LLW notes

Volume 30 Number 2 March/April 2015

U.S. Nuclear Regulatory Commission

Comment Period Opens re Proposed Changes to Low-Level Radioactive Waste Disposal Regulations

in re Proposed Amendments to 10 CFR Parts 20 & 61 and Associated Technical Guidance

On March 26, 2015, the U.S. Nuclear Regulatory Commission published a proposed rule to amend 10 CFR Parts 20 and 61, "Licensing Requirements for Land Disposal of Radioactive Waste," in the *Federal Register* (80 *Federal Register* 16,081) for public comment.

NRC also published a notice of availability of associated guidance, "Guidance for Conducting Technical Analyses for Low-Level Radioactive Waste Disposal," for public comment in the *Federal Register* (80 *Federal Register* 15,930).

Comments for both the proposed rule and the conforming technical guidance documents should be submitted by July 24, 2015. Comments received after this date will be considered if it is practical to do so, but the NRC is able to assure consideration only for comments received on or before the due dates.

NRC staff gave a presentation on the Part 61 proposed rule and associated guidance at the spring 2015 LLW Forum meeting. *(Additional information, including a copy of NRC's power point presentation, can be found on the members-only, restricted-access portion of the LLW Forum's web site at www.llwforum.org.)*

The proposed rule can be accessed online at http://www.gpo.gov/fdsys/pkg/FR-2015-03-26/pdf/2015-06429.pdf. The associated technical guidance can be accessed online at http://www.gpo.gov/fdsys/pkg/FR-2015-03-26/pdf/2015-06536.pdf.

Proposed Rule re 10 CFR Parts 20 & 61

Summary NRC is proposing to amend its regulations that govern low-level radioactive waste disposal facilities to require new and revised site-specific technical analyses, to permit the development of site-specific criteria for low-level radioactive waste acceptance based on the results of these analyses, to facilitate

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In This Issue

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

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

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

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Low-Level Radioactive Waste Forum, Inc.

LLW Notes
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Editor and Writer: Todd D. Lovinger
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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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. (LLW Forum)

Registration is Now Open for the Fall 2015 LLW Forum Meeting

Embassy Suites Hotel in Downtown Chicago, Illinois
October 22-23, 2015

The Low-Level Radioactive Waste Forum (LLW Forum) is pleased to announce that registration is now open for our fall 2015 meeting, which will be held at the Embassy Suites Downtown Chicago Hotel on October 22-23, 2015. Please mark your calendars accordingly and save the date!

Interested stakeholders are encouraged to register and make hotel reservations for the meeting at your earliest convenience, as there is limited space available in our discount room block.

The meeting is being co-sponsored by the Central Midwest Interstate Low-Level Radioactive Waste Compact Commission, the Illinois Emergency Management Agency (IEMA), and the LLW Forum.

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 2015 LLW Forum meeting will be held on Thursday, October 22 (approx. 9:15 am – 5:15 pm) and Friday, October 23 (approx. 9:00 am – 1:00 pm) at:

Embassy Suites
Downtown/Lakefront
511 North Columbus Drive
Chicago, Illinois 60611

Located in the heart of downtown Chicago, the Embassy Suites Hotel is one block to the Magnificent Mile, two blocks to the Chicago River and three blocks to Navy Pier.

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 Todd Lovinger of the LLW Forum 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 meeting attendees for Wednesday (October 21) and Thursday (October 22) at the prevailing federal per diem rate (which is currently $194/night) plus tax/single or double. (The rate for a triple is $214/night plus tax and for a quadruple is $234/night plus tax.) A limited number of rooms are available at this rate for three days prior to and following the meeting, subject to availability.

To make a reservation, please call 1-800-HILTONS and ask for a room in the "LLW Forum block" at the Embassy Suites Downtown–Lakefront Hotel or use the following dedicated link: http://embassysuites.hilton.com/en/es/groups/personalized/C/CHIREES-LLW-20151020/index.jhtml?WT.mc_id=POG.

In order to receive the discounted rate, please make your reservation by September 18, 2015.

Transportation and Directions

Super Shuttle offers transportation from both Chicago O'Hare International Airport and Chicago Midway Airport for a minimum charge of $29. A taxi from the airport to the hotel is a minimum estimated charge of $50/each way. Driving directions from both airports can be found at http://chicagoembassy.com/. Please note that self-parking at the hotel is $43/day and valet parking is $63/day.

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

LLW Forum Holds Spring 2015 Meeting

Alexandria, Virginia on April 20-21, 2015

The Low-Level Radioactive Waste Forum held its spring 2015 meeting at the Old Town King Street Hilton located in Alexandria, Virginia on April 20-21, 2015.

The meeting was co-sponsored by the Southeast Compact Commission for Low-Level Radioactive Waste Management and the Central Interstate Low-Level Radioactive Waste Compact Commission.

The agenda included a wide array of topics addressing issues related to low-level radioactive waste management and disposal including but not limited to

- licensing and activities updates from the state regulator, facility operator and relevant compact commissions for the Waste Control Specialists' facility in Andrews County, Texas and the Energy*Solutions'* Clive facility in Tooele County, Utah;

- a perspective from the National Council of Radiation Protection and Measurements (NCRP) on recovery from nuclear or radiological incidents as detailed in Report 175;

- a report from the Electric Power Research Institute (EPRI) detailing issues and considerations for the proper management and disposition of low-activity waste;

- updating of the Protective Actions Guides (PAGs) and Planning Guidance for Radiological Incidents by the U.S. Environmental Protection Agency (EPA);

- the U.S. Nuclear Regulatory Commission's (NRC's) recently released new proposed rule

language on implementing requirements for a site-specific analysis for near-surface disposal (Part 61 rulemaking initiative);

- NRC's efforts, as well as scientific and technical considerations, related to revising the uniform waste manifest guidance to, among other things, improve reporting for the hard to detect phantom four radionuclides;
- updating of the NRC's 2007 programmatic assessment to guide the agency's low-level waste regulatory program;
- overview of the EPA's RadMap GIS-based government information tool that displays the locations and capabilities of radiation monitors in the United States, including potential application by emergency responders;
- review and analysis of a report prepared by Perma-Fix Environmental to address the impacts of Technologically-Enhanced Naturally Occurring Radioactive Materials (TENORM) associated with oil and gas development in the Commonwealth of Pennsylvania;
- review and analysis of a report prepared by Argonne National Laboratory to provide a radiological dose and risk assessment regarding the landfill disposal of TENORM associated with oil and gas development in North Dakota and potential regulatory changes arising therefrom;
- development of Supplementary Guidance related to the proper management and disposition of disused sources by the International Atomic Energy Agency (IAEA);
- an update of the current Source Collection and Threat Reduction (SCATR) initiative by the Conference of Radiation Control Program Directors (CRCPD);
- development of alternative technologies and other initiatives from the National Nuclear Security Administration (NNSA);
- addressing the shortage and high costs of Type B containers for sealed sources;
- analysis, overview and path forward for the NRC's byproduct material financial scoping study;
- EPA's proposed revisions regarding environmental protection standards for uranium and thorium mill tailings;
- overview of activities and initiatives at the U.S. Department of Energy (DOE) including consideration of Greater-than-Class C (GTCC) waste management and disposal options;
- path forward for Waste Isolation Pilot Plant (WIPP) and transuranic wastes across the DOE complex;
- status update re Nevada National Security Site (NNSS), Hanford reservation and other DOE facilities;
- DOE's waste management forecasts and prioritization amidst budget constraints;
- potential revisions to the radiation protection regulations to increase alignment with recommendations from the International Commission on Radiological Protection (ICRP); and,
- overview and implementation of the NRC's recently issued revisions to the Branch Technical Position on Concentration Averaging and Encapsulation (CA BTP).

As a benefit to LLW Forum members and subscribers, as well as meeting attendees, all of the power point presentations from the spring 2015 LLW Forum meeting have now been posted

to both the restricted-access, members-only portion of the LLW Forum's web site and a password protected drop box.

The fall 2015 LLW Forum meeting will be held at the Embassy Suites Downtown Chicago Hotel on October 22-23, 2015. The fall 2015 meeting is being co-sponsored by the Central Midwest Interstate Low-Level Radioactive Waste Compact Commission, the Illinois Emergency Management Agency (IEMA), and the LLW Forum. (See related story, this issue.)

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

LLW Forum / Disused Sources and Part 61 Working Groups

Disused Sources and Part 61 Working Group Updates

The following is a brief update on activities of the Low-Level Radioactive Waste Forum's (LLW Forum's) Disused Sources Working Group (DSWG) and Part 61 Working Group (P61WG).

For additional information and ongoing updates, interested stakeholders are encouraged to go to the DSWG web site at www.disusedsources.org and the P61WG web site at www.part-61.org.

Disused Sources Working Group

On April 21, 2015, immediately following the conclusion of the spring 2015 LLW Forum meeting, the DSWG held a closed-session working group meeting in Alexandria, Virginia. During the meeting, DSWG members reviewed preliminary draft results of a survey of state program directors and continued reviewing the path forward for implementation of the 24 recommendations contained in the March 2014 DSWG report.

This survey was distributed in cooperation with the Conference of Radiation Control Program Director's (CRCPD) E-34-Committee on Unwanted Radioactive Materials. The CRCPD Board reviewed, amended and approved the survey and encourages all state program directors to timely complete and submit responses.

As of press time, officials from 36 states had completed and submitted survey responses. The results will be presented by the DSWG at the 47th National Conference on Radiation Control on May 18 -21, 2015 in St. Louis, Missouri. The survey results will also be presented at the Health Physics Society's annual meeting in Indianapolis, Indiana on July 12-16, 2015. And, the DSWG recently received an invitation to present the survey results at the Organization of Agreement States' (OAS) annual meeting in Boston, Massachusetts on August 23-27, 2015.

Additional information, including a link to the survey, can be found on the DSWG web site at www.disusedsources.org.

Part 61 Working Group

Although the P61WG has not recently held a formal meeting, staff and members of the working group—which includes representatives from the four sited states—are currently reviewing a proposed rule to amend 10 CFR Parts 20 and 61, "Licensing Requirements for Land Disposal of Radioactive Waste," that was issued by the U.S. Nuclear Regulatory Commission (NRC) in the *Federal Register* (80 *Federal Register* 16,081) for public comment on March 26, 2015.

P61WG members and staff are also reviewing associated guidance, "Guidance for Conducting Technical Analyses for Low-Level Radioactive Waste Disposal," issued on the same day by NRC

for public comment in the *Federal Register* (80 *Federal Register* 15,930).

The P61WG plans to develop a briefing paper and submit comments on the documents. Comments for both the proposed rule and the conforming technical guidance documents are due to NRC by July 24, 2015. (See related story, this issue.)

Additional information and related documents and links can be found on the P61WG web site at www.part-61.org.

For additional information about the DSWG and the P61WG, please contact the working group's Project Director Todd D. Lovinger, Esq at (754) 779-7551 or at LLWForumInc@aol.com.

LLW Forum / 2015 Waste Management Symposium

LLW Forum Organizes Panel for Waste Management Symposium

The Low-Level Radioactive Waste Forum (LLW Forum) sponsored a panel at the 2015 Waste Management Symposium (WMS) that was held in Phoenix, Arizona from March 16-19, 2015.

LLW Forum Sponsored Panel

Session 17, which was titled *Hot Topics and Emerging Issues in US Commercial Low-Level Radioactive Waste Management*, was held from 1:30 to 3:15 p.m. in Room 103 AB of the Phoenix Convention Center on Monday afternoon—March 16, 2015.

There were five speakers participating on the panel in the following order:

- Andy Lombardo, Senior Vice-President at Perma Fix Environmental Services and Consultant to the Pennsylvania Department of Environmental Protection's Bureau of Radiation Protection, reviewing highlights from the Commonwealth of Pennsylvania's Technologically Enhanced Naturally Occurring Radioactive Materials (TENORM) study;

- Dale Patrick, Manager of the Radioactive Materials Program in the Division of Air Quality at the North Dakota Department of Health, summarizing challenges in the Bakkens/Three Forks Oil Fields, sharing an overview of public comments on proposed changes of the Radioactive Waste Disposal Limits in North Dakota from the current level of 5 picocuries/gram to 50 picocuries/gram, and reviewing the findings and conclusions of a study by the Argonne National Laboratory on Radiological Dose and Risk Assessment of Landfill Disposal of TENORM in North Dakota;

- Brandon Hurley, Chair of the Texas Low-Level Radioactive Waste Disposal Compact Commission, sharing an overview of the compact commission's activities with particular focus on proposed revisions related to 31 Texas Administrative Code (TAC) §675.21, §675.22 and §675.23 related to exportation and importation of waste;

- Leo Drozdoff, Director of the Nevada Department of Conservation and Natural Resources, providing insight into the issues, findings and recommendations contained in the March 2014 report from the Disused Sources Working Group (DSWG) related to the management and disposition of disused sources; and,

- Larry Camper, Director of the Division of Decommissioning, Uranium Recovery and Waste Programs in the Office of Nuclear Material Safety and Safeguards at the U.S.

Nuclear Regulatory Commission, discussing proposed amendments to Part 61 of Title 10 of the *Code of Federal Regulations* (10 CFR Part 61) titled, "Licensing Requirements for Land Disposal of Radioactive Waste," to require new and revised site-specific technical analyses, to permit the development of site-specific criteria for low-level radioactive waste acceptance based on the results of these analyses, and to facilitate implementation and better alignment of those requirements with current health and safety standards; finalization of the Branch Technical Position on Concentration Averaging and Encapsulation; and, proposed revisions to NUREG/BR-0204 re low-level radioactive waste manifesting with particular focus on the phantom-four radionuclides.

Waste Management

WMS is a non-profit organization dedicated to providing education and information exchange on global radioactive waste management and related topics. This year's conference was held at the Convention Center in Phoenix, Arizona from March 15-19, 2015.

The symposium provides an open forum for interested stakeholders to discuss and explore safe, environmentally responsible, technically sound and cost effective solutions to the management and disposition of radioactive wastes and the decommissioning of nuclear facilities to enhance the transparency and credibility of the global radioactive waste industry.

Additional information about the Waste Management Symposium can be found at www.wmsym.org. For additional information about the LLW Forum, please contact LLW Forum Executive Director Todd D. Lovinger, Esq at (754) 779-7551 or at LLWForumInc@aol.com.

Atlantic Compact/State of South Carolina

Proposal Offered to Re-Open Barnwell Facility to Out-Of-Compact Waste

Energy*Solutions* is proposing to once again allow low-level radioactive waste from outside of the Atlantic Interstate Low-Level Radioactive Waste Compact to be disposed at the company's facility in Barnwell, South Carolina.

Overview

The proposal, which would require approval from the state legislature, would encourage in-compact generators to send their Class A waste that is currently being disposed at Barnwell to the Energy*Solutions'* facility in Clive, Utah, thereby freeing up space that would be used for disposal of out-of-compact Class B and C waste.

