LLW notes

Volume 29 March/April 2014

LLW Forum's Disused Sources Working Group

Disused Sources Working Group Releases Report

In March 2014, the Low-Level Radioactive Waste Forum (LLW Forum) released a report from the Disused Sources Work Group (DSWG or working group) identifying findings and recommendations related to the management and disposition of disused sealed sources that pose a threat to national security.

A PDF copy of the 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.

A limited number of printed copies of the report will be available while supplies last by contacting the LLW Forum at (754) 779-7551 or LLWForumInc@aol.com.

Background

In September 2011, at the request of the U.S. Department of Energy (DOE) National Nuclear Security Administration/Global Threat Reduction Initiative (NNSA/GTRI), the LLW Forum formed the DSWG. The working group, which was comprised of eight Directors of the LLW Forum, solicited input from a broad range of stakeholders at 19 meetings over a 30-month period.

Following the formation of the DSWG, significant advancements occurred regarding the disposal of sealed sources. The Texas Low-Level Radioactive Waste Disposal Compact (Texas Compact) commercial low-level radioactive waste disposal facility began operation in 2012, including the disposal of sealed sources from within and outside the Texas Compact region. With this facility, licensees in all states now have the ability to dispose of most disused sources. In September 2013, the Clive facility began accepting certain Class A sealed sources under a State of Utah approved limited one-year variance. The Branch Technical Position on Concentration Averaging and Encapsulation (CA BTP) being developed by the U.S. Nuclear Regulatory Commission (NRC) may provide for the

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In This Issue

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

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

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Low-Level Radioactive Waste Forum, Inc.

LLW Notes
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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.

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

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LLW FORUM, INC.

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Key to Abbreviations

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

Low-Level Radioactive Waste Forum, Inc.

Registration Opens for Fall 2014 LLW Forum Meeting

Embassy Suites Denver — Downtown Convention Center

The Low-Level Radioactive Waste Forum, Inc. is pleased to announce that registration is now open for the fall 2014 meeting, 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 Hotel, which is located at 1420 Stout Street in Denver , Colorado 80202. The phone number for making reservations at the hotel is (800) 445-8667. In order to get the discounted rate, please ask for a room in the LLW Forum block.

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.)*

Search for Volunteer Hosts for 2015 Meetings

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

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

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

Anyone interested in potentially hosting or sponsoring a meeting should contact one of the officers or Todd D. Lovinger, the organization's Executive Director, at (754) 779-7551 or at LLWForumInc@aol.com.

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acceptance of additional high activity sealed sources at the South Carolina, Texas, and Washington state disposal sites. While disposal is now possible for most disused sources, however, there has not been a dramatic increase in disposal activity.

Issues for Consideration

While society derives many benefits from the use of sealed sources, the national security threats posed by certain sealed sources requires that the nation reexamine the way in which such sources are managed. The current paradigm for the management of sealed sources does not fully reflect the reality of the post-9/11 threat environment. The magnitude of the disused source problem is large. There are approximately two million sealed sources and tens of thousands of disused sources in the United States; however, the exact number and location of the disused sources are unknown. The existing data systems do not inventory all sealed sources or track all disused sources in the U.S. that pose a threat to national security. While most licensees manage their disused sources in a responsible manner,

there remains a national security concern because of the potential for malevolent use.

Once used for their original purpose, many sources are stored indefinitely. Contributing to the accumulation of disused sources is the fact that the cost of the eventual shipment and disposal of sources is not included in the purchase price; and in most states, financial assurance is not required. Therefore, some users are unaware of these costs. When considering the purchase of a new sealed source, the buyer is not required to consider the overall life-cycle cost of properly managing the source and most do not budget for its ultimate disposal. Thus, as currently configured, the economics of sealed source ownership do not motivate owners toward prompt end-of-life disposition, resulting in thousands of sealed sources being stored indefinitely. Since the purchase price of sources does not reflect the full life-cycle costs, users purchase more sources than they would if the total life-cycle costs were internalized.

Contributing Factors

The working group identified six major factors contributing to the disused source problem including:

- the life-cycle costs of managing and ultimately disposing of sealed sources are not internalized;
- the practices of the NRC and the NNSA do not fully reflect a consistent view of what sources pose a threat to national security;
- the regulatory system is not adequate for the post-9/11 threat environment;
- there are no financial incentives for disused sources to be reused, recycled, or disposed in a timely manner;
- the opportunities for recycling and reusing sealed sources are being underutilized; and,
- Type B shipping containers needed to transport certain high activity sealed sources are in short supply and are very expensive.

Findings and Recommendations

The NRC considers only Category 1 and Category 2 sealed sources to present a national security risk. However, the DSWG received input from NNSA that some Category 3 sealed sources pose a threat to national security. Accordingly, the working group concluded that the U.S. Government should reach an agreement across agencies regarding which sealed sources pose a threat to national security.

The DSWG also recommends that licensees should be informed about alternative technologies and the actual costs of reusing, recycling, or disposing of sources when they are no longer needed. Research on alternative technologies to replace sealed sources should be a priority of the federal government and the private sector.

While recognizing that the current regulatory system was developed to primarily protect health and safety, the DSWG advocates that NRC and the Agreement States should enhance the system to fully address the national security threat of sealed sources. According to the DSWG, a Specific License (SL) should be required for all Category 1 through 3 sources and all such sources should be tracked in the NRC's National Source Tracking System (NSTS). The DSWG also recommends that the regulatory system should be restructured to provide economic incentives for the prompt reuse, recycle, or disposal of disused sources. In its report, the working group states that financial assurance requirements should be broadened to cover all Category 1 through 3 sources and increased to cover the full cost of transportation and disposal. Licensees should be required to pay an annual possession fee for each sealed source in inventory.

In addition, the DSWG recommends that the NRC and the Agreement States should develop a comprehensive regulation to limit the storage of disused sources to two years and authorize regulators to require the disposition of sources in storage for more than two years unless there is a demonstrated future use. The working group also

contends that inventories of disused sources at sealed source manufacturers, suppliers, and waste brokers should be reduced. And, the DSWG states that NRC should reconsider its decision to allow foreign sources that may not have a commercial disposal pathway to be imported. The financial needs of the Agreement States should also be addressed.

According to the DSWG, federal and private research funding organizations should require grantees to budget for the disposal of sealed sources when they no longer are needed by the grantee.

In addition, the working group concludes that the reuse and recycling of sealed sources should be promoted. In this regard, they recommend that a study on measures to promote the reuse and recycling of sealed sources should be conducted by an agency such as the U.S. Environmental Protection Agency (EPA). They also argue that a sealed source "exchange" program should be established to facilitate the transfer of sources between those no longer needing sources and those looking to acquire sources.

In regard to issues related to Type B shipping containers, the DSWG advocates that NNSA undertake a market analysis of the demand for Type B shipping containers and take additional steps to encourage the private sector to increase the supply of commercially available Type B shipping containers. In addition, the working group recommends that NNSA identify several internationally-certified Type B shipping containers that would have widespread applicability to disused sources in the U.S. and submit applications to have these packages certified by NRC for domestic use. And, the DSWG states that the NRC should continue to expeditiously review applications for Type B shipping containers and should aggressively notify licensees and the Agreement States well in advance of the expiration of shipping container certifications.

An outreach program should be established, according to the DSWG, to assist licensees in identifying resources to assist with packaging, transport, and disposal of disused sources.

The working group also suggests that states with disposal facilities licensed to accept Class B and Class C low-level radioactive waste should examine their waste acceptance criteria and policies, including the alternative approaches provision in the revised CA BTP to facilitate the disposal of certain high activity sealed sources. The DSWG contends that the existing NRC-Conference of Radiation Control Program Directors (CRCPD) program should be adequately funded to address orphaned and abandoned sources and individual states should retain the ability to operate their own orphaned and abandoned source programs. In addition, the Texas Compact should continue to allow the disposal of sealed sources from outside the Texas Compact region.

The DSWG report acknowledges that NNSA needs to maintain the ability to recover orphaned and abandoned sources that present a national security threat for the foreseeable future. It also recognizes that the CRCPD Source Collection and Threat Reduction (SCATR) program has been effective in collecting and disposing of thousands of disused sources over the last seven years. Nonetheless, the DSWG argues that the long-term solution to the disused source problem is to hold the licensees who have purchased and obtained the economic benefit from the sources responsible for the proper reuse, recycling, or disposal of the sources when they become disused. To this end, the working group recommends that the NNSA should ensure that its programs do not provide a disincentive for licensees to properly reuse, recycle, or dispose of disused sources in a timely manner.

For additional information regarding the DSWG report, or to obtain a copy, please contact LLW Forum Executive Director Todd D. Lovinger at (754) 779-7551 or LLWForumInc@aol.com.

Central Midwest Compact

Central Midwest Compact Commission Holds Spring Meeting

On April 14, 2014, the Central Midwest Interstate Low-Level Radioactive Waste Compact Commission held its spring meeting beginning at noon CST / 1:00 pm EST.

The following is the agenda from the meeting:

1. Call to Order
2. Adoption or Modification of the Agenda
3. Adoption of Minutes from the Previous Meeting for September 10, 2013
4. Executive Session
5. First Public Comment Period
6. Reports
    a. Chairman & Host State Report
    b. Executive Assistant Report
    c. Investment Update
7. Other Business
    a. Unfinished Business
        i. Records Retention policy - adoption of
        ii. Records scanning
        iii. By law edits - adoption of
        iv. Business Case - adoption of
    b. New Business
        i. KY reporting
8. Second Public Comment Period
9. Next Scheduled Meeting or Announcement of Special Meeting
10. Adjournment

For additional information, please contact Joseph Klinger, Chairman of the Central Midwest Interstate Low-Level Radioactive Waste Compact Commission, at (217) 836-3018 or at cmidwestcompact@yahoo.com.

