhance the NSTS to include as a required field the date last used of all sealed sources that pose a threat to national security. These data should be validated during routine inspections.

The DSWG, however, recommended that the reporting of “use status” be a mandatory item, whereas compliance with NRC’s RIS 2014-04 is voluntary on the part of licensees. (See *LLW Notes*, March/April 2014, pp. 1, 5.)

A PDF copy of the DSWG report may be downloaded and printed from the LLW Forum’s web site at www.llwforum.org or the National Directory of Brokers and Processors web site at www.bpdirectory.com.

Overview and Summary

Licensees have been reporting Category 1 and Category 2 radioactive source transactions to the NSTS since January 2009 in accordance with 10 CFR 20.2207 requirements. Types of reportable transactions include the manufacture, transfer, receipt, disassembly, and disposal of Category 1 and Category 2 sources. Additionally, the regulation requires licensees to annually verify their inventory of nationally tracked sources possessed against the inventory in the NSTS.

However, licensees are not required to report to federal or state regulators the “use status” of their sealed sources – i.e., whether or not their sources are in use or have become disused. In RIS 2014-04, however, NRC states that sharing the use-status of sealed sources would benefit both licensees and regulators.

For licensees, reporting of the “use status” will encourage increased awareness of, and attention to, effective disused sealed source management, which may include financial and logistical planning for disposal, including related transportation costs and challenges. For sealed sources without a commercial disposal pathway, planning may involve coordination with source recyclers (including manufacturers), or federal programs which facilitate the recovery and disposition of disused sources. NRC believes that this type of attention and planning will not only facilitate timelier sealed source disposition, but also increase licensee awareness of the national security and public health and safety concerns related to keeping disused and unwanted sealed sources in storage for longer than necessary. For regulators, use-status information will increase their awareness of how many sealed sources under their purview are disused and in storage, where they are located, and what types of disposal challenges their licensees may encounter. For both regulators and licensees, NRC writes that this type of information sharing will improve the quality and efficiency of sealed source

Federal Agencies and Committees *continued*

management and disposition which, in turn, will benefit national security, public health, and safety.

Licensees who would like to provide this status information can specify the sources are in “long-term storage” in NSTS, or they can indicate the status in their NSTS transaction reports.

Licensees using the NSTS online can indicate long-term storage of sources as follows:

1. On the NSTS Main Menu, click “specify long-term storage sources.”
2. Enter the “make,” “model,” and “serial number” to locate the source, or click “search” to see all sources in the inventory.
3. Click the “select” radio button to select the source and click “specify long-term storage.”
4. Enter a date in the “long-term storage” date field and enter text in the “long-term storage reason” field.
5. Comment field is optional.
6. Click “Save.”

Licensees reporting source transaction information using NRC Form 748 can provide the long-term storage information in the “comment” field on the transaction report. In this regard, NRC offers the following sample text: “This source is in long-term storage as of mm/dd/yyyy because it is no longer in use and a current disposal path is not available.”

Additional information on reporting to the NSTS is available on the NSTS web site at <http://www.nrc.gov/security/byproduct/ismf/nsts.html>.

Background

Every year, thousands of sources become disused and unwanted in the United States. While secure storage is a temporary measure, the longer sources remain disused or unwanted, the chances increase that they will become unsecured or abandoned.

These sources have been the focus of much interagency attention from a national security standpoint since the publication of the 2006

Radiation Source Protection and Security Task Force Report. However, NRC states that, in many cases, disposal pathways are not currently available for disused sealed sources (and there are restricted options for storage of no-disposal-pathway waste).

The 2010 Radiation Source Protection and Security Task Force Report recommended that the NRC request additional information from licensees about their sealed sources in storage. Sharing sealed source use-status information will encourage more efficient sealed source management, as well as the timely disposal of disused and unwanted sealed sources, some of which NRC acknowledges now have a commercial disposal pathway.

RIS 2014-04 is available on the NRC web site under ADAMS using accession number ML14100A152.

For additional information regarding RIS 2014-04, please contact Angela Randall of the NRC’s Office of Federal and State Materials and Environmental Management Programs (FSME) at (301) 415-6806 or at Angela.Randall@nrc.gov.

Detailed Earthquake Risk Analysis Prioritized

On May 9, 2014, the U.S. Nuclear Regulatory Commission, following up on work underway when the Fukushima accident highlighted the importance of seismic issues in the nuclear arena, announced that the agency has set a priority list for 21 of 59 nuclear power plant sites in the central and eastern United States to conduct in-depth analyses of the plants' updated earthquake risk.