According to Energy*Solutions*, the proposal would provide for increased revenues to pay for the operational costs of the Barnwell facility, as well as offer greater revenue to the local community and state. Advocates also assert that the proposal could save jobs at the Barnwell site and provide funds for contribution toward the environmental remediation of the Pinewood Hazardous waste site.

Several lawmakers have confirmed that they have engaged in discussions about the proposal with Energy*Solutions*. Local news media suggests that a bill may be introduced in the South Carolina legislature.

According to an Energy*Solutions* representative, the 235-acre Barnwell site is already 87% full and has approximately 1 million cubic feet of capacity remaining. "Specifics of the proposal," states the Energy*Solutions* representative, "include an offer

to in-compact utilities of access to 8 million cubic feet of disposal space at favorable rates at Clive in exchange for 80,000 cubic feet of [Class] B and C capacity at Barnwell."

Background

Although the Barnwell facility has been in operation for 44-years, it closed to out-of-compact generators in 2008 in accordance with a state law approved in 2000. That law authorized the creation of the Atlantic Interstate Low-Level Radioactive Waste Compact and put into place the current restriction on disposal at the Barnwell facility to only the member-states of Connecticut, New Jersey and South Carolina. Energy*Solutions* previously expressed interest in keeping the facility open to out-of-compact waste, but failed to get the required legislative approval to do so.

Currently, the Waste Control Specialists facility in Andrews County, Texas is the only facility in the nation that is authorized to accept out-of-compact Class B and C waste. The Hanford facility in Richland, Washington accepts Class B and C waste only from the eleven member states of the Northwest Interstate Compact on Low-Level Radioactive Waste Management and the Rocky Mountain Low-Level Radioactive Waste Compact.

For additional information, please contact Dan Shrum, Senior Vice-President of Regulatory Compliance at EnergySolutions, at (801) 649-2000 or at dshrum@energysolutions.com; Ashlie Lancaster, Director of the South Carolina Budget and Control Board, at (803) 737-8030 or at alancaster@energy.sc.gov; or Max Batavia, Executive Director of the Atlantic Interstate Low-Level Radioactive Waste Compact Commission, at (803) 737-1879 or at manojbatavia@gmail.com.

Central Midwest Compact

Central Midwest Compact Commission Holds Spring Meeting

On April 7, 2015, the Central Midwest Interstate Low-Level Radioactive Waste Compact Commission held its spring meeting beginning at 10:00 am CST / 11:00 am 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 17, 2014
4. Executive Session
5. First Public Comment Period
6. Reports
    a. Chairman & Host State Report
    b. Executive Assistant Report
        i. Recommend not to professionally scan documents
        ii. Terminate phone contract
7. Other Business
    a. Unfinished Business
        i. Progress of Kentucky's reporting procedures
    b. New Business
8. Second Public Comment Period
9. Next Scheduled Meeting or Announcement of Special Meeting
10. Adjornment

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.

Northwest Compact/State of Utah

Utah DEQ Delays Public Comment on Depleted Uranium PA and SER

Public Information Forums to Proceed on May 6 & 7, 2015

By press release dated April 16, 2015, the Utah Department of Environmental Quality (DEQ) announced that it has granted a request from Energy*Solutions* to delay formal public comment on their request for a license amendment to accept large quantities of depleted uranium for disposal at its low-level radioactive waste disposal facility in Clive, Utah. Public information forums, however, will proceed as scheduled on May 6 and 7, 2015.

Three days earlier, on April 13, 2015, DEQ released the associated Safety Evaluation Report (SER) and announced the opening of a public comment period that was to include two public meetings and run through May 29, 2015.

However, by letter dated April 14, 2015, Energy*Solutions* requested that the public comment period be placed on hold to give the company an opportunity to address eight specific questions raised in the SER concerning its Performance Assessment (PA) for the disposition of depleted uranium at the Clive facility.

Depleted uranium is a product of the uranium enrichment process. While it is initially less radioactive than naturally occurring uranium, it becomes significantly more radioactive over time, posing challenges for safe and effective long-term disposal.

Should Energy*Solutions'* PA to dispose of large quantities of depleted uranium at the Clive facility be approved, amendments to Energy*Solutions'* license and ground water permit would be required before depleted uranium could be disposed at the facility. Those amendments would be addressed in separate licensing and permitting actions.

Officials from Utah DEQ and Energy*Solutions* gave presentations on the depleted uranium PA and SER at the spring 2015 LLW Forum meeting. *(Additional information, including copies of their power point presentations, can be found on the members-only, restricted-access portion of the LLW Forum's web site at www.llwforum.org.)*

For additional information, please contact Helge Gabert of the Division of Solid and Hazardous Waste at the Utah Department of Environmental Quality at (801) 536-0215 or at hgabert@utah.gov.

Opening of Public Comment Period

By press release dated April 13, 2015, DEQ announced the beginning of the public comment period for Energy*Solutions'* request for a license amendment to accept large quantities of depleted uranium at the Clive facility. The public comment period was scheduled to end on May 29, 2015.

The press release instructed interested stakeholders to email comments to swpublic@utah.gov or submit comments in writing to

Helge Gabert
Project Manager
Depleted Uranium Contract
Division of Solid and Hazardous Waste
Department of Environmental Quality
P.O. Box 144880
Salt Lake City, Utah 84114-4880

For additional information on public comments, public meetings, or to view the SER and PA, go to the DEQ's depleted uranium web page at http://www.deq.utah.gov/businesses/E/EnSolutions/depleteduranium/performassess/index.htm.

Public Meetings

DEQ scheduled the following two public meetings to give the public an opportunity to present oral comments on Energy*Solutions* proposal to dispose of large quantities of depleted uranium at the Clive facility:

Wednesday—May 6, 2015
6:00—8:00 pm
Tooele County Courthouse
47 South Main Street
Tooele, Utah

Thursday—May 7, 2015
6:00—8:00 pm
Utah Department of Environmental Quality
Board Room No 1015
195 North 1950 West
Salt Lake City, Utah

Both public meetings will be preceded by an informational meeting from 5:00 – 5:45 pm.

Release of Performance Assessment and Safety Evaluation Report

State and federal law required Energy*Solutions* to submit a site-specific PA to establish whether the facility can meet human health and safety performance standards for depleted uranium disposal. Accordingly, DEQ and its independent contractor SC&A prepared an SER that summarizes their analyses of the PA and the extent to which it complies with regulatory requirements.

Conclusions contained in the SER are subject to reconsideration based on public comments and the record as a whole. Accordingly, DEQ has not yet made a formal recommendation or determination at this time regarding Energy*Solutions'* proposal. The Director of the Utah Division of Radiation Control (DRC) will make the final decision on whether or not to issue a license amendment to Energy*Solutions* based on the SER /PA and comments received during the public comment period.

Energy*Solutions'* Request to Place Public Comment Period on Hold

By letter dated April 14, 2015, Dan Shrum—Energy*Solutions'* Senior Vice President of Regulatory Affairs—requested that the Utah DEQ place on hold the company's application to amend license condition 5 stating in relevant part as follows:

> *The Safety Evaluation Report released yesterday by the Utah Department of Environmental Quality raised eight specific questions about EnergySolutions' Depleted Uranium Performance Assessment. EnergySolutions hereby requests that the Department place on hold the public comment period until EnergySolutions has an opportunity to address these questions. We request adequate time for EnergySolutions and the Department to consider technical approaches for proper resolution of these questions.*
>
> *In making this request, EnergySolutions is not abandoning its Request for Consideration of the Depleted Uranium Performance Assessment originally submitted to the Department in June 2011. This request does not waive any legal or regulatory right of the Department or EnergySolutions related to the consideration of the Depleted Uranium Performance Assessment or the appeal of any Director's decision.*
>
> *Associated with this request, EnergySolutions suggests that the public*

meetings scheduled for May 6 and 7 of 2015 be indefinitely postponed. EnergySolutions is concerned that holding public meetings on an incomplete Safety Evaluation Report may mislead the public as to the risks of depleted uranium disposal.

Department of Environmental Quality's Response

By letter dated April 16, 2015, Rusty Lundberg—Director of the Utah DEQ—responded to Energy*Solutions'* request to place on hold the company's application to amend license condition 5 stating in relevant part as follows:

In a letter dated April 14, 2015, you requested that the public comment period for the Safety Evaluation Report (SER) be placed on hold in order to address and resolve the items identified in the report as being unresolved. The Department of Environmental Quality is committed to transparency in providing information to the public and supports the ability of the public to have access to all relevant information to enhance and not diminish or limit their participation if additional significant information can be provided.

We have evaluated this request and have determined that because you plan to provide additional information during this process, the public should have the benefit of a more complete report for comment. Therefore, we are putting the public comment period on hold for a limited time. We will be proceeding with the public meetings as originally scheduled on May 6 and 7 in order to provide information to the public about the current SER. Additional public information meetings may be held, as appropriate, at the time of any final proposal. Public hearings to take comment on the proposal will be postponed until the comment period for the final proposal. We fully recognize the impact this has to again delay a decision on the depleted uranium performance assessment.

Comments submitted during the comment period that began April 13, 2015 will become part of the formal record. The comment period, however, is now suspended, and any further comments will not be a part of the record.

Department of Environmental Quality Statement

On April 16, 2015, the Utah DEQ released the following statement on Energy*Solutions'* request to delay public comment on the depleted uranium disposal plan:

The Utah Department of Environmental Quality (DEQ) believes that a robust public process is critical to the best decision being made regarding the proposal to dispose of depleted uranium at the EnergySolutions facility in Clive, Utah. To this end, we invite the public to engage early by reviewing all of the pertinent documents and information online at http://www.deq.utah.gov/businesses/E/EnSolutions/depleteduranium/performassess/index.htm and by participating in a public information forum on May 6 and 7.

It is imperative that the formal administrative public comment process be as meaningful as possible. To accomplish this, DEQ will delay formal public comment and allow EnergySolutions additional time to address important components not addressed or resolved in the Safety Evaluation Report (SER) released on … [April 13, 2015]. The administrative public comment period that will form the basis of the decision record will be reopened when the information

necessary to fully analyze potential environmental and health impacts has been submitted by EnergySolutions.

Again, DEQ encourages the public to become informed about the issue and participate in the informal information process as well as the administrative public record.

Background

Utah Rules and Requirements Utah law allows the disposal of Class A low-level radioactive waste, but prohibits the acceptance of Class B and C low-level radioactive waste.

In April 2010, the Utah RCB completed rulemaking to require a site-specific PA for the disposal of large quantities of concentrated depleted uranium in the state. The Board took this action in order to address the unique radiological characteristics of depleted uranium that were not considered by the U.S. Nuclear Regulatory Commission (NRC) when it developed its limits on Class A low-level radioactive waste in the 1980's.

Under the rule, a PA needs to demonstrate that the radioactive waste land disposal facility will, for the disposal of large quantities of depleted uranium, meet the stipulated performance standards specified in Utah Administrative Code R313-25-9(5)(a) for a minimum of 10,000 years, with additional qualitative analyses for the period during which the depleted uranium reaches peak radiation activity, or approximately two million years. The PA must also analyze the following conditions to clearly demonstrate reasonable assurance that the exposure to humans and the environment from a potential release of radioactivity will not exceed protective limits:

- protection of the public considering air, soil, ground water, surface water, plant, and animal pathways of radioactive exposure;
- protection of inadvertent human intruders;
- protection of individuals during operations; and,
- long-term stability of the disposal site based on erosion, slope failure, settlement of wastes and backfill, infiltration through covers over disposal areas and adjacent soils, surface drainage of the disposal site, and the effects of changing lake levels.

The rule also prohibits the disposal of significant quantities of depleted uranium until the Director of the DRC reviews and approves the PA.

In conjunction with this rule, an amendment was made to Energy*Solutions'* radioactive materials license by adding license condition 35. This license condition requires Energy*Solutions* to prepare and submit a PA for approval prior to the disposal of large quantities of depleted uranium.

Preparation of Performance Assessment and Safety Evaluation Report In compliance with Utah rules and license condition 35, Energy*Solutions* completed and submitted to the Director for approval an in-depth, site-specific PA in support of its proposal to dispose of up to 700,000 metric tons of depleted uranium, including 3,577 metric tons of depleted uranium waste received by Energy*Solutions* in 2009 from the Savannah River site in South Carolina that was stored pending the outcome of the rulemaking and review of the PA.

DEQ reviewed and commented on the depleted uranium PA with two preliminary completeness reviews, three rounds of interrogatories, as well as additional requests for more detailed information. Energy*Solutions* responded to DEQ's inquiries with the following revised items:

- probabilistic model used to assess the adequacy of disposal of concentrated depleted uranium;
- compliance report;
- supplemental answers to DEQ technical questions regarding infiltration rates and unsaturated flow characteristics of the

proposed evapotranspirative cover, as well as other technical and regulatory matters; and,

- radon fluxes resulting from potential structural changes to the waste disposal embankment in deep time (i.e., greater than 10,000 years from now) due to pluvial lakes.

These inquiries culminated in the preparation of the SER, in which, based on the referenced technical discussions, recommendations are made for all aspects of the depleted uranium PA.

Utah DEQ Established in 1991, the Utah DEQ's mission is to safeguard public health and quality of life by protecting and enhancing the environment. DEQ implements state and federal environmental laws and works with individuals, community groups and businesses to protect the quality of Utah's air, land and water.

For additional information on the Utah DEQ, go to the department's web site at www.deq.utah.gov or 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.

Energy*Solutions* Energy*Solutions* is a Utah-based company that operates a commercial treatment, storage and disposal facility in Tooele County—approximately 80 miles west of Salt Lake City. The facility itself is about one square mile in size and is located in a remote desert area, approximately 20 miles from the nearest residence. The depth to groundwater averages about 30 feet. Energy*Solutions* is licensed to handle several classifications of radioactive material and waste including Class A low-level radioactive waste; naturally occurring and accelerator produced material (NORM); radioactive waste that is also determined to be hazardous (mixed waste); and, uranium and thorium by-product material. The Utah DRC and the NRC regulate the first three types of licenses. The mixed wastes operations are regulated by both the DRC and the Utah Division of Solid and Hazardous Waste (DSHW). DSHW regulates the hazardous waste portion and the DRC regulates the radioactive portion of the waste.

For additional information on EnergySolutions, go to the company's web site at www.energysolutions.com or contact Dan Shrum, Senior Vice President of Regulatory Compliance at EnergySolutions, at (801) 649-2000 or at dshrum@energysolutions.com.

Utah Radiation Control Board Holds March and April 2015 Meetings

On March 10, 2015, the Utah Radiation Control Board (RCB) held a working lunch meeting and a Board meeting.

The following day, on March 11, 2015, the RCB held a supplemental meeting regarding a proposal contained in S.B. 0244 to consolidate the Utah Department of Radiation Control and the Utah Department of Solid and Hazardous Waste.