Central Midwest Compact/State of Illinois

Quad Cities Nuclear Power Plant Declares Alert

At 1:40 p.m. CDT on April 2, 2014, the Quad Cities nuclear power plant—a commercial nuclear facility licensed by the U.S. Nuclear Regulatory Commission—declared an Alert for Unit 2. The two-unit plant, with Mark 1 boiling water reactors, is operated by Exelon Generation Co. and is located in Covert, Illinois—roughly 20 miles northeast of Moline.

The operators declared an Alert for Unit 2 due to smoke in the turbine building with indications of damage to safety related electrical equipment. The plant's fire brigade responded to the scene, and the plant called the local fire department and two ambulances to the site as a precaution. There were no reports of injuries.

Unit 2 was safely shut down. There were no abnormal releases of radioactive material as a result of this event and Unit 1 continued to operate at full power.

An Alert is the second lowest of four NRC emergency classifications used to declare an event which may involve an actual or potential

substantial degradation of the level of safety of the plant.

Following the alert, the NRC mobilized its Incident Response Center in Region III located in Lisle, Illinois to monitor the events. The NRC resident inspectors at the site closely followed the plant's actions from the control room. NRC will fully inspect the cause of and contributing factors to the event.

For additional information, please contact Viktoria Mitlyng at (630) 829-9662 or Prema Chandrathil at (630) 829-9663.

Northwest Compact/State of Utah

Utah Seeks Comments re Preliminary Draft Rules for Public Hearings re Byproduct Licensing Actions

During a meeting of the Utah Radiation Control Board on April 8, 2014, information was provided to Board members regarding preliminary draft rules that involve compliance with federal statutory provisions along with preliminary draft rule changes. In order to abide by the requirements, new rulemaking will be required to make clear to participants how those requirements are being met.

Accordingly, the Utah Radiation Control Board is seeking public comments on preliminary draft rule changes to Utah Administrative Code R313-17 *Administrative Procedures*; R313-24 *Uranium Mills and Source Material Mill Tailings Disposal Facility Requirements*; and R305-7-607 *Matters Governed by the Radiation Control Act, Title 19, Chapter 3*, but not including *Section 19-3-109.*

Federal Statutory Provision

The federal provision, as found in Atomic Energy Act §274(o), 42 USC §2021(o), states as follows:

In the licensing and regulation of byproduct material, as defined in section 11e.(2) of this Act, or of any activity which results in the production of byproduct material as so defined under an agreement entered into pursuant to subsection b., a State shall require–

. . .

(3) procedures which–

(A) in the case of licenses, provide procedures under State law which include–

(i) an opportunity, after public notice, for written comments and a public hearing, with a transcript,

(ii) an opportunity for cross examination, and

(iii) a written determination which is based upon findings included in such determination and upon the evidence presented during the public comment period and which is subject to judicial review . . . .

Comment Period

On April 18, 2014, a 30-day informal public comment period to receive comments on the preliminary rule changes commenced by publication of a notice on the Utah Division of Radiation Control's web page and distribution by electronic mail server. Written comments will be accepted until the close of business on Monday—May 19, 2014.

Comments received will serve to inform the Radiation Control Board in its further consideration and discussion in preparing proposed rule changes that will be filed for formal rulemaking and published to receive public comment. Accordingly, the Radiation Control Board will receive all comments submitted and no responses to comments will be prepared.

Written comments should be directed to Rusty Lundberg, Utah Division of Radiation Control, P.O. 144850, Salt Lake City, Utah 84114-4850. Comments may also be submitted via email to rlundberg@utah.gov. If submitting comments by email, please write "Rules to implement Federal Statute Hearings for byproduct material licensing actions" in the subject line.

A copy of the preliminary draft rules is available at http://www.radiationcontrol.utah.gov/Rules/docs/2014/preliminarydraftrules.doc.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.

Comments Sought re Utah Generator Site Access Permit Requirements

On March 12, 2014, the Utah Department of Environmental Quality (DEQ) commenced an informal public comment period to receive comment on the proposed preliminary rule changes to R313-26, Generator Site Access Permit Requirements for Accessing Utah Radioactive Waste Disposal Facilities.

Preliminary Rule Changes

The following is an abbreviated overview of some of the preliminary rule changes. Persons interested in additional detail are directed to the document itself.

- the addition of new definitions for "applicant," "business day," and "waste of international origin;"
- the deletion of an existing definition for "packager;"
- an express statement that applicants authorize the Director or designee of the Utah Division of Radiation Control (DRC) "to enter the place of business and conduct a point-of-origin evaluation of the Waste Collector's, Waste Generator's, or Waste Processor's waste packaging, classification, and waste management activities;"
- requires advance approval by the DRC Director of the transfer of a Generator Site Access Permit;
- requires the provision of an NRC waste manifest in searchable PDF electronic format to the DRC Director at least three (3) business days before waste arrival, as well as a summary spreadsheet that attributes and documents the waste's originating generator name(s), compact affiliation and state or nation of origin;
- requires applicants to ensure that each container "does not contain waste of international origin in any quantity;"
- requires applicants to ensure that each container does not exceed the Class A limits set in UAC R313-15-1009, contain radionuclides not analyzed in the disposal facility's performance assessment (PA) modeling report, contain radionuclides in activity concentrations above those analyzed in the disposal facility's PA modeling report, or contain nuclides not considered in the development of Class A limits as defined in either NUREG-0782 or NUREG-0945;
- provides for the possibility of imposition of an enforcement action, monetary penalty, or both—as well as the possibility of immediate termination of the Generator Site Access Permit—for violation of the requirements in the above bulleted item;
- requires that the waste shipper ensure that all material is contained, that no release of waste material from the container has occurred, and that physical and containment integrity of the waste packages has not been compromised; and,
- states that "[l]and disposal of waste bearing concentrations of radionuclides in excess of Class A limits" constitute a violation and will

"subject the licensee to enforcement action and monetary penalty."

A redline version of the preliminary changes to Rule R313-26 can be found at http://www.radiationcontrol.utah.gov/Rules/docs/2014/03Mar/r313-026-redline.pdf.

Submitting Comments

A notice of commencement of the informal comment period was announced on the DRC's web page, as well as distributed via electronic mail server.

Written comments were accepted through the close of business on Friday, March 28, 2014**.**

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

Utah Radiation Control Board Holds April 2014 Meeting

On April 8, 2014, the Utah Radiation Control Board held a working lunch and regularly scheduled meeting in Salt Lake City, Utah. The meetings were open to the public.

Working Lunch Meeting Agenda

The working lunch was held in Room 3132 at the Multi Agency State Office Building at 195 North 1950 West in Salt Lake City, Utah. The following items, among others, were on the working lunch meeting agenda:

I. Welcome

II. Administrative Rulemaking

   a. Discussion — Public Comments on preliminary proposed changes to R313-26, Generator Site Access Permit Requirements for Accessing Utah Radioactive Waste Disposal Facilities

   b. Discussion — Preliminary 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)

III. Other Items

   a. NRC Update – 10 CFR Part 61 Rulemaking (SRM-SECY-2013-0075)

Regular Board Meeting

The Board meeting was held in Room 1015 (DEQ Board Room) at the Multi Agency State Office Building at 195 North 1950 West in Salt Lake City, Utah. The following items, among others, were on the regular Board meeting agenda:

I. Welcome

II. Approval of the Minutes from the February 11, 2014 Board Meeting

   a. Working Lunch

   b. Board Meeting

III. Administrative Rulemaking

   a. Review of Public Comments on preliminary proposed changes to R313-26, Generator Site Access Permit Requirements for Accessing Utah Radioactive Waste Disposal Facilities – Possible evaluation by Board Subcommittee

   b. Overview of preliminary 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)

IV. Information Items

a. Nuclear Regulatory Commission – 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. Low-Level Radioactive Waste Forum – Availability of Final Report – Disused Sealed Sources

ii. Depleted Uranium Performance Assessment Update

d. Legislative Update

e. Other Division Items

i. First Quarter Activities Report

V. Public Comment

VI. Next Scheduled Board Meeting: Tuesday, May 13, 2014 at 1:00 p.m.
Multi Agency State Office Building, Board Conference Room 1015
195 North 1950 West
Salt Lake City, Utah

Background

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

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

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

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

Rocky Mountain Board/State of New Mexico

Meeting Held re URENCO USA Facility Review

On April 16, 2014, a public meeting was held to discuss the U.S. Nuclear Regulatory Commission's recent review of the URENCO USA nuclear fuel enrichment facility located in Eunice, New Mexico. The meeting was open to the public and media, and NRC officials were available to answer questions after the business portion of the meeting.

During the meeting, which was held in the Eunice Community Center, NRC staff discussed with company officials the results of the agency's review of safety performance at the plant from January 1, 2012 through December 31, 2013. The discussion included the areas of safety operations, radiological controls, facility support and other areas.

"Although we only do this overall review of the facility's performance every two years, our inspectors make frequent trips to the facility and have ongoing discussions with the company's management," said NRC Region II Administrator Victor McCree. "Those interactions help ensure

safe facility operation that protects employees, people living nearby and the environment."

In its review, the NRC found no areas needing improvement so the agency will continue the normal level of inspection required for a facility of this type.

A copy of the NRC review is available on the agency's website at www.nrc.gov.

Southeast Compact Commission

Southeast Compact Commission Appoints Ted Buckner as Executive Director

Effective April 1, 2014, Ted Buckner has been appointed as the new Executive Director of the Southeast Compact Commission for Low-Level Radioactive Waste Management. Ted replaces Kathryn Haynes, who recently announced her retirement effective March 31, 2014.

Buckner comes to the position of Executive Director with 22 years of experience on the staff of the Southeast Compact Commission as Associate Director. His primary duties have been staffing the Administrative Committee of the Commission, monitoring and analysis of proposed regulations of the U.S. Nuclear Regulatory Commission and the U.S. Environmental Protection Agency, analysis of legal issues, and day-to-day management of the Southeast Compact Commission's investment portfolio.

Prior to joining the Southeast Compact Commission staff, Buckner worked as an attorney in the State of Louisiana specializing in environmental and legislative issues at the state and federal level. Before that, he worked for 13 years in corporate taxation with Price Waterhouse & Co. and the Ingram Corporation.