The agency has reviewed updated earthquake hazard information for the 59 operating reactor sites and one unfinished reactor site east of the Rocky Mountains. The sites submitted this information in March 2014 as part of the NRC's implementation of lessons learned from the 2011 Fukushima nuclear accident. The submittals showed the plants, which have substantial safety margin above their designs' anticipated hazards, are safe for continued operation while more work is done. Should this additional analysis indicate more immediate actions are necessary, the NRC will ensure the plants respond appropriately.

"We've examined this information to see how a plant's new quake hazard compares to the ground movement that the plant's original design process considered," said Eric Leeds, Director of the NRC's Office of Nuclear Reactor Regulation. "We're closely following the industry's response and we're confident the plants are safe to continue operating. If a plant's new hazard exceeds the original design, the plant has to do a detailed analysis to determine any changes in accident risk from a quake. Plants must also do shorter-term work to see if they should enhance key safety equipment."

With limited technical expertise available to the industry to complete this effort, the NRC prioritized the follow-on work. The priority list is based on several factors that deal with how a

site's quake hazard transmits energy at frequencies that can affect a plant's structures, pipes, pumps and related safety systems. A large change between a plant's original and new hazards at those frequencies was a key consideration in determining a plant's priority. Strong overall ground motions at those frequencies also influenced a plant's priority, as can information from earlier risk evaluations.

The NRC requires these sites to submit their detailed risk analysis by June 30, 2017:

- ◆ Callaway – Fulton, Missouri;
- ◆ Cook – Bridgman, Michigan;
- ◆ Indian Point – Buchanan, New York;
- ◆ North Anna – Louisa, Virginia;
- ◆ Oconee – Seneca, South Carolina;
- ◆ Peach Bottom – Delta, Pennsylvania;
- ◆ Pilgrim – Plymouth, Massachusetts;
- ◆ Robinson – Hartsville, South Carolina;
- ◆ Vogtle – Waynesboro, Georgia; and,
- ◆ Watts Bar – Spring City, Tennessee.

The NRC requires these sites to submit their detailed risk analysis by December 31, 2019:

- ◆ Beaver Valley – Shippingport, Pennsylvania;
- ◆ Browns Ferry – Athens, Alabama;
- ◆ Catawba – York, South Carolina;
- ◆ Dresden – Morris, Illinois;
- ◆ Fermi – Newport, Michigan;
- ◆ Hatch – Baxley, Georgia;
- ◆ LaSalle – Marseilles, Illinois;
- ◆ Oyster Creek – Forked River, New Jersey;
- ◆ Palisades – Covert, Michigan;
- ◆ Summer – Jenkinsville, South Carolina; and,
- ◆ Sequoyah – Soddy-Daisy, Tennessee.

The 21 plants have until December 2014 to complete an "expedited approach" review to evaluate and reinforce key core cooling equipment to ensure plants could safely shutdown if an earthquake in fact were to occur at the higher seismic ground motion. If these reviews show the need to enhance that equipment, the work must be complete by December 2016.

The NRC is still deciding whether another 23 sites, including the Bellefonte unfinished reactor site in Alabama, require the detailed risk evaluation. The NRC has determined these sites must submit the expedited approach assessment by December 2014. If the NRC concludes these sites need the in-depth risk analysis they must submit it by December 31, 2020. The remaining 16 central and eastern U.S. sites have shown their original design accounts for the new hazard and need no further analysis; three of those sites have told the NRC they will provide an expedited approach assessment. The NRC will continue to evaluate the plants' hazard information while risk analyses are underway.

The full list of central and eastern U.S. plants is included in the NRC's letter to the 60 sites, which is available on the agency's website at www.nrc.gov. The Columbia (Benton County, Washington), Diablo Canyon (Avila Beach, California) and Palo Verde (Wintersburg, Arizona) sites must submit their new hazard estimates in March 2015. The NRC will use the same process to determine which of these sites require additional risk analysis. The NRC's blog has more information on the seismic re-evaluation process.

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

Annual Report on Abnormal Occurrences Issued for FY 2013

On June 11, 2014, the U.S. Nuclear Regulatory Commission released its annual report on abnormal occurrences for fiscal year 2013, citing 10 events involving radioactive materials. During this reporting period, no events at NRC-licensed facilities, including nuclear power plants, were

significant enough to be reported as abnormal occurrences.

An accident or event is considered an abnormal occurrence if it involves a major reduction in the degree of protection of public health and safety. Abnormal occurrences can include, but are not necessarily limited to, moderate exposure to or release of radioactive material licensed by the NRC or a state agency; major degradation of safety-related equipment; or, major deficiencies in design, construction, use of, or management controls for facilities or radioactive material.