The following month, on April 14, 2015, the RCB held another Board meeting.

The meetings, all of which were open to the public, were held in the Multi Agency State Office Building in Salt Lake City, Utah.

Meetings on March 10, 2015

Working Lunch Meeting Agenda The following items, among others, were on the working lunch meeting agenda for March 10, 2015:

I. Welcome

II. Administrative Rulemaking

a. Discussion Following Public Comment Period

i. Proposed changes to R313-28-31, *General and Administrative Requirements,* and R313-35, *Requirements for X-Ray Equipment for Non-Medical Applications*

ii. Proposed changes to R313-15-1208, *Reports of Leaking or Contaminated Sealed Sources,* and R313-38-3, *Clarifications or Exceptions*

b. Discussion Proposed Rule

i. Proposed changes to create a new section (R313-xxx) to provide for the creation of an advisory committee to address administrative rulemaking matters associated with the Board for purposes of administering the radiation control program as authorized by the Radiation Control Act

III. Other Items

Regular Board Meeting Agenda The following items, among others, were on the regular Board meeting agenda on March 10, 2015:

I. Welcome

II. Approval of the Minutes from the February 10, 2015 Board Meeting

III. Administrative Rulemaking

a. Action Following Public Comment Period

i. Proposed changes to R313-28-31, *General and Administrative Requirements,* and R313-35, *Requirements for X-Ray Equipment for Non-Medical Applications*

ii. Proposed changes to R313-15-1208, *Reports of Leaking or Contaminated Sealed Sources,* and R313-38-3, *Clarifications or Exceptions*

b. Proposed changes to create a new section (R313-xxx) to provide for the creation of an advisory committee to address administrative rulemaking matters associated with the Board for purposes of administering the radiation control program as authorized by the Radiation Control Act

IV. Information Items

a. Nuclear Regulatory Commission (NRC) Update

i. Final Branch Technical Position—Concentration Averaging and Encapsulation

b. Low-Level Radioactive Waste

i. Energy*Solutions*—Depleted Uranium Performance Assessment

c. Uranium Recovery Sites

i. Energy Fuels Resources/White Mesa Mill

d. 2015 Legislature—Update

i. H.B. 78—Generator Site Access Permits Amendments

ii. S.B. 173—Financial Assurance Determination Review Process

iii. S.B. 244—DEQ Modifications

1. Board Statement on S.B. 244

e. Public Availability of Information—DEQ EZ Records Search

V. Public Comment

VI. Next Scheduled Board Meeting:

Tuesday, April 14, 2015, 1:00 p.m.
Multi Agency State Office Building, Board Conference Room #1015
195 North 1950 West
Salt Lake City, Utah

Supplemental Meeting on March 11, 2015

The purpose of the supplemental meeting on March 11, 2015 was to discuss, revise as appropriate, and approve the Board's statement regarding current Senate Bill 0244 (SB0244).

The following draft language was considered for the Board's statement:

> *Senate bill 244 consolidates the Department of Radiation Control and the Department of Solid and Hazardous Waste with their respective boards. While the board has no opinion on the administrative efficiencies of merging the 2 departments, we feel that the merging of the boards is ill advised.*
>
> *The boards are made of Utah residents that volunteer their time and expertise to the State of Utah.*
>
> *The time commitment of board and subcommittee work as well as the preparation required for each board meeting is substantial (RCB: 8 meetings/ year, 96 min average board meeting time, 77 pages of board package; SHWB: 5.5 meetings/year, 65 min/meeting and 187 pages board package).*
>
> *The new larger board would have to tackle a much wider range of issues, requiring even more preparatory work and longer meetings.*
>
> *It is regrettable that no input was sought from the board or the majority of stakeholders by the DEQ or the authors of SB 244. The board feels that the Radiation Control Board and the Solid and Hazardous Waste Board should not be merged.*

S.B. 0244 was one of several items on the RCB's agenda for the regular meeting that was held a day earlier. *(For additional information, see above section.)*

Meetings on April 14, 2015

The following items, among others, were on the regular Board meeting agenda on April 14 2015:

I. Call to Order

II. Approval of the Minutes from the March 10-11, 2015 Board Meetings

III. Administrative Rulemaking

a. Proposed Rule Changes

i. Proposed changes to sections of R313-19-34, *Terms and Conditions of Licenses;* R313-24 -4, *Clarifications or Exceptions;* and, R313-36-3, *Clarifications or Exceptions to incorporate corresponding federal regulations promulgated by the NRC and published in the* Federal Register *of July 6, 2012 (77* Federal Register *39,899)*

ii. Proposed changes to R313-12-3, *Definitions;* R313-19, *Requirements of General Applicability to Licensing of Radioactive Material;* R313-21, *General Licenses;* and, R313-22, *Specific Licenses to incorporate corresponding federal regulations promulgated by the NRC and published in the*

Federal Register of July 25, 2012 (77 Federal Register 43,666)

IV. Information Items

a. U.S. Nuclear Regulatory Commission (NRC) Update

i. Proposed changes to 10 CFR Part 61, *Licensing Requirements for Land Disposal of Radioactive Waste,* which was published in the *Federal Register* on March 26, 2015 (80 *Federal Register* 15,930); and, related Guidance for Conducting Technical Analyses for Low-Level Radioactive Waste Disposal—both documents are available on the DRC and NRC web sites

b. Low-Level Radioactive Waste

i. Energy*Solutions*—Depleted Uranium Assessment Update

c. First Quarter 2015 Activities Report

d. Public Availability of Information—DEQ EZ Records Search

V. Public Comment

VI. Next Scheduled Board Meeting:

Tuesday, June 9, 2015, 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.deq.utah.gov/boards/radiationcontrol/docs/agendas/.

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.

Southwestern Compact

Southwestern Compact Commission Hosts 70th Meeting

On April 9, 2015, the Southwestern Low-Level Radioactive Waste Commission hosted its 70th meeting from 3:00 – 6:00 pm AZ Time at the Embassy Suites Hotel in Phoenix, Arizona.

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

- call to order
- roll call
- welcome and introductions
- statement regarding due notice of meeting
- reports, status and/or activity
  - Commission Chair
  - Executive Director
  - licensing agency
  - party states
- exportation
  - ratification of approved petitions
- review and approve letter of intent for annual audit 2014-15 by Starbucks & Walsh

- review and approve update of Procedures Manual
- approve sponsoring Low-Level Radioactive Waste Forum (LLW Forum) meeting for Fall 2016 in San Diego, California
- update on incompatibility issues
- update on Technologically Enhanced Naturally Occurring Radioactive Material (TENORM) and fracking issues
- National Nuclear Security Administration (NNSA) update—table top drills, shipping containers, disused sealed sources
- review and amend approved budget
- public comment
- future agenda items
- next meeting date and location (October 9, 2015 in Sacramento, California)
- adjournment

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

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

Texas Compact

Texas Compact Commission Holds March and April 2015 Meetings

The Texas Low-Level Radioactive Waste Disposal Compact Commission (Texas Compact Commission) held a regularly scheduled meeting on March 13, 2015. The meeting, which was originally scheduled for March 5, 2015, was rescheduled due to the possibility of severe weather.

The following month, the Texas Compact Commission held a regularly scheduled meeting on April 16, 2015.

Both meetings were open to the public and were held at the Texas Commission on Environmental Quality (TCEQ) offices located at 12100 Park 35 Circle in Austin, Texas.

Meeting on March 13, 2015

The following is an abbreviated overview of the agenda for the Texas Compact Commission meeting that was held on March 13, 2015. 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;
- consideration of and possible action on requests for amendments to agreements for importation of low-level radioactive waste from Bionomics, Inc.; Exelon; and, Tennessee Valley Authority;
- consideration of and possible action on applications and proposed agreements for importation of low-level radioactive waste

from Aerojet Ordnance Tennessee; Ecology Services, Inc.; and, WMG, Inc.;
- Chairman's report on Texas Compact Commission activities including reporting on fiscal matters and on other actions to be taken by the compact; and,
- adjourn.

Meeting on April 16, 2015

The following is an abbreviated overview of the agenda for the Texas Compact Commission meeting that was held on April 16, 2015. 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;
- consideration and possible action on the publication for comment of the proposed adoption of a new 31 Texas Administrative Code §675.20 and the proposed revisions of 31 Texas Administrative Code §675.21, §675.22 and §675.23 related to the exportation and importation of low-level radioactive waste;
- consideration of and possible action on requests for amendments to agreements for importation of low-level radioactive waste from EMC Thomas Gray & Associates, Inc.; Entergy James A. Fitzpatrick NPP; Philotechnics, Ltd.; and, RAM Services, Inc.;
- consideration of and possible action on applications and proposed agreements for importation of low-level radioactive waste from EMC Thomas Gray & Associates, Inc.;
- consideration of and possible action on a petition and proposed order for exportation of low-level radioactive waste from NSSI; Bionomics, Inc. on behalf of Texas A&M University Environmental Health and Safety Office; and, Bionomics, Inc. on behalf of Texas A&M University Nuclear Science Center;
- receive reports from Waste Control Specialists LLC (WCS) about recent site operations and any other matter WCS wishes to bring to the attention of the Texas Compact Commission;
- Chairman's report on Texas Compact Commission activities including reporting on fiscal matters to be taken by Compact; report on the Chair's implementation of procedures to ensure decorum and efficiency with respect to public comments at the Texas Compact Commission's meetings;
- report from Leigh Ing, Consulting Supervisory Director of the Texas Compact Commission, on her activities and questions related to Texas Compact Commission operations;
- discussion and possible changes of dates and locations of future Texas Compact Commission meetings in 2015 and 2016; and,
- adjourn.

Background

Texas Compact Commission Meetings The Texas Compact Commission may meet in closed session as authorized by the Texas Open Meetings Act, Chapter 551, Texas Government Code. Texas Compact Commission meetings are open to the public.

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

Draft Import/Export Rules On July 18, 2014, the Texas Compact Commission announced the availability for public review and comment of working drafts of proposed revisions to 31 Texas Administrative Code (TAC) §675.21, §675.22 and §675.23 related to exportation and importation of waste. (See *LLW Notes*, July/August 2014, p. 12.) Comments received will be reviewed in order to develop rules for proposal in the *Texas Register*.

The working draft rules for comment include redline/strikeout versions in PDF format and clean versions in PDF format. Links are provided to the current rules in the TAC, and clean

versions of the revised working drafts are also provided in Word to assist reviewers in developing comments. The working draft rules and associated links can be found at http://www.tllrwdcc.org/rules/.

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.

State of Michigan

Oversight Increased for Palisades Nuclear Power Plant

On February 27, 2015, U.S. Nuclear Regulatory Commission staff issued a white finding of low-to-moderate safety significance to the Palisades nuclear power plant for the failure to accurately calculate radiation doses to workers during an activity last year. The finding will result in increased oversight of the plant by the NRC.

The plant, which is operated by Entergy Nuclear Operations Inc., is located in Covert, Michigan—approximately five miles south of South Haven.

The doses received by the workers were below the NRC's annual radiation limit and are not expected to have any impact on their health.

NRC inspectors reviewed the plant's methodology for calculating doses to workers involved in replacing control rod drive housings during the 2014 refueling outage. They determined that the methodology did not meet NRC requirements. Specifically, the licensee failed to ensure that radiation dosimeters were placed in the highest exposed location of the body for this activity, which resulted in inaccurate dose calculations. In addition, the licensee failed to establish a procedure to ensure proper placement of dosimeters. This resulted in inaccurate calculation and assignment of dose for numerous workers.

"Even though this incident did not result in harm to workers, our action underscores the importance of adhering to NRC requirements to ensure an accurate understanding and adequate monitoring of doses to workers at nuclear plants," said NRC Region III Administrator Cynthia Pederson.

The utility has taken immediate steps to resolve the problem and is developing long-term corrective actions. The NRC will conduct an inspection to independently verify these actions are sufficient to prevent recurrence.

As a result of this finding, the plant will move from Column 1 to Column 2 of the NRC's Action Matrix, as of the fourth quarter of 2014. The company has 30 days to contest the finding.

The Inspection Report and Notice of Violation are publicly available on the NRC web site at http://pbadupws.nrc.gov/docs/ML1433/ML14336A624.pdf.

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

Nuclear Power Plants and Other NRC Licensees

News Briefs for Nuclear Power Plants Across the Country

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

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

Appalachian Compact/State of Maryland and Commonwealth of Pennsylvania

Calvert Cliffs Nuclear Power Plant On April 13, 2015, the U.S. Nuclear Regulatory Commission (NRC) announced that the agency had begun a special inspection of the Calvert Cliffs nuclear power plant to review issues during the unplanned shutdown of both reactors on April 7, 2015. The plant, which is operated by Exelon, is located in Lusby, Maryland. Like all nuclear power plants, the facility at Calvert Cliffs transmits power to the grid, but also receives power back for operational purposes. On April 7, 2015, a grid disturbance due to the failure of a transmission line in Southern Maryland caused both Calvert Cliffs reactors to automatically shut down as designed. Following the grid disturbance, one of Unit 2's emergency diesel generators (which provide power to safety systems when off-site power is lost) started, but tripped after 11 seconds. This same diesel generator failed to start in 2010 after a loss of off-site power. In addition, one of three saltwater pumps on Unit 2 failed to automatically restart when power switched to the emergency diesel generators. Per procedure, operators manually started the pump, which provides cooling water to certain plant equipment. "While there was no impact on public health and safety, the issues with the emergency diesel generator and the saltwater pump warrant a closer look," said NRC Region I Administrator Dan Dorman. The three-member inspection team is charged with developing a sequence of events; reviewing and assessing equipment response to the events; reviewing operator performance; and, assessing the effectiveness of Exelon's response to this event. An inspection report documenting the team's findings will be issued within 45 days of the end of the inspection.

Susquehanna Nuclear Power Plant On April 10, 2015, NRC announced that the agency has approved the proposed indirect transfer of the operating licenses for Susquehanna Steam Electric Station, Units 1 and 2. The reactors are located in Luzerne County, Pennsylvania—approximately 70 miles northeast of Harrisburg. PPL Susquehanna LLC applied for the direct transfer on July 11, 2014 and updated the application several times through March 2015. The transfer involves transactions where PPL Corporation, PPL Susquehanna's current parent, will spin off PPL Energy Supply, which will include the Susquehanna reactors. Energy Supply will become a wholly owned subsidiary of a new company, Talen Energy Holdings, which is a wholly owned subsidiary of a new parent company, Talen Energy Corporation. Following the transactions, PPL Susquehanna will be renamed Susquehanna Nuclear LLC, which will hold the reactors' licenses and operating authority. The NRC's review of the transfer application concludes the transfer will maintain public health and safety and will meet the relevant agency regulations. The indirect transfer will maintain PPL Susquehanna/Susquehanna Nuclear as the licensed operator. The transfer will also maintain the reactors' licensing bases, principal officers, staff and day-to-day management and operations. On October 24, 2014, Douglas Ritter of Berwick, Pennsylvania submitted a petition for leave to intervene and requested a hearing on the transfer application. The Commission continues to consider the hearing request.