Buckner obtained a Bachelor of Science degree in Accounting from Auburn University and a law degree from Tulane University, and he is a member of the North Carolina Bar Association. He has been an active participant of the Low-Level Radioactive Waste Forum, Inc. and currently serves as the Treasurer of the organization.

For additional information, please contact Ted Buckner at (919) 380-7780 or at tedb@secompact.org.

Texas Compact Commission

Texas Compact Commission Meets with Regulated Community

On April 15, 2014, a meeting was held between the Texas Low-Level Radioactive Waste Disposal Compact Commission and the regulated community (i.e., brokers, manufacturers, processors and disposers) at Bridgewater Place in Knoxville, Tennessee.

Meeting Format and Guidelines

The meeting was informational in nature. The Texas Compact Commission specifically stated that it did not wish to hear presentations. Instead, the meeting was intended to be an open forum with questions, answers and discussion.

To help ensure an organized flow of information, stakeholders were invited to participate in an open forum with the Texas Compact Commission in four parts including (1) manufacturers, (2) processors, (3) brokers, and (4) an open session to address remaining issues. All meeting attendees were invited and encouraged to attend the entire meeting to observe the various discussions.

The following matters were not up for discussion at the meeting: the acceptance of waste of international origin; regulatory jurisdiction concerning when a radioactive material is declared a radioactive waste; and, the shipment of radioactive material or radioactive waste.

Questions from the Rules Committee

The Texas Compact Commission's Rules Committee provided the following questions for discussion at the meeting:

- Should a source manufacturer be able to take back sources they sold, and declare the sources as their waste? Yes or no, and why? What about distributors?
- Can the Texas Compact Commission do anything within its jurisdiction, and through the rules, to encourage recycling and/or re-use of sealed sources? This means the sealed source capsule, not the housing, lead shielding, or other materials which are not part of the source capsule.
- What does the term "sham recycling" mean? Can the Texas Compact Commission do anything within its jurisdiction, and through the rules, to discourage sham recycling? Can the Texas Compact Commission do anything within its jurisdiction, and through the rules, to encourage the disposal of disused sources?
- In the "White Paper" distributed by the Texas Compact Commission, there was discussion of a possible period where the Texas Compact Commission (and potentially other State Agencies) would allow entities to submit import applications which did not include generator authorizations, but other information might be provided to establish where the waste came from. Please comment on this concept. How long should the period be? Should the period only be for sources that became waste prior to the existence of Texas Commission on Environmental Quality (TCEQ) Form 20225?
- Why do brokers submit import allocation applications, particularly for sealed sources, that request Class A, B, C waste types? What effect would it have if the Texas Compact Commission asked for a breakdown, by waste class, for the volume requested in an application? How would this affect generators?
- Do brokers or generators ever ship Compact and Non-Compact waste in the same shipment? In the same container? If no, why not? Is any kind of hardship created? Could brokers/generators account for the waste by volume/activity if Compact/Non-Compact waste was in the same container?
- Do brokers/generators/processors typically make multiple shipments of waste when using an allocation? Or is an allocation typically exhausted by one shipment?
- Why do brokers not always provide signed generator authorization forms when applying for an import agreement? If the signed forms cannot be provided with your application, are three additional information packages sufficient? If no, why not?
- Do the specific radionuclide requirements (C-14, Tc-99, I-129, U-238) of the rules inhibit your ability to apply for an allocation or ship waste for disposal? If yes, in what way? Would it help to alleviate this issue, if only specifics were required for C-14?
- The Texas Compact Commission has been asked about establishing a process for handling import agreements that need to be amended. Would you be in favor of such a process?
- What would you consider a minor amendment and why? Do you believe minor amendments should require a vote of the Texas Compact Commission? What kind of public notice, if any, would be appropriate for a minor amendment?

- Would it negatively impact you if the Texas Compact Commission only approved import agreements that expired on August 31st of the requested year (no carryover of allocation)? If yes, how? In other words, no multi-year applications.

In order to allow attendees an opportunity to consider the above questions, they were distributed in advance of the meeting.

Goal of the Meeting

The Chairman of Texas Compact Commission established the Rules Committee to review the Texas Compact Commission's existing rules under 31 TAC §675.21, §675.22, and §675.23 and to develop any proposed changes to the existing rules. Members of the Rules Committee include Commissioners Linda Morris, Richard Saudek and Chairman Robert Wilson. Commissioner Morris, Commissioner Saudek and Commissioner Salsman attended the meeting in Knoxville, TN.

The Texas Compact Commission is seeking input for consideration in their preparation of an initial draft rule for the formal rule-making process. During this informal phase, input is important to the Commissioners for developing language relating to processing of import applications and establishing the generator of low-level radioactive waste. It is important to the Texas Compact Commission to understand each company's unique experiences, processes, and business constraints.

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.

Texas Compact Commission Holds March Meeting

On March 13, 2014, the Texas Low-Level Radioactive Waste Disposal Compact Commission (Texas Compact Commission) held a regularly scheduled meeting at the Holiday Inn Dallas North—which is located at 4960 in Arapho, Texas.

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 request for amendments to agreements for importation of low-level radioactive waste from Bionomics and Exelon;
- consideration of and possible action on applications and proposed agreements for importation of low-level radioactive waste from Radiac and Zion Solutions;
- receive reports from the Texas Commission on Environmental Quality (TCEQ) on the status of pending facility operator license amendment applications and any other matter TCEQ wishes to bring to the attention of the Texas Compact Commission;
- receive reports from Waste Control Specialists LLC (WCS) about recent site operations and any other matter WCS wishes to bring to the attention of the Texas Compact Commission;
- discussion and possible action to designate a Commissioner to pick up warrants;

- discussion and possible action to amend the Texas Compact Commission's bylaws;
- discussion and possible action to proceed with a contract, not to exceed $2,500, to develop a Texas Compact Commission State of Texas Risk Assessment Report;
- Chairman's report on Texas Compact Commission activities including reporting on fiscal matters and on other actions to be taken by the compact;
- report from Leigh Ing, Consulting Supervisory Director of the Texas Compact Commission, on her activities and questions related to Commission operations;
- discussion and possible changes of dates and locations of future Texas Compact Commission meetings; and,
- adjourn.

Background

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

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

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

Texas Compact/State of Texas

TCEQ Completes Assessment re Texas' High-Level Waste Storage Options

On March 1, 2014, the Radioactive Materials Division of the Texas Commission on Environmental Quality (TCEQ) published an assessment of the state's high-level radioactive waste storage options. The report, which evaluates the challenges posed by spent nuclear fuel and other high-level radioactive waste currently stored on-site at the six Texas nuclear reactors, was conducted at the request of Texas Governor Rick Perry.

Subsequently, on March 29, 2014, Governor Perry sent a letter to Lieutenant Governor David Dewhurst and House Speaker Joe Straus in which he advocates that Texas "begin looking for a safe and secure solution for … [high-level radioactive waste] in Texas."

The issue was recently discussed during a closed-door meeting of the Andrews Industrial Foundation during which a representative from Waste Control Specialists LLC (WCS), which began storing transuranic waste from the U.S. Department of Energy (DOE) in April 2014, reportedly confirmed the company's interest in exploring the potential storage of high-level radioactive waste at its facility in Andrews County.

TCEQ Assessment

The TCEQ report includes, among other things, technical descriptions, an historical overview, a review of current practices for storing spent nuclear fuel, transportation issues and an analysis of the available options.

Background There is currently no federal disposal site for high-level radioactive waste, including spent nuclear fuel. As a result, Texas' two nuclear power plant sites—which include Comanche Peak in Glen Rose and the South Texas Project in Bay City—are storing their spent nuclear fuel on-site. Although TCEQ concludes that current storage practices are environmentally sound and that state and federal regulations are adequate to protect the environment and public health, the agency points out that most of this waste is stored at nuclear facilities which are within 100 miles of major metropolitan areas. "[T]he continued availability of an appropriate storage area may prove challenging," states TCEQ, "as the nuclear facilities face decommissioning at the end of their licenses."

Regardless of whether or not the federal government is eventually able to implement definite plans to construct a geologic repository, spent nuclear fuel will need to be stored for decades. For instance, even if the proposed Yucca Mountain high-level radioactive waste repository was approved and completed in 2020, the U.S. Department of Energy (DOE) estimates that interim storage will continue to be needed until 2056, in part because moving spent nuclear fuel from storage to disposal is calculated to require 24 years. If, on the other hand, the proposed Yucca Mountain repository is cancelled and a new site selection process begins, the U.S. Government Accountability Office (GAO) projects that the earliest date for a geologic repository would be 2048.

Analysis Due to the continued need for storage options, the TCEQ report determines that one or more centralized storage facilities should be constructed in which the DOE takes title to spent nuclear fuel so that the waste can be moved away from the nuclear power plant sites. This approach was also advocated by the Blue Ribbon Commission on America's Nuclear Future.

TCEQ recognizes that any attempt by a private corporation to site a centralized interim storage facility will likely face public opposition. "Finding a site that has local and state support," writes TCEQ, "would greatly enhance the chance of a private centralized interim storage site being successfully sited and constructed." Nonetheless, TCEQ acknowledges that there are significant outstanding issues with this approach as nuclear power plants would have to take title to the spent nuclear fuel and would have to agree to take back the waste if the storage facility closes prior to the development of a permanent repository.

Due to title issues, TCEQ finds that the successful siting and construction of a private centralized interim storage facility is highly uncertain and may therefore be difficult for a private company to attempt. The agency states, however, that a DOE owned interim storage facility could conceivably be operated by the private sector. In this regard, TCEQ notes that DOE often uses private entities to operate its national laboratories and other facilities.

Conclusion By building upon the methodology used for siting the Waste Isolation Pilot Plant (WIPP) in New Mexico and the Low-Level Radioactive Waste Disposal Facility in Texas, TCEQ concludes that the siting and construction of a spent nuclear fuel storage or disposal facility "is not only feasible but could be highly successful."