For FY 2013, the 10 abnormal occurrences reported happened in Agreement States. (The NRC has agreements with 37 states under which the states regulate industrial and medical uses of radioactive materials.) Two of the events involved exposure of an embryo or fetus, and the remaining eight involved misadministration of radioactive material during diagnostic or therapeutic procedures. An estimated 16 million medical procedures involving radioactive materials are performed in U.S. medical facilities each year. Three of the 10 events occurred in previous fiscal years and are included because the NRC completed its evaluation of these events in FY 2013. The report details investigation of each incident by the NRC, state agencies and licensees, as well as measures taken to ensure such incidents do not recur.

A section on "other events of interest" discusses four events that do not meet the abnormal occurrence criteria but have been perceived by Congress or the public to be of high health and safety significance, have received significant media coverage, or have caused the NRC to increase its attention to or oversight of a program area. Three of these events occurred at nuclear power plants, and one involved a nuclear fuel facility. This section includes updates to other events of interest reported in previous annual reports.

Federal Agencies and Committees *continued*

The report on abnormal occurrences for fiscal year 2013 is published as NUREG-0090, Volume 36. It was transmitted to Congress on June 6 and is available on the NRC website at www.nrc.gov.

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

Proposed Procedures for New Reactor Pre-Operation Hearings

On April 18, 2014, the U.S. Nuclear Regulatory Commission staff announced that staff was seeking public comments on proposed generic procedures the agency would use to conduct hearings on whether a new reactor has been built according to its license. Subsequently, on May 21, 2014, the agency held an information meeting on the proposed procedures at NRC headquarters in Rockville, Maryland. Comments on the proposed procedures, which can be found under Docket ID NRC-2014-0077, were accepted until July 2, 2014.

When the NRC issues a Combined License for a new reactor, that license includes the inspections, tests, analyses and acceptance criteria to be satisfied during construction. The NRC must find the acceptance criteria are met before reactor operation is authorized. Individuals or groups have a limited opportunity to ask for a hearing to challenge whether all the acceptance criteria have been or will be met. The NRC updated its policy on this subset of hearings in 2008.

The Commission directed the staff in 2013 to draw up procedures for these “acceptance criteria” hearings. After the staff resolves public comments, the draft procedures will go to the Commission for approval. The Commission will

then use the adopted final procedures as a basis for orders specific to each hearing.

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

(Continued from page 6)

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.

On February 20, 2014, NRC released a Staff Requirements Memorandum (SRM-SECY-13-0075) whereby the Commission approved publication of the proposed rule and the associated draft guidance for public comment, subject to listed comments and changes. (See *LLW Notes*, January/February 2014, pp. 1, 32-33.) According to NRC staff, “Due to the breadth of the changes directed by the SRM, it will take the staff a significant amount of time to revise the proposed rule, supporting documents, and associated draft guidance before sending the package back to the Secretary of the Commission for signature and publication.”

A copy of SRM-SECY-13-0075 is available at <http://www.nrc.gov/reading-rm/doc-collections/commission/srm/2013/2013-0075srm.pdf>.

NRC Proposes to Amend Licensing, Inspection and Annual Fees Rule

On April 14, 2014, the U.S. Nuclear Regulatory Commission announced that the agency was seeking public comments on proposed changes to its regulations for the licensing, inspection, and annual fees it charges applicants and licensees for FY 2014. The proposed fee rule, which was published the same day in the *Federal Register*, includes fees required by law to recover approximately 90 percent of the agency's budget authority.

For the FY 2014 proposed fee rule, the NRC's estimated required fee recovery amount is approximately \$930.7 million, an increase of 7.7 percent from FY 2013. Approximately 35 percent of the fees would recover the cost of specific services to identifiable applicants and licensees under 10 CFR Part 170. The remaining 65 percent would be billed as annual fees under 10 CFR Part 171. By law, the NRC is required to collect all fees by September 30, 2014.

The proposed rule includes several changes. First, the NRC is proposing to raise the current hourly rate from \$272 to \$279 for FY 2014, an increase of 2.7 percent from FY 2013. Second, the NRC would revise the flat rate license application fees in 10 CFR 170.21 and 170.31 to reflect the new hourly rate. Finally, the FY 2014 proposed annual fees would increase for operating reactors, research and test reactors, materials users, and uranium recovery facilities. Annual fees would decrease for others, including spent fuel storage facilities and fuel facilities. The increases reflected in the proposed fee rule are the result of increased budgetary resources provided by Congress for FY 2014 compared to FY 2013.

Comments on the proposed rule were accepted until May 14, 2014.