Atlantic Compact/States of Connecticut and South Carolina

Millstone Nuclear Power Plant By press release dated April 2, 2015, NRC announced that the agency will increase its level of oversight at the Millstone nuclear power plant following the finalization of a security-related inspection finding classified as "greater than green." Dominion Nuclear Connecticut Inc. owns the plant, which has two operating reactors and is located in Waterford, Connecticut. The NRC uses a color-coded assessment system for inspection findings and performance indicators, with colors ranging from green, for very low safety or security significance, to white, yellow or red, connoting high safety or security significance. In the case of security-related inspection findings or performance indicators, the NRC notifies the public when the "greater than green" threshold has been crossed. However, the agency does not provide specifics because of the sensitive nature of the information associated with such findings and indicators. NRC inspectors identified the finding following a security baseline inspection at the Millstone plant concluded on November 24, 2014. The finding was documented in an inspection report issued on January 5, 2015. The NRC requested that Dominion take part in a regulatory conference with agency staff to provide additional information and perspectives regarding the finding. That closed conference was held at the NRC's Region I Office on February 17, 2015. After considering the information presented by the company, and the information developed during the inspection, the NRC has determined the finding is appropriately characterized as greater than green. "The NRC will have to determine the most appropriate response with respect to inspections and follow-up reviews, based on the significance of the finding," said NRC Region I Administrator Dan Dorman. "It should be noted that the security of the plant is not in question and, indeed, our inspectors checked that compensatory measures were implemented before leaving the site." The Millstone Unit 3 plant was already under additional NRC oversight after receiving a finalized white (low to moderate significance) inspection finding last year. That finding stemmed from problems that affected the plant's turbine-driven auxiliary feed-water pump from May 2013 through February 2014.

Westinghouse Nuclear Power Plant On April 14, 2015, NRC staff met Westinghouse management in Columbia, South Carolina to discuss the results of a regulatory safety performance review at the company's commercial nuclear fuel fabrication plant. The meeting was open to the public and media, and NRC officials were available after the formal presentation to answer questions. The NRC staff assessed performance at Westinghouse during a period beginning January 1, 2013 and ending December 31, 2014 in the areas of safety operations, radiological controls, facility support and special topics. The NRC staff review determined that Westinghouse continued to conduct its activities safety and securely, protecting public health and the environment. "The NRC inspects Westinghouse and other nuclear fuel facilities on an ongoing basis to monitor their performance," said NRC Region II Administrator Victor McCree. "Our inspection reports are publicly available and we also hold regular meetings like this one near each facility to discuss our oversight and answer local residents' questions."

Vogtle and Summer Sites On March 24, 2015, NRC staff held a public meeting with Southern Co. and SCANA to discuss the initial test program and other issues related to Southern's two Westinghouse AP1000 nuclear units under construction at the Vogtle site and SCANA's two AP1000 units being built at the company's V. C. Summer site. The Vogtle site is near Waynesboro, Georgia—approximately 26 miles southeast of Augusta. The V. C. Summer site is near Jenkinsville, South Carolina—approximately 26 miles northwest of Columbia. The Vogtle site has two operating reactors and the V. C. Summer site has one operating reactor. During the meeting with the two companies, NRC staff were available to answer questions or discuss the

agency's inspection and oversight of the two construction projects.

Savannah River Site Mixed Oxide Fabrication Facility On April 16, 2015, NRC staff held a meeting with officials of Chicago Bridge & Iron AREVA MOX Services to discuss the results of the Applicant Performance Review for the Mixed Oxide Fabrication Facility under construction at the Savannah River Site. NRC staff members were available to answer questions or provide information after the formal portion of the meeting. The NRC review covered calendar year 2014 and concluded that construction activities were consistent with NRC rules and regulations as well as the conditions of the MOX construction authorization. No areas were identified as needing improvement and the NRC plans to continue to conduct its extensive inspection of construction activities at the site. The MOX facility, being constructed by Chicago Bridge & Iron AREVA MOX Services, is located at the U.S. Department of Energy's (DOE's) Savannah River Site near Aiken, South Carolina. When completed, the site will be owned by the DOE's National Nuclear Security Administration (NNSA) and will convert supplies of surplus weapons-grade plutonium into more proliferation-resistant material by blending it with natural or depleted uranium. When converted into mixed oxide, or MOX fuel, it can be used in commercial nuclear reactors to generate electricity. The NRC issued a construction authorization for the facility in March 2005 and extended it last November for an additional 10 years.

Central Interstate Compact/States of Kansas and Louisiana

Wolf Creek Nuclear Power Plant By press release dated April 8, 2015, NRC announced that the agency had issued a letter to Wolf Creek Nuclear Operating Corp. (WCNOC) officials saying they have adequately addressed safety conscious work environment concerns at the Wolf Creek nuclear plant, which is located north of Burlington, Kansas. Previously, on August 19, 2013, the NRC sent WCNOC a chilling effect letter following identification of two safety culture concerns. First, the U.S. Department of Labor's Occupational Safety & Health Administration (OSHA) issued a discrimination finding to Enercon, a contractor, for firing a worker who raised concerns with how work was being performed at the plant. The NRC determined that the firing might affect the willingness of other workers to raise safety concerns on safety-related work at the plant. Second, NRC found that a chilled work environment existed within the plant's quality assurance group that performs audits of safety-related work. A chilled work environment is one in which workers are hesitant to raise safety concerns for fear of retaliation. In response to the NRC's chilling effect letter, WCNOC officials implemented a range of corrective actions and conducted safety culture surveys at the site to assess the effectiveness of those actions, which yielded positive results. In January and February of this year, NRC inspectors reviewed WCNOC's corrective actions and interviewed plant employees to verify actions taken were effective. The report documents NRC's inspection results verifying that the new site-wide programs aimed at improving the work environment have been successful in addressing the issues that led to a chilled work environment. On April 8, 2015, NRC also issued a letter to Enercon saying the contract company has successfully implemented corrective actions to ensure workers feel free to raise concerns without fear of retaliation. NRC will continue to monitor the plant operator's ongoing activities to ensure they are effective in maintaining a long-term healthy work environment.

River Bend Nuclear Power Plant On March 30, 2015, NRC began a special inspection at the River Bend nuclear power plant to review circumstances surrounding the failure during testing of equipment needed to provide ventilation and cooling to plant areas with safety-related equipment. The plant, which is operated by Entergy Operations, is located in St. Francisville,

Louisiana. During periodic testing on March 9, 2015, equipment that provides ventilation and cooling to plant areas with safety-related equipment failed to start. A similar failure occurred during testing on February 23, 2015. "The March 9 event raises some concern with how electrical equipment has been maintained at the plant," said NRC Region IV Administrator Marc Dapas. "The purpose of this special inspection is to determine if there are any generic implications from equipment failures that occurred during the event." Two NRC inspectors spent about a week on site evaluating the licensee's root cause analysis, maintenance of some plant systems and adequacy of corrective actions. An inspection report documenting the team's findings will be publicly available within 45 days of the end of the inspection.

Waterford Nuclear Power Plant On April 7, 2015, NRC staff met with officials from Entergy Operations to discuss a preliminary inspection finding associated with the reliability of the Waterford nuclear power plant's emergency diesel generators. The plant is located in Killona, Louisiana. NRC officials answered questions from the public after the business portion of the conference. The NRC evaluates regulatory performance at commercial nuclear plants with a color-coded process that classifies inspection findings as green, white, yellow or red in order of increasing safety significance. The NRC has preliminarily determined that the inspection finding has greater than very low (green) safety significance that may require additional inspections, regulatory actions and oversight. The finding is associated with a vent pipe on the roof of a building that had corrosion that could allow rainwater to contaminate fuel oil for the plant's emergency diesel generators, affecting their operability. The generators are used to supply back-up power for safety-related systems in the event of a loss of off-site power. The violation is identified in an NRC inspection report that was issued on January 22, 2015. No decision on the final safety significance of the finding or any additional NRC actions were made at the conference. That decision will be announced at a later time.

Central Midwest Compact/State of Illinois

Honeywell International, Inc. By press release dated March 13, 2015, NRC announced that the agency has issued a confirmatory order to Honeywell International, Inc., requiring new training, communications, policies and guidance following an incident in which a contractor for the company terminated an employee, allegedly in part because the employee reported smelling alcohol on a supervisor's breath while on duty. The apparent violation stemming from the incident resulted in Honeywell's request for an Alternative Dispute Resolution (ADR) session. The ADR process uses a neutral mediator with no decision-making authority to assist the NRC and its licensees in reaching an agreement when there are differences regarding an enforcement action. An ADR session was conducted on December 9, 2014, resulted in an agreement for the NRC to issue an order outlining corrective actions to be taken by Honeywell. As part of the agreement, the NRC refrained from issuing a Notice of Violation or proposing a civil penalty against Honeywell, and Honeywell neither admitted nor denied that a violation occurred. The process stemmed from an NRC investigation into whether a Honeywell contractor (Bluestone, LLC) terminated one of its employees at the Honeywell Metropolis Works in Metropolis, Illinois after the employee informed both Bluestone and Honeywell of a safety concern—namely that the employee had smelled alcohol on the breath of an immediate supervisor onsite during duty hours. Bluestone is no longer a Honeywell contractor. Under the terms of the order, some of which also apply to two other Honeywell facilities, the company has agreed to have its senior managers conduct presentations to advise employees about the company's policies encouraging the reporting of employee concerns. The company will also present training on the issue and will modify processes providing for ongoing management support for employee protection requirements. In

addition, the company will review and update its Safety Conscious Work Environment Policy and incorporate applicable aspects of NRC's Safety Culture Policy as appropriate.

Midwest Compact/States of Minnesota, Missouri, Ohio and Wisconsin

Monticello Nuclear Power Plant NRC staff has decided that despite another inspection finding at the Monticello Nuclear Generating Plant, recent performance improvements make it unnecessary to put the facility in the category of plants with multiple and systemic performance issues. However, the plant will be under increased NRC oversight. Monticello has been in Column 3 of the performance matrix since 2013 due to a yellow finding related to weaknesses in the external flooding strategy. The results of two recent inspections demonstrated that the plant has taken effective actions to resolve the issues that led to the violation. The results of the inspection, which focused on the flooding issue, indicated a reversal in negative trends that led to the violation. The other inspection, which assessed the plant's ability to identify and resolve problems, also showed improvement in the plant's performance. On February 26, 2015, the NRC issued Monticello a greater than green security finding identified in the fourth quarter of 2014. While the details of this issue are not publicly available, it is important to note that the plant has corrected the situation. By the NRC's normal process, this finding, aggregated with the yellow finding, would result in Monticello's placement in Column 4 in the fourth quarter of last year. NRC will deviate from its normal process and place Monticello in Column 2 of the performance action matrix based on the fact that the flooding issue has been resolved; there have been no recent indications of new significant problems; and, improvements in performance. The greater than green security finding warrants a follow-up inspection, which will take place after the plant has had the opportunity to address the issues that caused the incident. In addition, the NRC will also perform an inspection focused on persistent human performance concerns at the plant. "Plants in Column 4 tend to have broad and systematic performance issues across multiple areas of plant operation. Our recent inspections demonstrate that Monticello's performance does not warrant its placement in Column 4," said NRC Region III Administrator Cynthia Pederson. "However, we will make sure the plant can sustain the improvements made so far and has resolved the security finding." Monticello is operated by Northern States Power Company – Minnesota. It is located in Monticello, Minnesota—approximately 30 miles northwest of Minneapolis.

Callaway Nuclear Power Plant By press release dated March 6, 2015, NRC announced that the agency has renewed the operating license of the Callaway nuclear power plant in Fulton, Missouri for an additional 20 years—i.e., through October 18, 2044. The Callaway plant is a single pressurized water reactor. The Union Electric Co., doing business as Ameren, applied to renew its license on December 19, 2011. The NRC staff's review of the application proceeded on two tracks. A safety evaluation report was issued on August 21, 2014 and a supplemental Environmental Impact Statement (EIS) on October 29, 2014. Under NRC procedures, the staff may renew a nuclear plant's operating license with Commission approval despite outstanding adjudicatory contentions. The Missouri Coalition for the Environment filed contentions last September and December seeking to re-open the Callaway adjudication. On February 26, 2015, the Commission denied the September 2014 request to reopen and suspend licensing of reactors. Still pending before the Commission is the December 2014 request to reopen the hearing and file an environmental contention. Once the NRC staff completed comprehensive environmental and safety reviews, it concluded Ameren met all the requirements for license renewal. On February 3, 2015, the staff requested authorization to renew the license. The Commission granted authorization on March 4, 2015. Should the renewed license be set-aside on appeal, Callaway would revert to its original

license, which is effective until October 18, 2024. Renewal of Callaway's license brings to 76 the number of commercial nuclear power reactors with renewed licenses. Applications for an additional 18 renewals are currently under review.

American Centrifuge Operating's Lead Cascade Facility On April 21, 2015, NRC staff held a public meeting in Piketon, Ohio, to discuss results of the agency's most recent review of American Centrifuge Operating's Lead Cascade facility. 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, 2013 to December 31, 2014. The discussion included the areas of safety operations, radiological controls, facility support and licensing. In its review, the NRC found no areas needing improvement and concluded that the facility continued to conduct its activities safely and securely. Because of that performance and the limited scope of operations, the NRC plans to continue conducting a more limited inspection program at the facility. The meeting was open to the public and media, and NRC officials were available to answer questions after the business portion of the meeting.

Kewaunee Nuclear Power Plant By press release dated April 1, 2015, NRC announced that the agency has proposed a $17,500 civil penalty against Dominion Energy Kewaunee, Inc. for the Kewaunee nuclear power plant. The proposed penalty is for a security-related violation stemming from routine agency security inspections. The NRC conducted the inspections between June and December of last year. Agency inspectors looked at the security requirements for the permanently shut down plant, conducted onsite inspections and reviewed plant documents. Once the issue was identified, the plant took corrective actions to address the security violations before the NRC inspectors left the site. To emphasize the importance of security awareness as well as the need for prompt identification of a violation, the NRC has proposed a $17,500 civil penalty. Details about security-related violations are not made public. A copy of the Enforcement Action, however, will be posted on the NRC's Public Document System (ADAMS). The Kewaunee Power Station is a single pressurized water reactor located in Carlton, Wisconsin. The plant permanently shut down on May 7, 2013 and the reactor was defueled shortly thereafter.