TCEQ cautions, however, that any federal or private program "needs to be established in a manner that reduces the uncertainty due to changing prevailing political opinions and minimizes local and state opposition through stakeholder meetings, finding volunteer communities, financial incentives, and a process that is considered fair and technically rigorous."

Governor's Letter

In his March 29 letter, Governor Perry writes that Texas will likely need to find a long-term solution for the safe and secure handling of high-level radioactive waste. "The citizens of Texas – and every other state currently storing radioactive waste – have been betrayed by their federal

government after contributing billions of dollars to fund a federal solution for … [high-level radioactive waste] disposal, because a federal solution still does not exist." According to the Governor, the current federal forecasts for a solution are too long to wait.

Governor Perry writes that it is time for Texas to act, particularly since New Mexico is seeking to be federally designated for high-level radioactive waste disposal. Pointing out that the New Mexico proposed site is approximately 50 miles from the Texas border, the Governor advocates that Texas should begin to look for a safe and secure solution for high-level radioactive waste within the state. Providing such a solution, he states, "would allow the citizens of Texas to recoup some of the more than $700 million they have paid toward addressing this issue."

The Governor concludes his letter by requesting that the TCEQ report be sent to the appropriate oversight committees. "The leadership at TCEQ understands the importance of this issue," writes Governor Perry, "and I believe they will be a valued resource as we continue to develop a Texas solution for the long-term resolution of … [high-level radioactive waste] currently residing inside our borders."

Potential Interest by WCS

According to the Odessa American, the issue of storing spent nuclear fuel was raised during a recent meeting of the Andrews Industrial Foundation, a non-profit economic development group. The paper quoted WCS spokesman Chuck McDonald as saying, "It is something that if we had the community support of, at WCS we would be interested in being a part of that." Nonetheless, McDonald stressed that WCS has not sought any of the federal permits that would be required.

Recently, WCS began accepting transuranic waste from DOE for temporary storage. Most of the transuranic waste consists of items like clothing, tools, rags and soil contaminated with radioactive elements during decades of nuclear research and weapons production in New Mexico. According to an April 2 announcement from DOE, up to about 100 more shipments may be sent to WCS before the June 30 deadline to remove the waste from the Los Alamos National Laboratory as part of an agreement with the state. The waste was initially intended to go to WIPP before two incidents in February resulted in temporary shutdown of the site.

Background

On January 31, 2014, House Speaker Straus issued interim charges for the 83rd Legislature. (See *LLW Notes*, January/February 2014, pp. 14-15.) The House Committee on Environmental Regulation was given three charges, including to study the rules, laws and regulations pertaining to high-level radioactive waste disposal in Texas; to determine the potential economic impact of permitting a facility in Texas; and, to make specific recommendations on the state and federal actions necessary to permit a high-level radioactive waste disposal or interim storage facility in Texas.

TCEQ's report is available at http://www.documentcloud.org/documents/1100389-tceq-assessment-of-texas-high-level-radioactive.html. For additional information, please contact TCEQ at (512) 239-6464 or go to www.tceq.state.tx.us or contact Rod Baltzer, President of WCS, at (972) 450-4235 or at rbaltzer@valhi.net.

State of Michigan

US Ecology to Acquire the Environmental Quality Company

On April 7, 2014, US Ecology, Inc. announced that it has entered into a definitive stock purchase agreement to acquire 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. EQ is owned by an affiliate of New York based private equity fund Kinderhook Industries, LLC. The transaction, valued at $465 million, is expected to close in the second or third quarter.

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 addition of EQ to US Ecology's family of permitted facilities will provide us with an expanded environmental services platform, broadening our geographic footprint and providing for a greater array of services to better meet the needs of our customers," commented US Ecology President and CEO Jeff Feeler. "In addition to its high quality, complementary assets, like US Ecology, EQ has a strong, uncompromising commitment to environmental, health, and safety compliance, engendering the trust of customers, employees and the broader community. We expect that the combination of US Ecology and EQ will result in cross-selling opportunities, transportation synergies and efficiencies of scale, delivering compelling value for our customers and stockholders as well as further opportunities for long-term growth."

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.

Fermi Nuclear Power Plant Declares Alert

On March 20, 2014, the U.S. Nuclear Regulatory Commission responded to an Alert that was declared at the Fermi Nuclear Generation Plant due to a small fire near the turbocharger of a diesel generator. The fire was quickly put out and the Alert was terminated at 3:32 p.m.

The single-unit plant is operated by DTE Energy. It is located in Newport, Michigan—approximately 25 miles northeast of Toledo. The plant is currently shut down for a refueling outage and is in a stable condition. There was no radiation release and no impact to plant workers or the public.

Workers at the plant saw fire in the vicinity of the turbocharger, an air intake system, on one of the station's four diesel generators during routine

testing. Plant workers were able to quickly extinguish the small fire. The other diesel generators were not affected.

An Alert is the second lowest emergency level in the NRC's emergency classification system. The NRC resident inspectors at the site followed the event in consultation with NRC staff at the NRC Region III Office in Lisle, Illinois. The NRC will review the circumstances surrounding the incident.

For additional information, please contact Viktoria Mitlyng at (630) 829-9662 or Prema Chandrathil at (630) 829-9663.

Constellation Energy Nuclear Group, LLC and Exelon Generation Company, LLC

Transfer of Five Reactor Licenses from Constellation to Exelon Approved

On April 1, 2014, the U.S. Nuclear Regulatory Commission announced that the agency has approved the proposed direct transfer of operating licenses from Constellation Energy Nuclear Group, LLC (CENG) subsidiaries to Exelon Generation Co. LLC for five commercial nuclear power reactors and three spent fuel storage installations.

Exelon currently owns 50.01 percent of CENG, which is jointly owned with EDF Inc.—a subsidiary of Electricité de France SA. CENG currently holds the operating licenses for five nuclear power reactors at three plant sites—Calvert Cliffs 1 and 2, Nine Mile Point 1 and 2, and R.E. Ginna—as well as associated independent spent fuel storage installations. EDF will continue to own the remaining 49.99 percent of CENG. Long Island Power Authority owns 18 percent of Nine Mile Point 2 and is not affected by the license transfers. Existing Exelon licenses will not be affected.

The NRC approved the indirect transfer of the licenses in February 2012 when Exelon merged with Constellation Energy Group Inc.—CENG's parent company. The current direct transfer allows Exelon to integrate the operations of the facilities into its existing nuclear fleet.

The transfer of the licenses will not result in any physical changes to the facilities. The on-site organizations and plant staffs, including senior managers, will remain essentially unchanged by the license transfers. The NRC staff determined that Exelon meets the agency's financial and technical qualifications requirements and concluded that public health and safety will not be adversely affected by the license transfers.

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

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 South Carolina

Summer Nuclear Plant On March 10, 2014, the U.S. Nuclear Regulatory Commission issued a confirmatory order to South Carolina Electric & Gas Co.'s Summer nuclear power plant—which is

located near Jenkinsville, South Carolina, approximately 26 miles northwest of Columbia. The company has agreed to a series of corrective actions related to its allowing access to an individual who had deliberately concealed information in order to obtain employment at the site. The order stems from a settlement achieved under the NRC's Alternative Dispute Resolution process, which was requested by SCE&G to address two apparent violations related to the 2010 event. Those violations involved the actions of a former contract employee who falsified a personnel history questionnaire and provided a fictitious court document. After the company discovered the fabrications in early 2011, SCE&G promptly terminated the individual's employment and took a number of immediate steps to reduce the likelihood of recurrence. The NRC's ADR process refers to mediation facilitated by a neutral third party with no decision-making authority who assists the NRC and a licensee in reaching an agreement when there are differences regarding an enforcement action. A mediation session between the NRC staff and SCE&G was held on October 8, 2013 and a settlement was reached. The confirmatory order outlines the corrective actions and steps SCE&G has taken and agreed to take to address the violations. Corrective actions already taken include a detailed analysis of the event and subsequent review of the company's site access process, sharing of the information within the company and throughout the nuclear industry, requiring official authentication of all criminal history judicial records, and program improvements such as independent reviews of information, enhanced training and periodic assessments. Under the order, SCE&G has committed to other actions including further industry-wide discussion of the event and additional training. In addition to the actions taken by the company and outlined in the order, the NRC issued an order to the former contract employee prohibiting him from engaging in all NRC-licensed activities for five years.

Catawba Nuclear Plant In late March 2014, NRC conducted a special inspection at Duke Energy's Catawba nuclear power plant to assess the circumstances surrounding the abnormal rotation of piston crankshaft bearings on the Unit 1 emergency diesel generators. The plant is located near York, South Carolina—approximately 18 miles south of Charlotte, North Carolina. During planned maintenance in early March, workers at the Catawba plant found that a connecting rod bearing on one of the two Unit 1 diesel generators had rotated from its normal position. A check of the other Unit 1 diesel generator led to the discovery of one of its bearings in a rotated position. Both of the bearings were replaced, but Duke Energy believes that the original bearings would have performed their function in the rotated position. "While there was no event where the diesel generators were needed, they are extremely important should the plant lose offsite power," said Victor McCree, NRC Region II Administrator. "Based on the need to gather more information and determine if there are generic issues that may apply to other plants, we felt a special inspection was warranted." The inspection team will review the circumstances surrounding the rotated bearings and the company's actions after they were identified. It will also look at maintenance practices, assess any previous bearings issues at the plant and evaluate the company's conclusions about whether the bearing would have operated in the abnormal position. A report documenting the inspection results should be issued within 45 days of the completion of the inspection.