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

NRC Hosts Vendor Oversight Workshop

On June 12, 2014, the U.S. Nuclear Regulatory Commission hosted a workshop in Portland, Oregon on how the agency oversees vendors and suppliers for the nuclear industry.

"We held the first of these workshops six years ago, and in that time the industry and the NRC have learned a great deal and undertaken several improvement initiatives on vendor performance and oversight," said Glenn Tracy, Director of NRC's Office of New Reactors. "While we've made significant progress, we continue to face challenges and there is more to accomplish. Vendors and industry play a vital role in ensuring nuclear safety and enhancing the regulatory process."

The workshop, open to the public, ran from 8:00 a.m. to 5:30 p.m. at the Portland Marriott Downtown Waterfront Hotel. Presenters included NRC staff, members of the Nuclear Procurement Issues Committee (NUPIC, an industry vendor clearinghouse), Nuclear Energy Institute representatives, Electric Power Research Institute officials, and current nuclear vendors.

The workshop was intended to bring together members of the public, licensees, applicants, vendors, suppliers of basic components, and

industry organizations. NRC staff led discussions on issues such as vendor oversight; 10 CFR Part 21 rulemaking activities; international calibration laboratories; activities in counterfeit, fraudulent, or suspect items; commercial-grade dedication of safety-related items and software quality assurance; and, supplier oversight implementation. NRC staff was available at the end of each workshop session for additional discussions.

The NRC held the workshop in conjunction with the NUPIC vendor meeting to make it easier for vendors to participate.

Certification Rule for GE-Hitachi New Reactor Design

On May 6, 2014, the U.S. Nuclear Regulatory Commission announced that the agency was seeking public comment on a supplement to the proposed rule to certify General Electric-Hitachi's (GEH) Economic Simplified Boiling Water Reactor (ESBWR) design. The supplement would add to the agency's March 2011 proposed rule and is available on regulations.gov under Docket ID NRC-2010-0135. Comments on the topics covered by the supplement were accepted until June 5, 2014.

The supplement covers changes to analysis of the design's steam dryer, which prevents excess moisture from damaging a nuclear power plant's electricity-generating turbine. Since early 2012, NRC reviewers have been requesting and then examining additional steam dryer information from GEH. The supplement also formally incorporates several dozen reference documents as requirements in the draft certification rule.

The design certification process includes public participation as the NRC resolves any safety issues for proposed reactor designs. NRC certification, in the form of a final rule, means the design meets the agency's safety requirements. An applicant for a nuclear power plant license using a certified design doesn't need to submit safety information for the certified design. Instead, the license application and the NRC's safety review would address the remaining safety issues for the proposed nuclear power plant.

The NRC is currently reviewing two Combined License applications referencing the GEH design. Detroit Edison Company is seeking a license for Fermi Unit 3 in Monroe County, Michigan, and Dominion is seeking a license for North Anna Unit 3 in Louisa County, Virginia. The NRC has certified four other standard reactor designs: the Advanced Boiling Water Reactor, System 80+, AP600, and AP1000.

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

Obtaining Publications

To Obtain Federal Government Information

by telephone

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

by internet

- NRC Reference Library (NRC regulations, technical reports, information digests, and regulatory guides).....www.nrc.gov
- EPA Listserve Network • Contact Lockheed Martin EPA Technical Support at (800) 334-2405 or email (leave subject blank and type help in body of message).....listserv@unixmail.rtpnc.epa.gov
- 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