Southeast Compact/States of Florida and Tennessee

Turkey Point Nuclear Power Plant New Reactors On April 22 and 23, 2015, NRC held three separate meetings in Miami and Homestead to allow the public to comment on its Draft EIS for Florida Power & Light's application to build two new nuclear reactors at the Turkey Point site. The site is located near Homestead—approximately 20 miles south of Miami. The April 22 meeting was held at Florida International University's Stadium Club. The April 23 meetings were held in the Reef Room at the Hampton Inn & Suites in Homestead. All three sessions were preceded by an informal one-hour open house, which allowed people to talk with NRC and U.S. Army Corps of Engineers staff. FPL submitted an application for a combined license for the two new units in June 2009 seeking NRC approval to build and operate two AP1000 reactors at the site where the company currently operates two nuclear units. The draft EIS includes a preliminary finding that there are no environmental impacts that would preclude the issuance of a combined license to build and operate the new Turkey Point units. The meetings provided the public with opportunities to submit comments on the draft EIS and its conclusions. The draft EIS is available on the NRC website as two documents. Volume 1 goes through chapter 7 and Volume 2 contains chapter 8 through Appendix J.

Watts Bar Nuclear Power Plant Construction On March 26, 2015, NRC held two public sessions to discuss construction of Unit 2 at the Tennessee Valley Authority's Watts Bar nuclear

plant, which is located near Spring City, Tennessee—approximately 60 miles southwest of Knoxville. During an open house at McMinn County High School, NRC staff members were available to discuss the NRC's assessment of construction activities at the site during 2014. The NRC staff devoted more than 23,000 hours to the inspection, assessment and other support of construction activities at the Watts Bar site during 2014, and found that TVA met NRC rules and regulations and the conditions of the construction permit. The second meeting, at the same location, was between NRC and TVA officials. Members of the public were invited to observe the business portion of the second meeting and senior NRC officials from both the regional office in Atlanta as well as the agency's headquarters were available to answer questions or listen to comments after that portion. "As we move closer to making a decision about a license for Watts Bar Unit 2, we felt it was important to give people who live near the site and other interested people an update on what we have done and what is planned, and to answer any questions they may have," said NRC Region II Administrator Victor McCree. During the second meeting, there were presentations by TVA and the NRC discussing the current status of the project, NRC inspections and other activities, and how the unit would be licensed if it meets all NRC requirements. If Watts Bar Unit 2 does receive an operating license, it would be the first nuclear plant to go into commercial operation in this country since Watts Bar Unit 1 began operating in 1996.

Sequoyah Nuclear Power Plant On March 20, 2015, NRC announced that the agency has published its final report detailing the environmental impacts of renewing the operating licenses of the Sequoyah Nuclear Plant, Units 1 and 2. The supplemental EIS contains the NRC staff's conclusion that the impacts would not preclude renewing the plant's licenses for an additional 20 years. The Sequoyah plant, which has two pressurized water reactors, is located in Soddy-Daisy, Tennessee—approximately 16 miles northeast of Chattanooga. The reactors are currently licensed to operate through September 17, 2020 for Unit 1 and September 15, 2021 for Unit 2. The operator, Tennessee Valley Authority, submitted its renewal application on January 15, 2013. The NRC's review of the application consists of a technical safety review and an environmental review. The final supplemental EIS is Supplement 53 to NUREG-1437, Generic Environmental Impact Statement for License Renewal of Nuclear Plants. The NRC published a draft version of the report in August 2014 and held two public meetings in Soddy-Daisy in September 2014 to receive public comment. The final report includes the staff's responses to the comments.

Nuclear Fuel Services Facility By press release dated March 5, 2015, NRC announced that the agency has issued the Licensee Performance Review for the Nuclear Fuel Services facility in Erwin, Tennessee and that the recent performance documented in that review has led the agency to return NFS to the normal level of oversight and inspection for NRC-licensed facilities of the same type. In 2004, the NRC increased its oversight of the facility, including the addition of a second resident inspector, based on the facility's performance and ongoing changes. Since that time, the agency has kept that increased level, but sustained improvement over the past several years, verified by NRC inspections, led to the conclusion that a return to the normal or core oversight level is warranted. The recent closure of the Safety Culture Confirmatory Order and the results of the review covering the period from January 2013 to December 2014 further demonstrate the improvement at the NFS facility. "Our most recent review of NFS found no areas needing improvement and we believe the management and staff of the facility now have the appropriate focus on safety and environmental protection required by the NRC," said NRC Region II Administrator Victor McCree. As part of the NFS facility's return to normal oversight, there will no longer be a second resident inspector at the site, but the facility will continue to have a senior resident inspector whose inspections will

be supplemented by region-based inspectors from the NRC offices in Atlanta. A public meeting to discuss the results of the review as well as NRC oversight and inspection activities at NFS was held in Erwin on April 23. The NRC's letter detailing the review of the NFS facility is available on the NRC website by searching for ML15064A006. On April 12, 2015, however, NRC began a special inspection to assess the circumstances surrounding an unplanned chemical reaction event. That unplanned reaction occurred on April 4, 2015 in a two-liter bottle stored in an access-controlled storage area. The bottle contained cleaning materials, some nitric acid and a small amount of uranium. There were no employee exposures or injuries during or after the event. "Although no one was injured and there were no employee exposures, it could have been worse had employees been in that area at the time," said NRC Region II Administrator Victor McCree. "Based on that potential, we needed to inspect exactly what happened and what steps are necessary to prevent it from happening again." During the special inspection, the NRC reviewed the company's response and investigation of the incident, developed a time line and determined the actual and potential safety significance of the incident. The special inspection continued for about a week. The NRC will issue a report within 30 days of the completion of the inspection.

Commonwealth of Massachusetts

Pilgrim Nuclear Power Plant On March 18, 2015, NRC held a public meeting in Plymouth, Massachusetts to provide details on its annual assessment of safety performance at the Pilgrim nuclear power plant, as well as to discuss the results of a team inspection conducted at the plant last fall in response to two "white" (low to moderate safety significance) performance indicators received by the plant. Pilgrim, which is located in Plymouth and is owned by Entergy Nuclear Operations Inc., operated safely during 2014. However, the plant was under additional NRC scrutiny because of two performance indicators transitioning to "white" in 2013. One of the indicators covers unplanned scrams, or shutdowns, per 7,000 hours of operation; the other involves unplanned scrams with complications. Last fall, a team of NRC inspectors traveled to Pilgrim to evaluate whether the issues behind the unplanned shutdowns had been satisfactorily addressed. The eight-member team found that although the company's problem identification, root cause evaluation and corrective action plans were generally adequate, deficiencies still existed in the implementation of corrective action plans, as well as in understanding of the issues' causes. As a result, per agency protocols, the NRC in January 2015 assigned two "parallel" "white" inspection findings to Pilgrim. The findings administratively replaced the two "white" performance indicators and mean that the plant will continue to receive heightened attention until the NRC can perform a follow-up team inspection and is satisfied the concerns have been resolved. The NRC will conduct that additional inspection once Entergy notifies the agency of its readiness for it. "Our inspectors identified several examples where corrective actions were not completed as intended or were closed prematurely," said NRC Region I Administrator Dan Dorman. "We expect Entergy to take the steps necessary to put in place corrective actions that will have a lasting impact and reduce the likelihood of unplanned scrams, or shutdowns." In addition, the NRC initiated a Special Inspection to review the plant's performance during a severe winter storm at the end of January 2015 that resulted in a reactor shutdown. The results of the inspection will be contained in a report to be issued this spring. In 2014, the NRC performed approximately 6,500 hours of inspection at Pilgrim.

State of Nebraska

Fort Calhoun Nuclear Power Plant By press release dated March 30, 2015, NRC announced that the agency is returning the Fort Calhoun nuclear plant to the NRC's normal reactor oversight program. The plant, which is operated by Omaha Public Power District (OPPD), is located approximately 19 miles north of Omaha,

Nebraska. The NRC increased its oversight following a 2011 refueling outage that was extended due to record flooding, an electrical fire and significant performance issues. Since December 2011, the agency has conducted approximately 60,000 hours of inspection, assessment and licensing activities. The plant restarted on December 18, 2013, after a shutdown of 32 months. "Fort Calhoun Station has operated safely since plant restart," said Region IV Administrator Marc Dapas. "In addition, OPPD has made significant improvements to its corrective action program, continues to implement its long-term improvement plan and has effectively addressed the performance deficiencies that resulted in NRC's increased oversight." Currently, the NRC has reviewed and closed seven of the ten improvement areas in the post-restart Confirmatory Action Letter in which OPPD committed to correct past deficiencies and ensure there is sustained improved performance going forward. The remaining open items include long-term actions such as performing a design basis reconstitution. Although the plant will be returned to the normal oversight process, NRC staff will continue to perform follow-up inspections to verify that all CAL commitments continue to be met. Fort Calhoun is returning to normal oversight as it currently has no significant safety or security issues. A public meeting was held in Omaha on April 9, 2015 between the NRC and OPPD to discuss Fort Calhoun's efforts to improve performance. Following the meeting, which was held at the Thompson Center, NRC staff were available to answer questions from members of the public.

National Council on Radiation Protection and Measurements (NCRP)

NCRP Issues Report re Decision-Making for Late-Phase Recovery from Major Nuclear or Radiological Incidents

On February 13, 2015, the National Council on Radiation Protection and Measurements (NCRP) issued Report No. 175 titled, *Decision-Making for Late-Phase Recovery from Major Nuclear or Radiological Incidents*.

The report provides guidance on making decisions after a major nuclear accident (*e.g*., Fukushima), as well as after an act of terrorism involving a radiological dispersal device (*e.g*., a dirty bomb) or an improvised nuclear device, that result in wide-area contamination with radioactive materials.

S.Y. Chen gave a presentation on the report at the spring 2015 meeting of the Low-Level Radioactive Waste Forum, Inc. (LLW Forum), which was held in Alexandria, Virginia on April 20-21, 2015. *(See related story, this issue.)*

Overview

The NCRP report considers the long-term consequences of widespread contamination and provides guidance on managing the cleanup and community restoration efforts. Health, environment, economic, psychological, cultural, ethical and political issues are addressed.

Optimization is described as the best approach to decision making for balancing the complex issues that follow wide-area contamination with radioactive materials. Optimization is an iterative

process that can be broken down into a series of steps, all of which involve cooperation with stakeholders as an essential element for a community focused recovery effort.

After a catastrophic incident, a resilient community is one that is able to bounce back to near-normal conditions in an expedited manner. Recognizing that any response, especially for late-phase recovery, is incident and site specific, the NCRP report emphasizes general principles for implementing the late-phase optimization process for circumstances that go well beyond those experienced in conventional cleanups.

Recommendations

The NCRP report concludes with the following eight recommendations:

1. Develop a national strategy to promote community resilience as the most favorable preparedness approach for responding to and recovering from nuclear or radiological incidents involving widespread contamination.
2. Integrate late-phase response into national, state and local government emergency response planning and ensure that it is regularly included in response exercises.
3. Embrace the site-specific optimization process for managing widespread contamination with radioactive material.
4. Ensure that stakeholder engagement and empowerment underpins the optimization process and uses consensus building in the decision-making process.
5. Develop a communication plan as an integral part of the preparedness strategy to ensure that messages are accurate, complete, understandable, and widely distributed.
6. Develop adaptive and responsive cleanup and waste management strategies to facilitate the optimization process.
7. Conduct research to develop new technologies, methods and strategies that address remediation of wide area contamination.
8. Establish a mechanism to integrate new information and lessons learned from past incidents into the strategies for late-phase recovery to promote continuous and adaptive improvements.

The NCRP report will be of special value to local and regional authorities who are charged with making decisions and setting policies in dealing with large-area contamination resulting from a major radiological or nuclear terrorist attack or accident.

The NCRP report can be ordered from the NCRP website at http://NCRPpublications.org in both PDF and hardcopy formats.

For additional information, please contact Dr. David Smith, Executive Director, at smith@NCRPonline.org or at (301) 657-2652 (extension 20) or (301) 907-8768.

Access Intelligence/Exchange Monitor Publications and Forums

Access Intelligence Acquires Exchange Monitor Publications and Forums

On March 16, 2015, Access Intelligence announced the acquisition of Exchange Monitor Publications and Forums—a media company specializing in conferences and e-newsletters in the defense and energy marketplaces. In a press release announcing the acquisition, Access Intelligence states, “This acquisition strengthens Access Intelligence’s foothold in delivering best

in class information to the defense and energy markets."

Exchange Monitor publishes professional newsletters and hosts forums, colloquiums and workshops to facilitate conversations among government and NGO officials and private industry executives on critical national and international programs and policies. The company's primary areas of focus include the Department of Energy's (DOE's) Office of Environmental Management and the clean-up of the nuclear legacy of the Manhattan Project and the Cold War; the National Nuclear Security Administration (NNSA) and the current U.S. nuclear weapons complex; the commercial radioactive waste industry; and, the development of technologies to reduce greenhouse gas emissions.

Exchange Monitor will join Access Intelligence's Aerospace & Energy Group, which includes *Defense Daily, POWER Magazine, The LDC Forums* and *Open Architecture Summit*. The group will be led by Defense Publisher Thomas Sloma-Williams.

Located in Washington, DC, Exchange Monitor Publications and Forums was founded in 1981 by the late Edward Helminski, a physicist who was actively engaged in complex technical issues in the public arena for more than 30 years. It operates four separate forums including the Decisionmakers' Forum; the Radwaste Summit; the Nuclear Deterrence Summit; and, the Conference on Carbon Capture, Utilization & Storage. It also publishes four weekly e-newsletters including *Weapons Complex Monitor*; *Nuclear Security and Deterrence Monitor*; *Radwaste Monitor*; and, *GHG Reduction Technologies Monitor*. It also publishes the daily *Weapons Complex Morning Briefing*.

"This acquisition is a reflection of Access Intelligence's ongoing commitment to the defense and energy information market, which includes respected brands such as *Defense Daily, POWER Magazine, Chemical Engineering* and the *ELECTRIC POWER Tradeshow*," said Don Pazour, President and CEO of Access Intelligence. "We are very proud to welcome a company with the credentials of Exchange Monitor to the Access Intelligence family, and expect that this new relationship will accelerate our strategic ambition to be the information provider of choice to the global defense and energy industries."

Access Intelligence is a portfolio company of Veronis Suhler Stevenson headquartered in Rockville, Maryland. It serves the media, PR, cable, healthcare management, defense, chemical engineering, satellite and aviation markets. Its brands include Cynopsis, Cablefax, PR News, FOLIO:, AdMonsters, Event Marketer, LeadsCon, Chief Marketer, Media Industry Newsletter, Defense Daily Network, Aviation Today, Studio Daily, POWER and Via Satellite. Market-leading shows include LeadsCon, The FOLIO: Show, Event Marketer Summit, SATELLITE 2015, OR Manager, LDC Trade Forums, Clean Gulf, ELECTRIC POWER, Energy Ocean and Offshore Communications. Access Intelligence also produces executive conferences for the healthcare, PR, media, cable, energy and defense markets.