Central Interstate Compact/States of Arkansas, Kansas and Louisiana

Arkansas One Nuclear Plant On May 1, 2014, NRC staff met with officials from Entergy Operations to discuss two significant preliminary enforcement actions in connection with a 2013 heavy equipment handling incident at the Arkansas Nuclear One plant in Russellville, Arkansas. The plant is operated by Entergy Operations, Inc. The NRC has preliminarily determined that the incident had high safety significance, or was red, for Unit 1, and had

substantial safety significance, or was yellow for Unit 2. Workers were moving a 525-ton component out of the plant's turbine building during a maintenance activity when a temporary heavy equipment 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 accident 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 heat removal systems. The falling turbine component damaged electrical cables 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 sensed vibrations as the heavy component fell and hit the turbine building structure. A preliminary yellow finding is being issued for Unit 2 because the impact of the incident was less significant. Specifically, Unit 2 never completely lost offsite 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 and identified areas for further inspection follow-up. The NRC held a public meeting in Russellville on May 9, 2013, to discuss the team's findings. From its follow-up inspections, the NRC identified the preliminary red and yellow findings documented in the latest NRC inspection report.

Wolf Creek Nuclear Plant On April 30, 2014, NRC will meet with officials from Wolf Creek Nuclear Operating Corp. to discuss a preliminary inspection finding associated with emergency preparedness at the Wolf Creek nuclear plant—which is located near Burlington, Kansas. After the business portion of the meeting, which was open to the public, NRC officials answered questions from the public. The NRC has preliminarily determined that the emergency preparedness finding had low to moderate safety significance, or was "white." NRC inspectors observed and evaluated a regularly scheduled emergency preparedness exercise at the site on November 5, 2013. During the exercise, the NRC found that the licensee had not addressed a previously identified error involving software used to assess offsite radiation dose during a plant emergency. Dose assessment is a key component of a plant operator's emergency response and it is important that it be accurate. The NRC report details the inspection findings. No decision on the final safety significance of the findings or any additional NRC actions were made at the conference, but rather will be announced at a later time.

Waterford Nuclear Plant On March 31, 2014, NRC announced that the Waterford 3 nuclear power plant will receive additional oversight based on an inspection finding of low to moderate safety significance for failing to ensure the operability of an exhaust fan in a room housing the plant's emergency diesel generators. The plant—which is located in Killona, Louisiana—is operated by Entergy Operations, Inc. The

violation involved a failure by the licensee to establish an adequate test program to demonstrate that a safety-related component would perform satisfactorily in service. Entergy officials did not conduct adequate testing to demonstrate that an exhaust fan in a room housing one of the plant's emergency diesel generators would function properly. The fan is necessary to keep the diesels, which supply emergency electrical power to safety-related equipment under some emergency conditions, from overheating. The licensee has taken corrective action to ensure the fan will function as intended. Had one of the plant's emergency diesel generators failed, other means existed to provide emergency electrical power to vital plant equipment. The NRC staff issued a preliminary finding in an inspection report issued on January 30, 2014. The licensee declined the opportunity for a regulatory conference. The issuance of the white finding will result in the plant moving from the Licensee Response Column of the agency's Action Matrix to the Regulatory Response Column. This will result in increased inspections and regulatory oversight until the agency is satisfied the relevant issues have been properly evaluated and satisfactory corrective actions have been developed and implemented.

Midwest Compact/State of Ohio

Davis-Besse Nuclear Plant On March 13, 2014, NRC announced that the agency is seeking public comment on a draft report assessing the environmental impacts of extending the operating license for the Davis-Besse nuclear power plant in Oak Harbor, Ohio. The Davis-Besse Nuclear Power Station is a single pressurized water reactor and is licensed to operate through April 22, 2017. First Energy Nuclear Operating Co. applied to renew the license for an additional 20 years on August 27, 2010. The draft environmental impact statement contains the NRC staff's preliminary finding that the environmental impacts of license renewal would not preclude renewing the license. This finding is based on the analysis and findings in the agency's generic environmental impact statement on license renewal, the environmental report submitted by First Energy, consultation with federal, state and local agencies, the NRC staff's own independent review, and the staff's consideration of public comments. The NRC staff held two public meetings on March 25 at the Camp Perry Conference Center to present the report's findings and receive comments from the public. Comments were also accepted over the federal rulemakings website at www.regulations.gov and by regular mail through April 21, 2014. The draft environmental impact statement for the Davis-Besse license renewal (NUREG-1437, supplement 52), along with information on the staff's review of the license renewal application, is available on the NRC website at www.nrc.gov.

Northwest Compact/States of Alaska, Washington and Wyoming

Acuren USA On April 25, 2014, NRC announced that the agency had issued a Confirmatory Action Letter documenting actions that Acuren USA has agreed to take before resuming radiography operations at its facility in Kenai, Alaska. In addition, the NRC will conduct a follow-up inspection to learn more about a recent incident. The letter formalizes commitments company officials made to the NRC after an unannounced inspection of Acuren's facility in Kenai on April 10, 2014. Inspectors walking around the outside of the facility observed high readings on their radiation survey meters in an area where there were no boundaries or physical controls to prevent entry by the public during radiography operations. The company is licensed to use radioactive materials in devices for making images of pipe welds. An initial dose estimate performed by the inspectors suggests that had a member of the public been standing next to the building, they could have been exposed to radiation in excess of NRC annual limits (100 millirem) during the time the radiography operations were conducted on that day. In addition, the inspectors were concerned that over the course of a year, members of the public who

may have worked in a nearby office had the potential to receive a dose in excess of NRC annual limits. The inspection team will develop a detailed chronology of the events, evaluate the adequacy of licensee actions in response to the incident, and assess the factors which may have contributed to the event. The team will prepare a written report that will be made publicly available. In the meantime, the company has agreed (1) not to resume radiography operations at its Kenai facility without NRC approval; (2) to provide the NRC with a description of planned actions taken to ensure that future activities will not result in any member of the public being exposed to radiation doses in excess of NRC limits at any of its facilities or temporary job sites; and, (3) to provide the NRC with evaluations necessary to determine whether members of the public were exposed in excess of NRC dose limits during past activities. Issuance of the Confirmatory Action Letter does not preclude the NRC from taking other additional actions for any violations of NRC requirements that may be identified.

AREVA Fuel Facility On April 9, 2014, NRC held a public meeting to discuss the agency's recent review of AREVA NP Inc.'s nuclear fuel manufacturing facility located in Richland, Washington. During the meeting, NRC staff discussed with company officials the results of the agency's review of safety performance at the plant from January 1, 2012 through December 31, 2013. The discussion included the areas of safety operations, radiological controls, facility support and other areas. In its review, the NRC found no areas needing improvement, so the agency will continue the normal level of inspection required for a facility of this type. The meeting was open to the public and media, and NRC officials were available to answer questions after the business portion of the meeting.

Ross Uranium Facility On April 25, 2014, NRC issued an operating license to Strata Energy Inc. for the Ross uranium recovery facility in Crook County, Wyoming. Strata submitted the application for the in situ recovery facility in January 2011. The license is the fifth issued by the NRC for a uranium recovery facility since 1998. The NRC's review of the application included an environmental review published in February 2014 as a Supplemental Environmental Impact Statement (EIS), which referenced the agency's Generic EIS for in situ recovery facilities. The NRC's review also included a Safety Evaluation Report, which concluded the proposed facility can operate safely, including management of radiological and chemical hazards, groundwater protection, and eventual cleanup and decommissioning. An NRC Atomic Safety and Licensing Board will hold a hearing to examine environmental contentions related to the project later this year. The Ross EIS, NUREG-1910 Supplement 5—as well as the Safety Evaluation Report, the license and more information on the Ross application—are available on the NRC web site at www.nrc.gov.

Southeast Compact/States of Georgia and Tennessee

Vogtle Nuclear Plant On April 24, NRC held an open house to provide information on the agency's assessment of the two operating units at the Vogtle nuclear plant during 2013, as well as the agency's inspection of construction activities for the two new Vogtle units. The informal open house was held in the auditorium of the Augusta Technical College's Waynesboro Campus, during which staff were available to answer questions about the safety performance of Vogtle Units 1 and 2, as well as overall NRC oversight and inspection. A separate presentation on inspection and oversight of Units 3 and 4, now under construction, was held later that evening in the same auditorium and was also followed by a question and answer session. The Vogtle plant is located near Waynesboro, about 26 miles southeast of Augusta. It is operated by Southern Nuclear Operating Co. Overall, the NRC staff concluded that Vogtle Units 1 and 2 operated safely in 2013, and there were no inspection findings or performance indicators that would cause the NRC to increase its level of oversight and inspection. Based on the plant's performance, the NRC staff plans to continue the detailed routine or baseline inspections all nuclear power plants

receive. The NRC performance review of Vogtle site construction found that, overall, Southern Nuclear Operating Co. and its contractors conducted construction activities in compliance with NRC regulations and the conditions of the plant's combined license. Based on that assessment, the NRC will not expand its activities beyond the detailed inspections currently being planned and conducted.

Watts Bar Nuclear Plant On April 9, 2014, NRC held two meetings to discuss construction inspection and oversight of Watts Bar Unit 2, which is being built near Spring City, Tennessee—approximately 60 miles southwest of Knoxville. The plant is being built by the Tennessee Valley Authority, which also operates Unit 1 at the site. At the meetings, NRC staff discussed the agency's assessment of the construction of the new units during 2013. In addition, TVA discussed the status of the project, including major milestones and potential challenges that may impact the construction schedule and the NRC staff will discuss the status of construction inspections and licensing efforts for Unit 2. A letter sent from the NRC to plant officials addresses construction oversight. The NRC staff found that the units were being constructed in a manner that protected public health and safety and met all regulatory objectives. The NRC has three construction resident inspectors at the Watts Bar site. Additional information on the construction reactor oversight process is available on the NRC web site at www.nrc.gov.