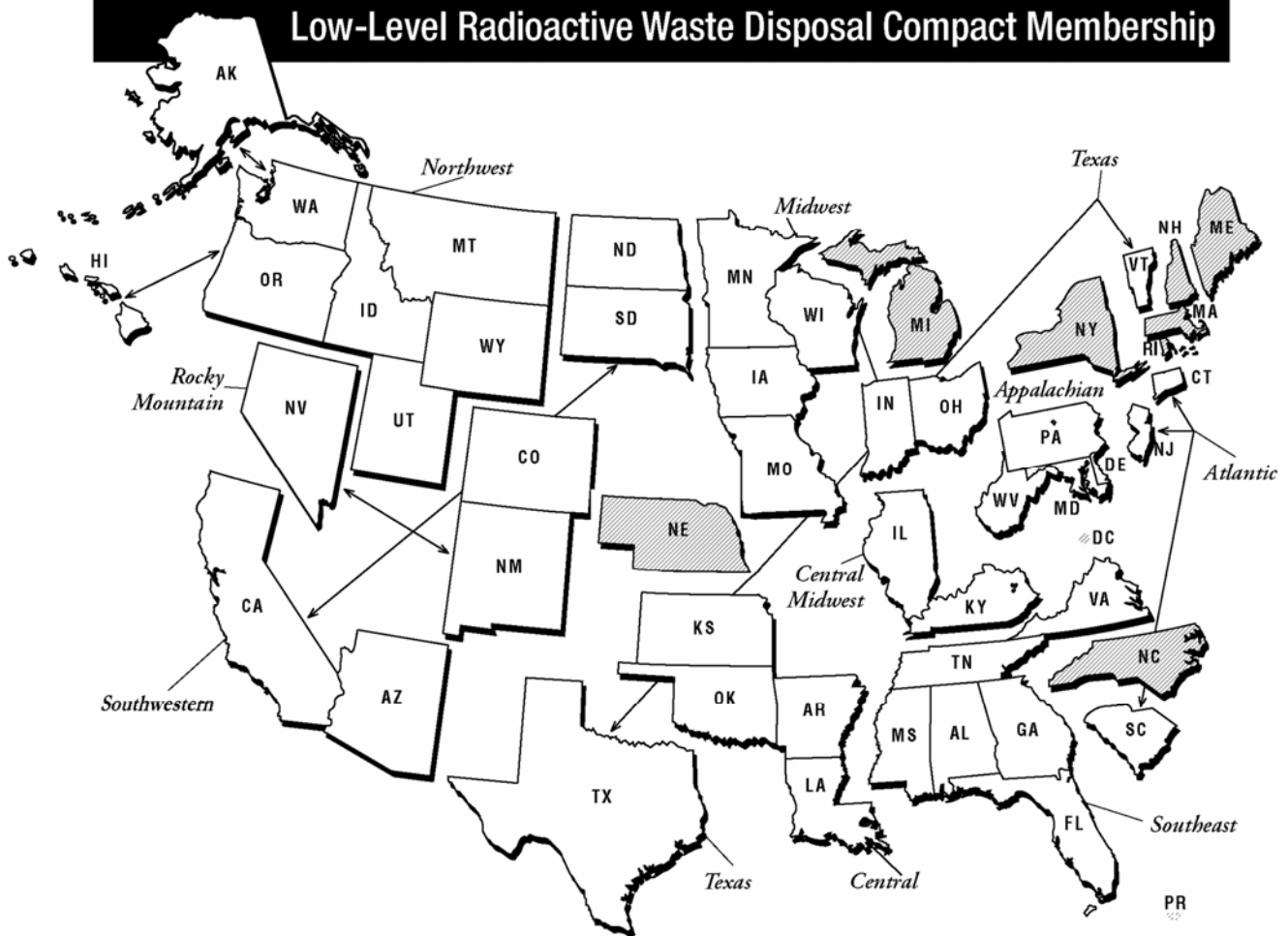
To access a variety of documents through numerous links, visit the website for the LLW Forum, Inc. at www.llwforum.org

Acknowledgement and Disclaimer

Acknowledgement: This material is based upon work supported in part by the U.S. Department of Energy under Award Numbers DE-EM0001364 and DE-EM0003153.

Disclaimer: Neither the United States Government nor any agency thereof, nor any of their employees, makes any warranty, express or implied, or assumes any legal liability or responsibility for the accuracy, completeness, or usefulness of any information, apparatus, product, or process disclosed, or represents that its use would not infringe privately owned rights. Reference herein to any specific commercial product, process, or service by trade name, trademark, manufacturer, or otherwise does not necessarily constitute or imply its endorsement, recommendation, or favoring by the United States Government or any agency thereof. The views and opinions of authors expressed herein do not necessarily state or reflect those of the United States Government or any agency thereof.

Low-Level Radioactive Waste Disposal Compact Membership



Appalachian Compact

Delaware
Maryland
Pennsylvania
West Virginia

Atlantic Compact

Connecticut
New Jersey
South Carolina

Central Compact

Arkansas
Kansas
Louisiana
Oklahoma

Central Midwest Compact

Illinois
Kentucky

Northwest Compact

Alaska
Hawaii
Idaho
Montana
Oregon
Utah
Washington
Wyoming

Midwest Compact

Indiana
Iowa
Minnesota
Missouri
Ohio
Wisconsin

Rocky Mountain Compact

Colorado
Nevada
New Mexico

Northwest accepts Rocky Mountain waste as agreed between compacts

Southeast Compact

Alabama
Florida
Georgia
Mississippi
Tennessee
Virginia

Southwestern Compact

Arizona
California
North Dakota
South Dakota

Texas Compact

Texas
Vermont

Unaffiliated States

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