Veronis Suhler Stevenson (VSS) is a leading private investment firm that invests in the information, business services, healthcare IT, and education industries in North America and Europe. VSS provides capital for buyouts, recapitalizations, growth financings and strategic acquisitions to lower middle market companies and management teams with the goal of building companies organically as well as through a focused add-on acquisition program. VSS makes privately-negotiated investments across the capital structure and has the ability to invest in situations requiring control or non-control equity, mezzanine securities and structured equity securities.

For additional information, please contact Macy Fecto at mfecto@accessintel.com or Jennifer Schwartz at jschwartz@accessintel.com.

Advisory Committee on Reactor Safeguards (ACRS)

Nominations Invited for the Advisory Committee on Reactor Safeguards

The U.S. Nuclear Regulatory Commission is seeking two qualified candidates for appointment to its Advisory Committee on Reactor Safeguards (ACRS). The ACRS is an advisory group that provides independent technical review of, and advice on, matters related to the safety of existing and proposed nuclear facilities and the adequacy of proposed reactor safety standards. It also advises the Commission on issues in health physics and radiation protection.

The ACRS's primary focus is on safety issues associated with the U.S. operation of 99 commercial nuclear power plants and regulatory initiatives including risk-informed and performance-based regulations, license renewal, power uprates, new reactor applications, and the use of mixed oxide and high burnup fuels. In addition, the ACRS may be asked to provide advice on radiation protection, radioactive waste management and earth sciences in the agency's licensing reviews for fuel fabrication, enrichment and waste disposal facilities.

The Commission is seeking individuals with at least 20 years of broad experience and a distinguished record of achievement in one or more areas of nuclear science and technology or related engineering disciplines.

Interested individuals should find candidate criteria and details at the corresponding *Federal Register* notice published on March 25, 2015. Resumes will be accepted until June 23, 2015. Resumes should be sent via regular mail to Kendra Freeland, ACRS, Mail Stop T2E-26, U.S. Nuclear Regulatory Commission, Washington, DC 20555-0001. Resumes may also be sent via e-mail to Kendra.Freeland@nrc.gov.

For more information on the ACRS, go to the NRC website at www.nrc.gov. For additional information, please contact Maureen Conley of the NRC at (301) 415-8200.

(Continued from page 1)

implementation, and to better align the requirements with current health and safety standards. The proposed rule would affect low-level radioactive waste disposal licensees or license applicants that are regulated by the NRC or the Agreement States.

Major Provisions Major provisions of the proposed rule include changes to:

- revise the existing technical analysis for protection of the general population to include a 1,000-year compliance period;
- add a new site-specific technical analysis for the protection of inadvertent intruders that would include a 1,000-year compliance period and a dose limit;
- add new analyses that would include a 10,000-year protective assurance period and annual dose minimization target;
- add a new analysis for certain long-lived low-level radioactive waste that would include a post-10,000-year performance period;
- add new analyses that would identify and describe the features of the design and site characteristics that provide defense-in-depth protections;
- add a new requirement to update the technical analyses at closure; and,
- add a new requirement to develop site-specific criteria for the future acceptance of low-level radioactive waste for disposal based on either the results of these technical analyses or the existing low-level radioactive waste classification requirements.

Purpose The proposed rule anticipates a need to dispose of large quantities of depleted uranium from newly licensed uranium enrichment facilities. "Depleted uranium actually becomes more radioactive as it decays over centuries, and the current regulations did not anticipate large quantities of it being disposed of commercially as Class A low-level waste (the least radioactive classification)," states NRC. "In addition, the industry anticipates blending some Class A waste with more-radioactive Class B and Class C wastes that currently lack a disposal path. Blending could create large quantities of Class A waste near the upper classification limit of radioactivity. The current regulations anticipated only a small amount of waste near the upper limit."

According to NRC, the proposed amendments would ensure that low-level radioactive waste streams that are significantly different from those considered during the development of the current regulations (i.e., depleted uranium and other unanalyzed waste streams) can be disposed of safely and meet the performance objectives for land disposal of low-level radioactive waste. NRC believes that the proposed amendments would also increase the use of site-specific information to ensure performance objectives are met that are designed to provide protection of public health and safety.

Submitting Comments

Proposed Rule Public comments on the proposed rule will be accepted until July 24, 2015. They may be submitted using any of the following methods:

- via the federal government's rulemaking web site at www.regulations.gov using Docket ID NRC-2011-0012;
- via facsimile to (301) 415-1101;
- via email to Rulemaking.Comments@nrc.gov; or,
- via mail to Secretary, U.S. Nuclear Regulatory Commission, Washington, D.C. 20555-0001, ATTN: Rulemaking and Adjudications Staff.

Public comments on the associated technical guidance will also be accepted until July 24, 2015. They may be submitted using either of the following methods:

- via the federal government's rulemaking web site at www.regulations.gov using Docket ID NRC-2015-0013; or,
- via mail to Cindy Bladey, Office of Administration, Mail Stop 3WFN-06-A44M, U.S. Nuclear Regulatory Commission, Washington, D.C. 20555-0001.

Background

On July 18, 2013, NRC staff requested Commission approval to publish a proposed rule in the *Federal Register* that would amend 10 CFR Part 61. (See *LLW Notes*, July/August 2013, pp. 1, 32-38.) As originally proposed, the amendments would revise 10 CFR Part 61 to require low-level radioactive waste disposal licensees and license applicants to conduct updated and new site-specific analyses and to permit the development of criteria for future low-level radioactive waste acceptance based on the results of these analyses. The July 2013 proposed rule would update the existing technical analysis requirements for protection of the general population (i.e., performance assessment) to include a 10,000-year compliance period; add a new site-specific technical analysis for the protection of inadvertent intruders (i.e., intruder assessment) that would include a 10,000-year compliance period and a dose limit; add a new analysis for certain long-lived low-level radioactive waste (i.e., performance period analysis) that would include a post-10,000 year performance period; and, revise the technical analyses required at closure. NRC also proposed the addition of a new requirement to develop criteria for the acceptance of low-level radioactive waste for disposal based on either the results of

these technical analyses or on the existing low-level radioactive waste classification requirements. This would facilitate consideration of whether a particular disposal site is suitable for future disposal of depleted uranium, blended low-level radioactive waste, or any other previously unanalyzed low-level radioactive waste stream.

On February 12, 2014, the Commission approved publication of the proposed rule and draft guidance for public comment subject to listed comments and changes. (See *LLW Notes*, January/February 2014, pp. 1, 32-33.) The comments and changes included, among other things, the following: the proposed rule should be revised to include a regulatory compliance period of 1,000 years; the proposed rule should be published with a compatibility category "B" applied to the most significant provisions of the revised rule including the Period of Compliance, the Protective Assurance Analysis Period and its analytical threshold, and the Waste Acceptance Criteria; the site-specific analysis for protection of the general public within the 1,000-year compliance period should set a specific dose limit of 25 mrem/yr; and, the proposed rule should clearly indicate that the intruder assessment should be based on intrusion scenarios that are realistic and consistent with expected activities in and around the disposal site at the time of site closure. The Commission also directed that the proposed rule should include a clear statement that licensing decisions are based on defense in depth (DID) protections, such as siting, waste forms and radionuclide content, engineered features, natural geologic features of the disposal site, and on performance assessment (PA) goals and insights, as well as scientific judgment.

For additional information on the 10 CFR Parts 20 and 61 proposed rule, please contact either Gary Comfort at (301) 415-8106 or at Gary.Comfort@nrc.gov or Andrew Carrera at (301) 415-1078 or at Andrew.Carrera@nrc.gov.

For additional information on the associated technical guidance document, please contact either Priya Yadav at (301) 415–6667 or at Priya.Yadav@nrc.gov or Stephen Dembek at (301) 415–2342 or at Stephen.Dembek@nrc.gov.

NRC Hosts First Public Meeting re Part 61 Proposed Changes

On April 28, 2015, the U.S. Nuclear Regulatory Commission (NRC) hosted a panel discussion on the agency's proposed rule to amend 10 CFR Parts 20 and 61, "Licensing Requirements for Land Disposal of Radioactive Waste."

The meeting was held from 9:30 a.m. to 3:30 p.m. in the Commission Hearing Room (1st Floor) at the agency's headquarters, which are located at One White Flint North at 11555 Rockville Pike in Rockville, Maryland.

This was a Category 3 meeting in which public participation was actively sought to fully engage the public in a discussion of regulatory issues.

The following topics were on the agenda for the meeting:

- opening remarks and panel member introductions;
- presentation on submitting comments on proposed rule language;
- NRC presentations, panel discussions and opportunities for the public to ask questions on the proposed rule language; and,
- summation and closing remarks.

NRC plans to hold additional public meetings during the comment period and will announce them as they are scheduled.

For additional information on the April 28 public meeting, please contact Stephen Dembek of the NRC at (301) 415-2342 or stephen.dembek@nrc.gov.

NRC Publishes Draft LLW Programmatic Assessment Results

On March 13, 2015, the U.S. Nuclear Regulatory Commission published a Request for Comment at 80 *Federal Register* 13,451 seeking feedback from stakeholders on a draft list of prioritized low -level radioactive waste tasks based upon the assessment updates to the strategic assessment (now called a programmatic assessment) performed in 2007.

The objective of this updated assessment remains the same as the 2007 assessment; that is, to identify and prioritize tasks that the NRC staff can undertake to ensure a stable, reliable, and adaptable regulatory framework for effective low-level radioactive waste management, while also considering future needs and changes that may occur in the nation's commercial low-level radioactive waste management system.

In 2014, through public meetings, webinars, and *Federal Register* notices, the NRC staff solicited public comment on what changes, if any, should be made to the current low-level radioactive waste program's regulatory framework, as well as specific actions that the staff might undertake to facilitate such changes.

The NRC staff considered the comments received, performed an assessment of the comments, and developed a draft list of prioritized low-level radioactive waste tasks.

Interested stakeholders were requested to submit comments by April 13, 2015. Comments received after this date will be considered if it is practical to do so, but the NRC is able to assure consideration only for comments received on or before this date.

Information related to NRC's low-level radioactive waste programmatic assessment may be obtained at http://www.regulations.gov by searching for Docket ID NRC–2014–0080. Interested stakeholders may also obtain publicly available documents online in the ADAMS Public Documents collection at http://www.nrc.gov/reading-rm/adams.html.

The LLW Forum's comments on NRC's low-level waste programmatic assessment may be found online by going to the Resources Page of either the Disused Sources Working Group (DSWG) web site at www.disusedsources.org or the Part 61 Working Group (P61WG) web site at www.part-61.org.

Updated Prioritized List

The NRC received numerous comments in response to the request for suggested updates to the programmatic assessment. Many commenters expressed similar views, but there also were conflicting comments. For example, some commenters wanted the NRC to make it easier to dispose of Low Activity Waste (LAW) at Resource Conservation and Recovery Act (RCRA) sites or other disposal facilities not licensed in accordance with the NRC's regulations in 10 CFR Part 61, whereas other commenters wanted the NRC to require that disposal of LAW be done only at licensed low-level radioactive waste sites. Comments that were determined to be outside the scope of the programmatic assessment or comments related to tasks that have been recently completed by the NRC are not addressed in this programmatic assessment.

To evaluate and prioritize these comments, the NRC used the low-level radioactive waste strategic objective that was developed for the 2007 strategic assessment. Specifically, in SECY –07–0180 the NRC used the NRC's Strategic Plan to develop a strategic objective for the low-level radioactive waste regulatory program. To ensure the strategic objective was still current, the NRC reviewed the latest version of the NRC's Strategic Plan (Strategic Plan: Fiscal Years 2014–2018

(NUREG–1614, Volume 6, which can be found at *http://www.nrc.gov/reading-rm/doccollections/nuregs/staff/sr1614/v6/*).

The NRC concluded that the strategic objective developed in SECY–07–0180 is still applicable. The strategic objective is: ''The objective of the NRC's [low-level radioactive waste] regulatory program is to provide for a stable, reliable, and adaptable regulatory framework for effective [low-level radioactive waste] management, while maintaining safety, security, and protection of the environment.'' The NRC evaluated whether the need to complete each task was a short, medium, or long term priority. Also, the NRC considered potential costs and benefits along with consideration of the availability of disposal options. The NRC used the list of 20 items in SECY–07–0180, as a starting point and combined, deleted, or added items based on the current low-level radioactive waste landscape and on stakeholder comments received in 2014.

Completed Tasks NRC identified the following tasks as completed:

- Task 5: "Review and update guidance on extended storage of [low-level radioactive waste] for materials and fuel cycle licensees and review industry guidance for reactors." This item was completed by the NRC by issuing Regulatory Issue Summary (RIS) 2008–12, "Considerations for Extended Interim Storage of Low-Level Radioactive Waste by Fuel Cycle and Materials Licensees," (ADAMS Accession No. ML07333075) and RIS 2011 –09 "Available Resources Associated with Extended Storage of Low-Level Radioactive Waste," (ADAMS Accession No. ML111520042).
- Task 13: ''Identify new waste streams.'' This item is considered completed because the proposed changes to 10 CFR part 61 (*i.e.*, Site - Specific Analysis Rulemaking) are broad enough to include potential new waste streams that may be developed in the future.
- Task 17: ''Develop information notice on waste minimization.'' This item is considered completed because in 2012 the NRC issued its ''Low-Level Radioactive Waste Management and Volume Reduction,'' policy statement that addressed this issue and no further work is anticipated by the NRC. This policy statement is available on the federal rulemaking Web site at *http://www.regulations.gov* under Docket ID NRC–2011–0183.

The completed tasks were removed from the task list.

Combined Tasks Similar tasks were grouped together, specifically under the topics related to the revision to 10 CFR Part 61. Several tasks in the 2007 assessment were related to the proposed revision to 10 CFR Part 61 including, determining if disposal of large quantities of DU would change the waste classification tables; developing guidance on alternate waste classification; and, implementing major revisions to 10 CFR Part 61. Based on the Commission's direction, the NRC's efforts related to revision to 10 CFR Part 61 has been limited to specifying a requirement for a site-specific analysis and associated technical requirements for unique waste streams including the disposal of significant quantities of DU.

These tasks have been combined and separated into two tasks, ''Complete and Implement Site-Specific Analysis Rulemaking,'' and ''Update the Waste Classification Tables.'' Once the Site-Specific Analysis Rulemaking is complete, in accordance with Revised Staff Requirements SECY–13–0001, ''Staff Recommendations for Improving the Integration of the Ongoing 10 CFR Part 61 Rulemaking Initiatives'' (ADAMS Accession No. ML13085A318), the NRC staff plans to communicate further with the Commission on the need for a second rulemaking for revising the waste classification tables.