Southwestern Compact/State of South Dakota

Dewey-Burdock Uranium Recovery Project On April 2, 2014, NRC announced that the agency had issued an operating license to Powertech USA for the Dewey Burdock uranium recovery facility in Fall River and Custer Counties, South Dakota. Powertech submitted the application for the in situ recovery facility in August 2009. The license is the fourth issued by the NRC for a uranium recovery facility since 1998. The NRC's review of the application included an environmental review published in January 2014 as a Supplemental Environmental Impact Statement (EIS), which referenced the agency's Generic EIS for in situ recovery facilities. The NRC's review also included a Safety Evaluation Report, which concluded the proposed facility can operate safely, including management of radiological and chemical hazards, groundwater protection, and eventual cleanup and decommissioning. An NRC Atomic Safety and Licensing Board will hold a hearing to examine environmental and safety contentions related to the project later this year. The Dewey Burdock EIS, NUREG-1910 Supplement 4, Volumes 1 and 2—as well as the Safety Evaluation Report, the license and more information on the Dewey Burdock application—are available on the NRC website at www.nrc.gov.

State of New York

Ginna Nuclear Plant On April 17, 2014, NRC announced that the agency will increase its level of oversight at the Ginna nuclear power plant following the finalization of a "white" (low to moderate safety significance) inspection finding for the facility. The finding, which involves a violation of NRC requirements, is based on a failure to properly implement flooding protection measures. The plant—which is located in Ontario, New York—is operated by Exelon Generation Co. LLC. NRC inspectors determined that electrical cable penetrations that could allow for the flow of water from a manhole into battery rooms were not properly sealed for many years. The batteries are part of the plant's credited emergency back-up power capabilities for events during which off-site power, the plant's normal source of electricity, is lost. The flooding could have disabled not only the batteries but also other emergency back-up sources of power for the plant. While the company made modifications to fix the problem late last year, the NRC is taking enforcement action because of the length of time the vulnerability existed. An NRC inspection

report issued in February 2014 notes that Constellation, the owner of record for the plant until recently, failed to identify the need to correct two non-hydrostatically sealed cable penetrations between a manhole located on site property and a battery room after the flood height the plant must be able to withstand was changed in 1983. In addition, the company neither promptly corrected the problem in May 2013 when the condition was identified nor took timely action in early September 2013 when it was presented with evidence by NRC inspectors challenging its May 2013 evaluation that the penetrations did not represent a potential vulnerability. Prior to making a final enforcement decision, the NRC offered the company the opportunity to take part in a Regulatory Conference to provide additional information regarding the apparent violation, to submit a written response or to accept the finding without any formal response. The company submitted a written response dated March 14 in which it stated that, among other things, it had initiated a root cause analysis to better understand why the issue was not identified earlier through the plant's problem identification and resolution program.

State of North Carolina

Global Nuclear Fuel On April 14, 2014, NRC announced that the agency had begun a special inspection at the Global Nuclear Fuel facility in Wilmington, North Carolina to review the circumstances surrounding the discovery in late March that some safety equipment was unavailable or unreliable. On March 28, 2014, plant employees determined that a moisture sensor that is one of the facility's criticality controls was not operable. A pressure indicator in the same system that would have also helped prevent a criticality was later found to be in a condition that made it unreliable. A criticality can occur when nuclear materials come together in sufficient quantity or arrangement to initiate a chain reaction resulting in either a "burst" or a sustained release of radiation. Moisture can also play a role in a criticality. A criticality event would not be expected to affect people or the environment outside the facility, but could be serious for workers in the immediate area. There were three inspectors on site for the special inspection, from the NRC's fuel facility division in the Region II office in Atlanta and the agency's headquarters in Rockville, Maryland. The team is reviewing the facts surrounding the equipment issues, the company's actions after the condition was discovered and any long-term corrective actions to prevent recurrence. A report documenting the inspection results should be issued within 45 days of the completion of the inspection.

Commonwealth of Puerto Rico

Centro de Medicina On April 9, 2014, NRC announced that the agency had issued an Order to a Santurce, Puerto Rico company imposing a $7,000 civil penalty for failure to dispose of licensed nuclear material in its possession. The material is contained in nuclear devices used for medical diagnostic purposes. The NRC considered additional daily fines against Centro de Medicina (CDM) Nuclear because of its ongoing possession of the material, but the agency has determined further penalties are not warranted because CDM has initiated steps towards site decommissioning. In a previous Order issued on August 7, 2012, the NRC notified CDM that it had failed to pay its annual licensing fee to the agency and had 20 days to do so. When the firm did not comply, the NRC revoked CDM's license on August 28, 2012 and required CDM to take several steps, including arranging for the disposal or transfer of any licensed nuclear materials possessed under its license. During a visit to the Santurce site on January 17, 2013, an NRC inspector confirmed that the company's licensed radioactive sources were properly accounted for and secured. However, despite the August 2012 Order, CDM was not acting to address the issue and had failed to respond to NRC communications on the matter. An NRC notice of the proposed $7,000 fine was issued on November 5, 2013. When CDM did not respond to the

notice, an NRC inspector visited the facility on January 29, 2014. Company representatives agreed at that time to obtain cost estimates for disposal of the material but subsequently said CDM did not have sufficient funds to do so. Since then, the company has secured an estimate for disposal or transfer of the materials.

State of Rhode Island

Geisser Engineering Corp. On March 21, 2014, NRC proposed an $11,200 civil penalty against a Rhode Island firm for performing work on numerous occasions at both a federal facility in the state and in Connecticut without first obtaining permission from the NRC to do so. Rhode Island is an "Agreement State," which means that under an agreement with the NRC, it oversees the use of nuclear materials within its borders that would otherwise be regulated by the NRC. However, such activities performed at federal facilities and in Connecticut and other "Non-Agreement States" are under the jurisdiction of the NRC and therefore must be approved by the agency. This requirement is known as "reciprocity." It means that an individual or company licensed by the NRC or an Agreement State to use radioactive material must seek permission before conducting activities outside of the jurisdiction covered by the licensing agency. Geisser Engineering Corp. (GEC)—which is based in Riverside, Rhode Island—did not adhere to that reciprocity requirement and used portable nuclear gauges in Connecticut between October 21, 2009 and June 23, 2011. The company also performed work at the Newport Naval Station—located in Newport, Rhode Island—which is also under NRC jurisdiction because it is a federal facility. All told, GEC failed to file for reciprocity on 22 occasions prior to performing work at these locations. The NRC gathered information about these activities during an unannounced inspection at the company's offices. The agency's Office of Investigations also conducted an investigation into the matter and determined that the firm's president was aware of the reciprocity requirements and chose not to follow them over a protracted period of time. NRC staff conducted a closed pre-decisional enforcement conference with the president of GEC on November 20, 2013 regarding the inspection and investigation findings. In addition to the fine proposed for GEC, the NRC is also issuing an order prohibiting the company's owner, George Geisser III, from participating in NRC-licensed activities for three years. This is because his actions with respect to the lack of reciprocity filing have been determined by the NRC to be deliberate, resulting in the "loss of reasonable assurance that you may be relied upon, at this time, to comply with NRC requirements," the order states.

International Atomic Energy Agency (IAEA)

U.S. National Report Presented to IAEA's Convention on Nuclear Safety

On March 25, 2014, U.S. Nuclear Regulatory Commission Chairman Allison Macfarlane presented the United States' Sixth National Report for the Convention on Nuclear Safety (NUREG-1650, Revision 5) to member countries of the International Atomic Energy Agency (IAEA) in Vienna, Austria.

Macfarlane spoke and took questions from other delegates in a closed-door session that concluded an international peer review of the U.S. report, which was published last October. (See *LLW Notes*, November/December 2013, pp. 21-22.) The sixth review meeting of the Convention on Nuclear Safety to concluded on April 4, 2014.

"This peer review process is a critical part of the international community's efforts to share experience, learn lessons, and strengthen global nuclear safety," Macfarlane said in her remarks. She was joined by Mark Satorius, NRC's Executive Director for Operations, and Robert Willard, President and Chief Executive Officer of the Institute for Nuclear Power Operations, who presented an industry perspective on U.S. nuclear safety.

Countries that are parties to the Convention meet every three years to discuss their reports. The U.S. report demonstrates how the United States implements a high level of nuclear safety by enhancing national measures and international cooperation, and by meeting the obligations of all the articles established by the Convention. These articles address, among other issues, the safety of existing nuclear installations, the legislative and regulatory framework, the regulatory body, responsibilities of licensees, human factors, quality assurance, radiation protection, emergency preparedness, siting, design and construction.

The report discusses the status of safety issues raised in the Fifth U.S. National Report, including reactor materials degradation, cyber security, digital upgrades to instrumentation and control, moisture effects on underground cables, using accident pressure buildup to maintain emergency core cooling functions, gas bubbles in light-water reactor coolant systems, enhancement to emergency preparedness regulations, as well as the NRC's ongoing efforts to address lessons learned from Fukushima.

In addition to the peer review of the U.S. report, the NRC received high marks earlier this year from an IAEA Integrated Regulatory Review Service team, which assessed the U.S. regulatory infrastructure against international safety standards and good practices. (See *LLW Notes*, January/February 2014, pp. 22-24.) The IRRS team concluded that the NRC "acted promptly and effectively … in the interests of the public health and safety" in response to the March 2011 Fukushima nuclear accident in Japan.

The Sixth National Report is available on the NRC website at www.nrc.gov. For additional information, please contact David McIntyre of the NRC at (301) 415-8200.

U.S. Department of Energy and U.S. Nuclear Regulatory Commission

DOE and NRC Meet to Discuss Yucca Mountain Groundwater Report

On April 7, 2014, officials from the U.S. Department of Energy and U.S. Nuclear Regulatory Commission met to discuss DOE's plans to update its technical report on groundwater impacts of the proposed nuclear waste repository at Yucca Mountain, Nevada. The report, "Analysis of Postclosure Groundwater Impacts for a Geologic Repository for the Disposal of Spent Nuclear Fuel and High-Level Radioactive Waste at Yucca Mountain, Nye County, Nevada," was originally issued in July 2009.

The meeting was held from 1:30 p.m. - 3:00 p.m. at NRC headquarters in the Commissioners' Hearing Room in Rockville, Maryland. The public was invited to attend and given an opportunity to ask questions prior to the end of the meeting.

Background

In November 2013, the Commission requested that DOE supplement its environmental impact statement on the Yucca Mountain repository with additional information pertaining to groundwater. (See *LLW Notes,* November/December 2013, p. 30.) The request was part of the agency's effort to continue the licensing process of the repository application consistent with an order from the U.S. Court of Appeals for the District of Columbia Circuit. (See *LLW Notes,* September/October 2013, p. 21.) The NRC originally requested the supplement in 2008, after DOE submitted its license application for the proposed repository.

In February 2014, DOE responded to the NRC request, declining to supplement the environmental impact statement but offering to update its July 2009 technical report on groundwater impacts of the proposed repository. At the April 7 meeting, NRC staff will ask DOE officials to explain their plans and schedule for updating the technical report.

For additional information, please contact David McIntyre at (301) 415-8200 or Alexa Sieracki at (301) 287-0627 or at alexa.sieracki@nrc.gov.

U.S. Nuclear Regulatory Commission

NRC Seeks Public Comment on Draft Strategic Plan

On March 6, 2014, the U.S. Nuclear Regulatory Commission announced that the agency is seeking public comments on its draft Strategic Plan, covering Fiscal Years 2014-2018. The draft provides a blueprint for the agency to plan, implement and monitor work needed to achieve the NRC's mission for the next four years.

The draft plan describes the agency's mission and its two strategic goals, which although slightly reworded for clarity and readability, remain fundamentally unchanged from the current plan. The NRC's mission is "to license and regulate the Nation's civilian use of radioactive materials to protect the public health and safety, promote the common defense and security, and protect the environment." The two strategic goals are "to ensure the safe use of radioactive materials and to ensure the secure use of radioactive materials."

The draft plan includes a new vision statement that reflects how the agency operates using the principles of a good regulator. The NRC's new vision states, "A trusted, independent, transparent, and effective nuclear regulator." The draft also includes new strategic objectives that describe,

more specifically, the results needed to achieve the agency's strategic goals.

Strategies to meet each of these objectives are described in the draft plan and reflect how the agency will respond to meet new challenges affecting nuclear regulations, such as processing license applications involving new technologies such as small modular reactors and continuing implementation of enhancements to improve reactor safety based on insight from the 2011 nuclear accident at Fukushima Dai-ichi.

The NRC issued its first Strategic Plan in September 1997 and is now required to update it every four years. The final Strategic Plan will replace the agency's existing plan (FY 2008-2013).

The draft Strategic Plan is available on the NRC's website at www.nrc.gov. For additional information, please contact Ivonne Couret of the NRC at (301) 415-8200.

Waste Confidence Rulemaking Briefing

On March 21, 2014, NRC staff and invited parties briefed the Commission in a public meeting on the Waste Confidence rulemaking.

The meeting was held in the Commissioners' Conference Room at NRC Headquarters in Rockville, Maryland.

Invited External Participants

The invited external participants included:

- Ronald Johnson, Tribal Council President, Prairie Island Indian Community;
- John Sipos, Assistant Attorney General, State of New York;
- Ellen Ginsberg, Vice President, General Counsel, and Secretary, Nuclear Energy Institute;
- Michael Callahan, Decommissioning Plant Coalition; and,
- Geoffrey Fettus, Senior Project Attorney, Natural Resources Defense Council.

Meeting Agenda, Slides and SECY Paper

Prior to the meeting, an agenda and slides were posted at http://www.nrc.gov/public-involve/public-meetings/webcast-live.html and at http://www.nrc.gov/reading-rm/doc-collections/commission/tr/2014/, where links to the webcast archive and transcript were also made available after the meeting.

In preparation for the meeting, NRC staff developed a paper for the Commission, SECY-14-0025, *Waste Confidence—Continued Storage of Spent Nuclear Fuel Proposed Rule: Public Feedback on Specific Issues*, that summarizes public feedback on the four issues on which the Commission specifically sought comment in conjunction with the Waste Confidence rule. This paper is available at http://www.nrc.gov/reading-rm/doc-collections/commission/secys/2014/.

Background

The proposed rule was published for public comment in the *Federal Register* on September 13, 2013. (See *LLW Notes*, September/October 2013, pp. 36-37.) Known as "waste confidence," the proposed rule would replace a similar provision in NRC's environmental regulations that was vacated by the U.S. Court of Appeals for the District of Columbia Circuit on June 8, 2012. (See *LLW Notes*, July/August 2012, p. 18.)

During the 98-day public comment period, the NRC held 13 public meetings nationwide to collect public comments on the draft environmental statement and rule. The agency also received more than 33,000 written comments. (See *LLW Notes*, November/December 2013, pp. 32-33.)

The rule does not authorize extended storage of spent fuel at reactor sites – a separate license is required for that. Rather, waste confidence is a generic finding of the environmental impacts of storing spent fuel for extended periods beyond the licensed operating life of reactors.

The Waste Confidence GEIS forms the regulatory basis for the proposed rule. The statement is available on the NRC's waste confidence webpage.

The Waste Confidence Generic Environmental Impact Statement (GEIS) and final rule are expected to be published no later than October 3, 2014. (See *LLW Notes*, January/February 2014, p. 34.)

Additional information on the Waste Confidence rulemaking and GEIS is available on the NRC's Waste Confidence website at http://www.nrc.gov/waste/spent-fuel-storage/wcd.html.

For additional information, please contact Sarah Lopas, NMSS/WCD, at (301) 287-0675 or at Sarah.Lopas@nrc.gov.

Proposed Revision to Acceptance Criteria for Emergency Cooling Systems

On March 24, 2014, the U.S. Nuclear Regulatory Commission announced that the agency is seeking comment on a proposed change to agency regulations regarding the acceptance criteria for emergency systems to cool the reactor core if an accident occurred at a U.S. nuclear power plant.

The proposed rule reflects recent research findings that identified new damage mechanisms for zirconium alloy-covered fuel rods during a loss-of-coolant accident. It would also apply to all fuel types and cladding materials, as well as address a petition for rulemaking regarding crud, oxide deposits and hydrogen content in zirconium -alloy fuel cladding. The proposed rule would ensure an acceptable level of fuel rod performance following a loss-of-coolant accident, providing adequate protection of public health and safety. It would also provide licensees the option to use risk-informed methods to address the effects of debris during long-term cooling following a loss-of-coolant accident.

The proposed rule is not part of the NRC's response to the 2011 events at Fukushima, but an outcome of a Nuclear Energy Institute petition for rulemaking in 2000, direction given to the staff by the Commission in 2003, and findings of a 10-year research program ending in 2008. Thus, the development of the proposed rule pre-dates the Japan events by several years.

Comments on the changes will be accepted until June 9, 2014. In addition, comments are being accepted on three related draft regulatory guides. Comments may be submitted on the Regulations.gov website; by e-mail to Rulemaking.Comments@nrc.gov; by facsimile at (301) 415-1101; or, by mail to Secretary, U.S. Nuclear Regulatory Commission, Washington, DC 20555-0001, ATTN: Rulemakings and Adjudications Staff.

For more information on the proposed rule, contact NRC staff members Tara Inverso at (301) 415-1024 or at tara.inverso@nrc.gov or Paul Clifford at (301) 415-4043 or at paul.clifford@nrc.gov.

Input Sought re Reactor Fuel Behavior During Postulated Accidents

On March 13-14, 2014, U.S. Nuclear Regulatory Commission staff met with the public, industry representatives and other interested parties to discuss technical issues the agency should consider in upcoming research on nuclear fuel safety. The meeting was held in the Commission Hearing Room at the agency's headquarters in Rockville, Maryland.

During the meeting, staff from the NRC's Offices of Nuclear Regulatory Research and Nuclear Reactor Regulation discussed their work to date on how high burn-up nuclear fuel pellets might fragment under certain conditions during an accident where a reactor loses cooling water. The staff also discussed whether fuel pellet fragments might be released through breaks in the fuel pin cladding. There was also discussion on how the research into fuel behavior could affect analysis of specific postulated accidents including:

- a reactor ejecting a control rod out of the core;
- a break in the piping carrying steam to the plant's turbine; and,
- a single pressurized-water reactor coolant pump locking up or breaking its drive shaft.

The public was invited to join the meeting's discussions along with academic and industry researchers, utilities, and international regulators.

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

NRC Issues Annual Assessments for Nation's Nuclear Plants

On March 6, 2014, the U.S. Nuclear Regulatory Commission announced that the agency had issued annual assessment letters to the nation's 100 operating commercial nuclear power plants regarding their performance in 2013. As of the end of December 2014, 89 plants were in the two highest performance categories.

"These assessment letters are an annual report card on the performance of the nation's nuclear power plants," said Ho Nieh, Director of the Division of Inspection and Regional Support in the Office of Nuclear Reactor Regulation. "We ensure nuclear power plants are safe by inspecting them and rating their performance regularly, as part of our mission to protect people and the environment."

Of the 89 highest-performing reactors, 80 fully met all safety and security performance objectives and were inspected by the NRC using the normal inspection program. Nine reactors were assessed as needing to resolve one or two items of low safety significance. For this performance level, regulatory oversight includes additional inspection and attention to follow up on corrective actions.

The plants requiring additional inspection include: Browns Ferry 3 (Alabama); Clinton (Illinois); Fitzpatrick (New York); Grand Gulf 1 (Mississippi); LaSalle 2 (Illinois); Point Beach 2 (Wisconsin); Prairie Island 2 (Minnesota); Robinson (South Carolina); and, Turkey Point 3 (Florida). Robinson has resolved their issues since the reporting period ended and has transitioned to the highest performing level.

Nine nuclear reactors were in the third performance category with a degraded level of

performance. For this category, regulatory oversight includes more NRC inspections, senior management attention and oversight focused on the cause of the degraded performance. These plants include Browns Ferry 2 (Alabama); Duane Arnold (Iowa); Monticello (Minnesota); Pilgrim (Massachusetts); Point Beach 1 (Wisconsin); Sequoyah 1 and 2 (Tennessee); Susquehanna 2 (Pennsylvania); and, Watts Bar 1 (Tennessee). Sequoyah 1 and 2 and Watts Bar 1 have resolved their issues since the reporting period ended and have transitioned to the highest performing level.