Deleted Tasks Several items included in the table in SECY–07–0180 were deleted from the

table in the new *Federal Register* notice. These items include:

- Task 1: ''Evaluate potential changes to [low-level radioactive waste] regulatory program as a result of severe curtailment of disposal capacity.'' This item was deleted because the anticipated curtailment of disposal capacity did not occur and is not expected to occur in the near term.
- Task 8: ''Examine the desirability and benefits of legislative changes.'' As with Task 1, this item was deleted because the anticipated curtailment of disposal capacity did not occur and is not expected to occur in the near term.
- Task 15: ''Develop waste acceptance criteria for [low-level radioactive waste] disposal in uranium mill tailings impoundments.'' The NRC anticipated that some low-level radioactive waste would need to be disposed in uranium mill tailing impoundments due to the diminishing capacity at low-level radioactive waste disposal sites. This item was deleted because the anticipated curtailment of disposal capacity did not occur and is not expected to occur in the near term.

Added Task A new task has been added to the list, ''Update NUREG/BR–0204, Rev. 2 (July 1998), ''Instructions for Completing NRC's Uniform Low-Level Radioactive Waste Manifest.'' NUREG/BR–0204 provides instructions for completing the NRC's Forms 540/540A, 541/541A, and 542/542A.'' These forms are collectively known as the uniform manifest.

Stakeholders and the NRC have identified items on the forms that should/need to be revised. For example, instructions for manifest reporting of the activities of hydrogen-3, carbon-14, technetium-99, and iodine-129, when their activities are below the lower limit of detection, will be clarified. Additionally, work on the 10 CFR Part 61 rulemaking also identified needed revisions to the forms.

New Rankings Table 1 in Section III of the new *Federal Register* notice reflects the NRC's views on the tasks that should receive priority consideration moving forward as follows:

High Priority Tasks

- complete and implement site-specific analysis rulemaking;
- update the waste classification tables;
- implement the updated CA BTP;
- perform scoping study of the need to review/expand byproduct material financial assurance to account for life-cycle cost;
- clarify the regulatory authority of greater-than-class C (GTCC) waste disposal and develop licensing criteria for a GTCC disposal facility;
- finalize internal procedure/Standard Review Plan for 10 CFR 20.2002 requests; and,
- update NUREG/BR-0204, Rev. 2 (July 1998), "Instructions for Completing NRC's Uniform Low-Level Radioactive Waste Manifest."

Medium Priority Tasks

- develop guidance that summarizes disposition options for low-activity waste (LAW);
- update and consolidate low-level radioactive waste guidance into one NUREG;
- coordinate with other agencies on consistency in regulating LAW and determine the impact of LAW disposal from radiological dispersal devices (RDD); and,
- promulgate rule for disposal of LAW.

Low Priority Tasks

- develop procedures for import/export review;
- examine the need for guidance on defining when radioactive material becomes low-level radioactive waste; and,
- develop and implement the national waste tracking system.

Background

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

- the need for greater flexibility and reliability in low-level radioactive waste disposal options;
- increased storage of Class B and Class C low-level radioactive waste because of the potential closing of the Barnwell, South Carolina disposal facility to out-of compact waste generators;
- the potential need to dispose of large quantities of power plant decommissioning waste, as well as depleted uranium (DU) from enrichment facilities;
- increased safety concerns;
- the need for greater low-level radioactive waste program resources than were available;
- increased security concerns related to storing low-level radioactive waste in general and sealed radioactive sources in particular; and,
- the potential for generation of new waste streams (for example, by the next generation of nuclear reactors and the potential reemergence of nuclear fuel reprocessing in the United States).

Based on these challenges and issues, the NRC staff conducted a Strategic Assessment of the NRC's low-level radioactive waste regulatory program. Based on extensive stakeholder input during public meetings, the NRC staff received a variety of tasks to be included in the Strategic Assessment and evaluated them based on the overall strategic objectives for ensuring safety, security, and other factors. From these solicited tasks, the NRC developed a list of 20 tasks responsive to identified programmatic needs. These tasks were assigned priorities of high, medium, or low, and ranged from narrowly focused tasks such as updating low-level radioactive waste storage guidance to broader tasks such as suggesting legislative changes to Congress to improve the national low-level radioactive waste program.

The NRC staff issued the strategic assessment in late 2007 in SECY–07– 0180, ''Strategic Assessment of Low-Level Radioactive Waste Regulatory Program'' (ADAMS Accession No. ML071350291). The strategic assessment identified and prioritized the NRC staff's tasks to ensure that the low-level radioactive waste program continued to:

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

Since 2007, the NRC has completed several high priority tasks identified in the 2007 Strategic Assessment, including updating guidance for low-level radioactive waste storage and evaluating the disposal of DU and the measures needed to ensure its safe disposal. In addition, the NRC continues to work on the revisions to Part 61 of Title 10 of the *Code of Federal Regulations* (CFR) and implementation of the update to the Concentration Averaging and Encapsulation Branch Technical Position (CA BTP). In addition, the national low-

level radioactive waste program continues to evolve.

To set the direction for the NRC's low-level radioactive waste regulatory program in the next several years, the NRC began developing a new strategic assessment of its low-level radioactive waste program (now called a programmatic assessment). The objective of this updated programmatic assessment remains the same as the 2007 strategic assessment—*i.e.*, to identify and prioritize tasks that the NRC can undertake to ensure a stable, reliable and adaptable regulatory framework for effective low-level radioactive waste management, while also considering future needs and changes that may occur in the nation's commercial low-level radioactive waste management system.

The NRC solicited public comment on what changes, if any, should be made to the current low-level radioactive waste program's regulatory framework, as well as specific actions that the NRC might undertake to facilitate such changes. Specifically, the NRC requested comments at a public workshop in Phoenix, Arizona on March 7, 2014. Additionally, the NRC requested comments by issuing a *Federal Register* notice on May 15, 2014 (79 *Federal Register* 27,772), with a 60-day public comment period. The NRC also held webinars on June 17, 2014 and July 8, 2014, requesting comments on the proposed update to the assessment. The initial comment period was scheduled to close on July 14, 2014. However, on July 9, 2014 (79 *Federal Register* 38,796), the NRC extended the comment period to September 15, 2014. The NRC sought comments on developments that would affect the low-level radioactive waste regulatory program over the next several years and that would affect licensees and sited States and actions that the NRC could take to ensure safety, security, and the protection of the environment.

The NRC received twelve comment submissions to the *Federal Register* notices and also received numerous comments as the result of the public meeting and webinars. The comment submissions are available on the federal rulemaking Web site at *http://www.regulations.gov* under Docket ID NRC–2014–0080.

Comments

The NRC is requesting comments on the updated prioritized task list as presented in Section III, Table 1 of the new *Federal Register* notice. In particular, the NRC is requesting any views on possible unintended consequences of finalizing the proposed task list and any tasks that commenters feel the NRC did not adequately consider.

Comments may be submitted by either of the following methods:

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

- Mail: Cindy Bladey, Office of Administration, Mail Stop: OWFN–12–H08, U.S. Nuclear Regulatory Commission, Washington, DC 20555–0001.

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

For additional information, please contact Stephen Dembek at (301) 415-2342 or at Stephen.Dembek@nrc.gov or Melanie Wong at (301) 415–2432 or at Melanie.Wong@nrc.gov.

NRC Publishes Revisions re Concentration Averaging and Encapsulation

On February 25, 2015, the U.S. Nuclear Regulatory Commission issued Revision 1 of the Branch Technical Position on Concentration Averaging and Encapsulation (CA BTP). The guidance, which was published at 80 *Federal Register* 10,165, provides acceptable methods that can be used to perform concentration averaging of low-level radioactive waste for the purpose of determining its waste class for disposal.

The revised CA BTP consists of two volumes. Volume 1 (ADAMS Accession No. ML12254B065) contains the staff technical positions on averaging and certain other information. Volume 2 (ADAMS Accession No. ML12326A611) contains staff responses to stakeholder comments on the May 2012 draft (ADAMS Accession No. ML121170418) and the technical bases for the staff positions.

NRC staff gave a presentation on the revised CA BTP at the spring 2015 LLW Forum meeting. *(Additional information, including a copy of NRC's power point presentation, can be found on the members-only, restricted-access portion of the LLW Forum's web site at www.llwforum.org.)*

The revised CA BTP can be found online at http://www.gpo.gov/fdsys/pkg/FR-2015-02-25/pdf/2015-03913.pdf.

Introduction

Revision 1 of the CA BTP provides updated guidance on the interpretation of § 61.55(a)(8) of Title 10 of the *Code of Federal Regulations* (10 CFR), ''Determination of concentrations in wastes,'' as it applies to the classification (as Class A, B, or C waste) of a variety of different types and forms of low-level radioactive waste. Paragraph 61.55(a)(8) states that radionuclide concentrations can be averaged over the volume of the waste or its weight if the units are expressed as nanocuries per gram. The average radionuclide concentrations are compared with the waste classification tables in 10 CFR 61.55 to determine the class of the waste. The waste class determines the minimum safety measures to be applied in order to provide reasonable assurance of safe disposal of the waste.

The previous version of the CA BTP, published in 1995 (ADAMS Accession No. ML033630732), was issued before the NRC adopted its risk-informed and performance-based regulatory policy. The revised CA BTP, which has been informed by that policy, contains new guidance related to blending of low-level radioactive waste, as directed by the Commission in its Staff Requirements Memorandum for SECY–10–0043, ''Blending of Low-Level Radioactive Waste,'' (ADAMS Accession No. ML102861764).

Overview

The major changes to the 1995 CA BTP are summarized below. A more complete list of changes can be found in Appendix B of Volume 1 of the revised CA BTP. In addition, NRC staff responses to individual public comments are contained in Section 3 of Volume 2 of the CA BTP. Finally, a summary of the changes to the May 2012 version published for public comment is available in ADAMS Accession No. ML14157A227.

Increase in Cesium-137 Sealed Source Activity Limits In the revised CA BTP, NRC staff has increased the limits for disposal of cesium-137 (Cs-137) sealed sources, using an improved technical basis and a reasonably foreseeable but conservative intruder scenario. Cesium-137 is used in sealed sources for research, medical, and industrial purposes. The recommended constraint on the size of these sources for disposal has been increased from 1.1 TBq (30 Ci) to

4.8 TBq (130 Ci), based on new, more risk-informed analysis. The revised CA BTP also specifies a process that licensees should use to request review by Agreement State regulators of proposed disposals of larger activity sources.

Demonstration of Adequate Mixing in Blended Low-Level Radioactive Waste The revised CA BTP also addresses the Commission direction to ''develop a clear standard for determining homogeneity'' of blended waste. The 1995 CA BTP constrained the concentrations of inputs to a mixture of blended waste and therefore did not need to address the homogeneity of the final mixture. It included a ''Factor of 10'' concentration limit on waste blending which limited blending of waste streams with radionuclide concentrations to within a factor of 10 of the average concentrations in the blended product. The revised CA BTP specifies certain thresholds on radionuclide concentrations of waste streams that are blended together. Above these thresholds, licensees should demonstrate waste is adequately blended. Considerations for this demonstration are also discussed. The thresholds for demonstrating adequate blending and the guidance on demonstrating waste is adequately blended are based on a probabilistic dose assessment. This revision is risk-informed because of the method used to establish the threshold for the homogeneity demonstration. It is also performance-based because the position no longer constrains concentrations of *inputs* to a blending process, but instead specifies criteria that the *output* (*i.e.,* blended waste) must meet to protect an inadvertent intruder from potential hot spots in the waste.

Alternative Approaches Another revision to the CA BTP is the addition of specific guidance for licensees to use in proposing site- or waste-specific averaging approaches, rather than the generic approaches specified in the body of the CA BTP. This revision is consistent with NRC's performance-based regulatory policy because it facilitates the use of other averaging approaches to meet the 10 CFR Part 61 performance objective of protecting an inadvertent intruder. The 1995 CA BTP stated that alternative approaches for averaging should be approved under NRC's regulation in 10 CFR 61.58. By referencing a provision in the regulations that applies to alternatives to the *requirements* in 10 CFR Part 61 (and not NRC staff guidance like the CA BTP), performance-based approaches to intruder protection were in effect discouraged. In addition, not all regulatory authorities in Agreement States that license disposal sites have this provision in their regulations, and so the regulatory mechanism for obtaining approval of alternatives was not available to all licensees. That is, some regulators could not authorize deviations from the 1995 CA BTP under that provision, even though site-specific features may have justified other averaging approaches. The revised CA BTP acknowledges that site-specific and other approaches may be used, and deviations from staff guidance in the CA BTP do not need the 10 CFR 61.58 approval that was previously specified. Instead, the regulatory authority may approve another approach in the same manner used for deviations from other NRC guidance.

Risk-Informed Treatment of Cartridge Filters In the 1995 CA BTP, cartridge filters—a waste type generated during the operation of nuclear power plants—were defined as discrete objects subject to certain averaging constraints on each filter. Each filter had to be radiologically characterized and fit within the specified averaging constraints of the 1995 CA BTP. While that default position remains in place, the revised CA BTP also allows for the treatment of such filters as blendable waste, with a documented justification. Characterizing the overall blendable waste mixture and classifying the mixture based on its total radioactivity, rather than individual items, is permitted for many other waste types in the revised CA BTP. This more risk-informed position is justified because in practice many filters do not present a gamma hazard to an intruder, based on their actual radionuclide concentrations.

Risk-Informed Averaging of Other Discrete Waste Items The 1995 CA BTP constrained the averaging of discrete items with its Factors of 1.5 (which applied to primary gamma emitters) and 10 (which applied to other radionuclides). The factors applied to the *average* radionuclide concentrations in a mixture of certain discrete items, such as activated metals, such that the radionuclide concentrations in all items in a mixture had to be within those factors for the average of the mixture. These factors ensure uniformity of radionuclide concentrations in mixtures of items, but such mixtures could be uniformly low in concentration and risk. Thus, there is no relationship between the 1995 CA BTP position and acceptable risk (or dose). The revised CA BTP ties the averaging factors to the class limit for radionuclide concentrations (not the average of the mixture), which has a relationship to risk because the class limits are based on a dose of 5 mSv/yr (500 mrem/yr) exposure to an inadvertent intruder. The staff also revised the Factor of 1.5 to 2, since the uncertainty associated with intruder protection does not justify the precision implied by the first factor.

In developing the revised CA BTP, NRC staff identified one issue that may need further clarification. One of the categories of discrete wastes that are subject to special concentration averaging constraints is ‘‘contaminated materials.’’ The 1995 CA BTP defines contaminated materials as components or metals on which radioactivity resides on or near the surface in a fixed or removable condition. To demonstrate compliance with these averaging constraints, the radiological characteristics and volumes of individual items are typically determined. However, items with surface contamination may also be categorized as radioactive trash which is not subject to any special averaging constraints. Items in radioactive trash do not need to be individually characterized. Instead, a container of radioactive trash can be surveyed to determine its overall radioactivity and its classification determined by dividing the overall activity by the waste volume. Neither the 1995 CA BTP nor draft revisions published for public comment provided guidance for categorizing items as either contaminated materials or radioactive trash. In addition, NRC staff received no comments from stakeholders on this issue. NRC staff will consider whether additional guidance, such as a Regulatory Issue Summary (RIS), is warranted for distinguishing contaminated materials from radioactive trash. The staff may also formally clarify or supplement other positions in the CA BTP at a later time, as necessary.