One reactor, Browns Ferry 1 in Alabama, is in the fourth performance category and requires increased oversight because of a safety finding of high significance, which will include additional inspections to confirm the plant's performance issues are being addressed.

Fort Calhoun plant in Nebraska is currently under a special NRC oversight program distinct from the normal performance levels because of an extended shutdown with significant performance issues. The oversight panel cleared the unit to restart in December 2013, but the plant will remain under special oversight until the panel returns it to the regular program. Therefore, the plant will not receive an annual assessment letter.

Throughout the spring and summer, the NRC is hosting a public meeting or other event in the vicinity of each plant to discuss the details of the annual assessment results. A separate announcement will be issued for each public assessment meeting. In addition to the annual assessment letters, plants also receive an NRC inspection plan for the coming year.

The NRC routinely updates information on each plant's current performance and posts the latest information as it becomes available to the action matrix summary. The annual assessment letters sent to each operating reactor licensee (as well as mid-cycle assessments issued each September) are also available through the NRC's webpage on the Reactor Oversight Process. Annual construction assessments for new reactors at the Vogtle and Summer sites and at Watts Bar 2 are also on the NRC website at www.nrc.gov.

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

NRC Proposes FY 2015 Budget to Congress

On March 4, 2014, the U.S. Nuclear Regulatory Commission announced that the agency has requested $1,059.5 million (including the Office of the Inspector General) in its Fiscal Year 2015 budget proposal to Congress to regulate nuclear power plants and users of nuclear materials to protect people and the environment. The budget represents a slight increase of $3.6 million from the enacted 2014 budget. However, because the fees that the NRC charges licensees are sent directly to the Treasury, the net appropriation requested is actually $124.2 million, which is $1 million less than in the previous year.

"This budget request will allow the NRC to continue to fulfill its vital safety and security mission on behalf of the American people," said NRC Chairman Allison Macfarlane.

The FY 2015 budget breakout includes $815.2 million for nuclear reactor safety and $232.2 million for nuclear materials and waste. The budget also includes resources to continue lessons -learned activities related to the Fukushima nuclear accident, including seismic and flooding reevaluations. NRC staff gave a presentation on lessons learned from the Fukushima accident at the recent Low-Level Radioactive Waste Forum meeting in Austin, Texas on March 17-18, 2014.

The budget reflects an increase of 66.8 full-time equivalent employees, in comparison to the FY 2014 enacted budget. The FY 2015 budget

funds 3,881.8 full-time equivalent employees, including the Office of the Inspector General.

Included in the budget request is $12.1 million for the Office of the Inspector General, which independently and objectively conducts audits and investigations to ensure the efficiency and integrity of NRC programs, and to promote cost-effective management. The Office of the Inspector General's budget also includes funding to provide Inspector General services for the Defense Nuclear Facilities Safety Board.

The budget briefing slides are available on the NRC website at www.nrc.gov. A limited number of hard copies of the report are available from opa.resource@nrc.gov.

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

Renee Simpson Selected as Director of NRC's Office of Congressional Affairs

On March 11, 2014, the U.S. Nuclear Regulatory Commission announced that Chairman Allison Macfarlane had named Renee Simpson as Director of the Office of Congressional Affairs. Simpson replaces Rebecca Schmidt, who retired on January 31, 2014 after nine years at the NRC and 30 years of service to the federal government.

Prior to her new appointment, Simpson served in senior staff positions on the House Appropriations and Senate Intelligence Committees and held a number of related positions, including service in the Offices of Legislative Affairs for the U.S. Marine Corps and Director of National Intelligence.

Simpson's career in the federal government began in 1981, when she was commissioned as a naval officer. She served with distinction for 24 years of active and reserve duty, retiring as a Navy Captain. Along the way, she held progressively more responsible positions in matters of national security, both in uniform and as a civil servant, including her most recent jobs in Congress conducting oversight of intelligence activities. She also served in state government as Professional Staff for the Legislative Budget Board, a permanent joint committee of the Texas Legislature. The board develops budget and policy recommendations for legislative appropriations, and conducts evaluations to improve efficiency and performance of state and local operations.

Simpson received a Bachelor's Degree in Political Science from Wake Forest University and completed extensive graduate work in Georgetown University's Security Studies Program. She is also a graduate of several professional education programs and fellowships, including the John F. Kennedy Special Warfare Center and School; National Defense University; and Georgetown University's Government Affairs Institute. She was also recognized for her outstanding contribution as a fellow of the Massachusetts Institute of Technology's Center for International Studies Seminar XXI Program for "Foreign Politics, International Relations and the National Interest."

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- NRC Reference Library (NRC regulations, technical reports, information digests, and regulatory guides). ..... **www.nrc.gov**

- EPA Listserve Network • Contact Lockheed Martin EPA Technical Support at (800) 334-2405 or email (leave subject blank and type help in body of message). ..... **listserver@unixmail.rtpnc.epa.gov**

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- U.S. Government Printing Office (GPO) (for the Congressional Record, *Federal Register*, congressional bills and other documents, and access to more than 70 government databases). ..... **www.access.gpo.gov**

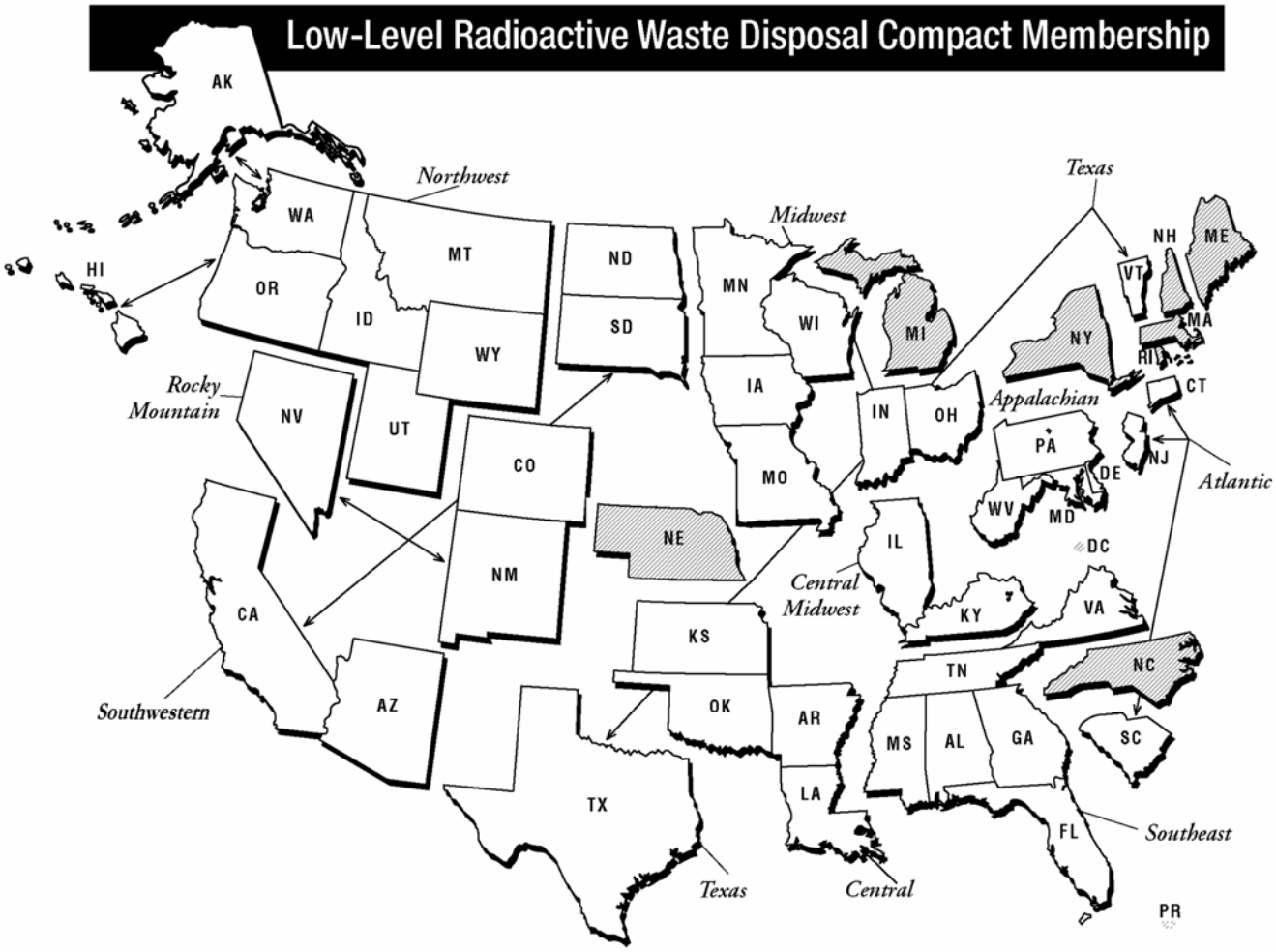
- GAO homepage (access to reports and testimony) ..... **www.gao.gov**

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

Accessing LLW Forum, Inc. Documents on the Web

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

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



Appalachian Compact
Delaware
Maryland
Pennsylvania
West Virginia

Atlantic Compact
Connecticut
New Jersey
South Carolina

Central Compact
Arkansas
Kansas
Louisiana
Oklahoma

Central Midwest Compact
Illinois
Kentucky

Northwest Compact
Alaska
Hawaii
Idaho
Montana
Oregon
Utah
Washington
Wyoming

Midwest Compact
Indiana
Iowa
Minnesota
Missouri
Ohio
Wisconsin

Rocky Mountain Compact
Colorado
Nevada
New Mexico

Northwest accepts Rocky Mountain waste as agreed between compacts

Southeast Compact
Alabama
Florida
Georgia
Mississippi
Tennessee
Virginia

Southwestern Compact
Arizona
California
North Dakota
South Dakota

Texas Compact
Texas
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