Implementation

The revised CA BTP describes and makes available to NRC and Agreement State licensees, Agreement States, and the public, methods that the NRC believes are acceptable for implementing specific parts of the Commission’s regulations. The positions in the revised CA BTP are not intended as a substitute for regulations, and compliance with them is not required. Agreement States may use this information in establishing waste acceptance criteria for their licensees who are operating waste disposal sites. Applicants and licensees may use the information in the revised CA BTP when developing applications for initial licenses, amendments to licenses, or requests for NRC regulatory approval. Licensees may use the information in the revised CA BTP for actions (*i.e.*, in determining average radionuclide concentrations in waste) that do not require prior NRC review and approval. Licensees may also use the information in the revised CA BTP to assist in attempting to resolve regulatory or inspection issues. Agreement States and current licensees may continue to use the previous guidance for complying with the concentration averaging provision in 10 CFR 61.55(a)(8) (*i.e.*, the January 23, 1995, ‘‘Final Branch Technical Position on Concentration Averaging and Encapsulation’’). Current licensees may also voluntarily use positions in the revised CA BTP.

In addition to the guidance in the revised CA BTP, licensees that ship waste for disposal in a

10 CFR Part 61 or Agreement State equivalent facility should ensure that the waste meets the concentration averaging provisions in the land disposal facility license. Where there are conflicts with this guidance, the land disposal facility license conditions issued by the regulatory authority (*i.e.*, the Agreement State) must be met.

Background

To provide protection for individuals who inadvertently intrude into a waste disposal facility, radioactive waste proposed for near-surface disposal must be classified based on its hazard to the intruder. The NRC's regulation, ''Licensing Requirements for Land Disposal of Radioactive Waste,'' 10 CFR Part 61, establishes a waste classification system based on the concentration of specific radionuclides contained in the waste. This system is one of the key components in ensuring protection of an inadvertent intruder. In determining these concentrations, the regulation states in 10 CFR 61.55(a)(8), that radionuclide concentrations can be averaged over the volume of the waste or its weight if the units are expressed as nanocuries per gram.

1983 Technical Position and 1995 CA BTP
Although 10 CFR Part 61 acknowledges that concentration averaging for the purposes of classifying waste for disposal is acceptable, it does not specify limitations on the implementation of concentration averaging. The staff published a technical position on radioactive waste classification, initially developed in May 1983 (ADAMS Accession No. ML033630755), that provided guidance on concentration averaging. This 1983 technical position describes overall procedures acceptable to NRC staff which could be used by licensees to determine the presence and concentrations of the radionuclides listed in 10 CFR 61.55, and thereby classify waste for near-surface disposal. Section C.3 of the 1983 technical position provided guidance on averaging of radionuclide concentrations for the purpose of classifying the waste.

In 1995, the NRC staff updated a portion of the 1983 technical position, publishing as a separate document the "Branch Technical Position on Concentration Averaging and Encapsulation," (60 *Federal Register* 4451, January 23, 1995). The 1995 CA BTP significantly expanded and further defined Section C.3 of the 1983 technical position dealing with concentration averaging, specifying a number of constraints on concentration averaging.

Significant Changes Necessitating Revision
The current update to the CA BTP is necessary due to the significant number of changes in the low-level radioactive waste program since the CA BTP was published in 1995. First, the Commission reviewed the 1995 CA BTP's position on blending of low-level radioactive waste in 2010 and directed the staff to revise it to be more risk-informed and performance-based. The 1995 version constrained the concentration of certain waste types put into a mixture (*e.g.*, ion exchange resins) to within a factor of 10 of the average concentration of the final mixture. The Commission directed the staff to replace this position and to implement a risk-informed, performance-based approach for low-level radioactive waste blending that made the hazard (*i.e.*, the radioactivity concentration) of the final mixture the primary consideration for averaging constraints. Second, the NRC adopted a risk-informed, performance-based regulatory approach for its programs in the late 1990's, after the 1995 CA BTP was published. The revised CA BTP more fully reflects that approach, not just for the blending position, but for other topics as well. One example is for concentration averaging of sealed radioactive sources.

The 1995 CA BTP significantly constrained disposal of sealed sources. Many sources have no disposal path because of the constraints recommended in the 1995 BTP. Licensees must store sealed sources for potentially long periods of time if there is no disposal option, and the sources are subject to loss or abandonment. The staff has reexamined the 1995 assumptions underlying the

radioactivity constraints on their disposal. The CA BTP's revised positions are based on different, but conservative assumptions and will allow for the safe disposal of more sealed sources than the 1995 CA BTP. The revised position will enhance national security by ensuring that the safest and most secure method for managing sealed sources (*i.e.,* permanent disposal in a licensed facility) is available to licensees.

Opportunities for and Response to Public Comments Revision 1 of the CA BTP was developed after consideration of public comments on three drafts. The first draft (ADAMS Accession No. ML103430088) was noticed in the *Federal Register* on January 26, 2011 (76 *Federal Register* 4739). The second draft (ADAMS Accession No. ML112061191) was made available to the public in September 2011—in advance of a public workshop held in Albuquerque, New Mexico—on October 20, 2011. The third draft (ADAMS Accession No. ML121170418) was noticed in the *Federal Register* for public comment on June 11, 2012, (77 *Federal Register* 34411).

Fifteen organizations representing a variety of interests submitted comments on the drafts. They included federal and state agencies and organizations, a nuclear power plant research organization, disposal and waste processing facility licensees, industry professional organizations, an advocacy group, and a waste services company. These comments have been considered by the NRC staff in developing the revision to the CA BTP. An overview of the changes to the 1995 CA BTP is presented in the *Federal Register* notice dated February 25, 2015. Detailed responses to each of the public comments are available in Volume 2 of the revised CA BTP.

For additional information, please contact Maurice Heath of the NRC's Office of Nuclear Material Safety and Safeguards (NMSS) at (301) 415-3137 or at Maurice.Heath@nrc.gov. Please refer to Docket ID NRC–2011–0022.

NRC Issues Annual Assessments for Nation's Nuclear Plants

By press release dated March 6, 2015, the U.S. Nuclear Regulatory Commission announced that the agency has issued annual letters to nuclear power plants operating in 2014 regarding their performance throughout the year. As of the end of December 2014, 94 of the nation's 100 commercial nuclear power plants were in the two highest performance categories.

"These assessment letters provide the results of a systematic NRC review of performance indicators and inspection findings at each domestic power reactor facility," said Bill Dean, Director of the Office of Nuclear Reactor Regulation. "In addition to ensuring that the nation's nuclear power plants are safe by inspecting them and evaluating their performance regularly, our goal in issuing these letters is to ensure that all of our stakeholders clearly understand the basis for our assessments of plant performance, our future inspection plans, and the actions we are taking to address any notable deficiencies."

Of the 94 highest-performing reactors, 75 fully met all safety and security performance objectives and were inspected by the NRC using the normal "baseline" inspection program. (This group includes the Vermont Yankee plant, which permanently shut down in late December and is now transitioning to decommissioning status.)

Nineteen 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 follow-up of corrective actions. Plants in this level are:

- Calvert Cliffs 2 (Maryland);
- Clinton (Illinois);

- Davis- Besse (Ohio);
- Diablo Canyon 1 and 2 (California);
- Fermi 2 (Michigan);
- Fitzpatrick (New York);
- Limerick 1 and 2 (Pennsylvania);
- Millstone 3 (Connecticut);
- Oconee 1 (South Carolina);
- Oyster Creek (New Jersey);
- Palisades (Michigan);
- Point Beach 2 (Wisconsin);
- River Bend (Louisiana.);
- Salem 1 (New Jersey);
- St. Lucie 1 (Florida);
- Waterford (Louisiana); and,
- Wolf Creek (Kansas).

Fermi, Oyster Creek, and Wolf Creek have resolved their issues since the reporting period ended and have transitioned to the highest performing level.

Three 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(s) of the degraded performance. These plants included:

- Monticello (Minnesota);
- Pilgrim (Massachusetts): and,
- Point Beach 1 (Wisconsin).

Monticello has resolved some of its issues since the reporting period ended and has transitioned to the second highest performing level.

Two reactors, Arkansas Nuclear One 1 and 2, were in the fourth performance category, requiring increased oversight because of two safety findings of substantial significance. This oversight will include several additional inspections and frequent NRC management involvement to confirm the performance issues are being addressed.

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

Later this spring and summer, the NRC will host 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 are also available through the NRC's webpage on the Reactor Oversight Process. Annual construction oversight assessments for new reactors at the Vogtle and Summer sites and at Watts Bar 2 are also on the NRC website. The letters are designated "4Q/2014" under "Assessment Reports/Inspection Plans" on each reactor's webpage.

Every six months, each plant receives either a mid-cycle or annual assessment letter along with an NRC inspection plan.

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

NRC To Begin Full Certification Review of APR1400 Reactor

By press release dated March 4, 2015, the U.S. Nuclear Regulatory Commission announced that the agency has docketed for review Korea Electric Power Corp. and Korea Hydro and Nuclear Power's application to certify the APR1400 reactor design for use in the United States.

The companies submitted their revised application for the design, an approximately 1,400 MWe pressurized-water reactor based on the Korean Optimized Power Reactor 1000, on December 23, 2014. The NRC, after conducting an acceptance check, has concluded the application is complete enough for a full design certification review. The staff will provide a review schedule in the near future.

The NRC's certification process determines whether a reactor design meets the basic U.S. safety requirements. Companies can then reference a certified design in applying for a Combined License to build and operate a reactor in the United States. The NRC's Advisory Committee on Reactor Safeguards provides input on design certification reviews.

If issued, certifications are valid for 15 years. The NRC has most recently certified Westinghouse's AP1000 and GE-Hitachi's Economic Simplified Boiling Water Reactor designs.

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

RIS Issued re Identifying and Reporting Security Incidents Under Part 37

On March 3, 2015, the U.S. Nuclear Regulatory Commission issued Regulatory Issue Summary (RIS) 2015-03 to inform licensees of the requirements regarding identifying and reporting security incidents, including suspicious activity, involving Category 1 or Category 2 quantities of radioactive material under 10 CFR Part 37; when and how to report those matters; and, to make recipients aware of a database used to track reports of suspicious activity.

NRC provided RIS 2015-03 to the Agreement States for their information and for distribution to their licensees, as appropriate. However, no specific action or written response is required.

Overview

Reporting of Incidents; Including Incidents Involving Suspicious Activity The regulations in 10 CFR Part 37.57(a) require a licensee to report to local law enforcement and the NRC after determining that an unauthorized entry resulted in an actual or attempted theft, sabotage, or diversion of a Category 1 or Category 2 quantity of radioactive material. The regulations in 10 CFR 37.57(b) require licensees to assess suspicious activity related to possible theft, sabotage, or diversion of radionuclides of concern, and if appropriate, to report the suspicious activity to local law enforcement and the NRC. The reporting of suspicious activities is an important component of evaluating the threat against licensed facilities and material. The NRC reviews individual notifications of suspicious activities to evaluate whether potential preoperational activities (i.e., multiple events at a single site or multiple events at multiple sites) may be part of a larger plan. NRC also integrates this information with other agencies in the

homeland security and intelligence communities. This has the potential to prevent or stop malicious activity at licensee facilities.

Examples of suspicious activity may include, but are not limited to, the following:

- stated threats against the licensee's facility or staff;
- use of forged, stolen, or fabricated documents to support access control or authorization activities;
- unusual challenges to security systems that could represent attempts to gather information on system performance or personnel or equipment response actions;
- an individual(s) conducting unapproved photographing or videotaping of licensed facilities;
- unauthorized attempts to probe or gain access to the licensee's business secrets or other sensitive information or to control systems, including the use of social engineering techniques (e.g., impersonating authorized users); and,
- the unauthorized operation, manipulation, or tampering of radioactive material in quantities of concern or the unauthorized operation, manipulation, or tampering of security-related structures, systems, and components that could prevent the implementation of the licensee's protective strategy.

Additional examples of potentially reportable suspicious activities are listed in Annex C of NUREG-2155, *Implementation Guidance for 10 CFR Part 37, Physical Protection of Category 1 and Category 2 Quantities of Radioactive Material,* as found at http://pbadupws.nrc.gov/docs/ML1305/ML13053A061.pdf.

To ensure compliance with the requirements in 10 CFR 37.57 and 10 CFR 37.81, the NRC staff wants to remind licensees of the following:

For licensees who possess Category 1 and Category 2 quantities of radioactive material:

1. The licensee must notify the local law enforcement agency (LLEA) immediately after determining that an unauthorized entry resulted in an actual or attempted theft, sabotage, or diversion of a Category 1 or 2 quantity of radioactive material. The licensee must also notify the NRC Operations Center as soon as possible (not later than 4 hours after discovery) but not at the expense of causing delay or interfering with the LLEA response to the event. [§37.57(a)] After notifying the LLEA and the NRC, the licensee must submit a written report within 30 days to the NRC for its analysis and evaluation. The report must identify any necessary corrective actions. [§37.57(c)]

2. The licensee must assess any suspicious activity related to the possible theft, sabotage, or diversion of Category 1 or 2 quantities of radioactive material and must notify the LLEA as appropriate. If the LLEA is notified, the licensee must also notify the NRC Operations Center as soon as possible, but not later than 4 hours after notifying the LLEA. [§37.57(b)]

For licensees shipping Category 1 quantities of radioactive material:

1. The shipping licensee must notify the LLEA and the NRC Operations Center within 1 hour after determining that a shipment of Category 1 quantities of radioactive material is lost or missing. [§37.81(a)]

2. The shipping licensee must notify the designated LLEA along the shipment route as soon as possible upon discovery of any actual or attempted theft or diversion of a shipment or upon discovery of suspicious activities related to a shipment of Category 1 quantities of radioactive material. After notifying the

LLEA, the licensee must also notify the NRC Operations Center. [§37.81(c)]

3. The shipping licensee must notify the NRC and the LLEA as soon as possible upon recovery of any lost or missing Category 1 quantities of radioactive material. [§37.81(e)]

4. The shipping licensee must submit a written report to the NRC within 30 days of an initial report of lost or missing material or attempted or actual theft or diversion of a shipment of Category 1 quantities of radioactive material. [§37.81(g)]

For licensees shipping Category 2 quantities of radioactive material:

1. The shipping licensee must notify the NRC Operations Center within 4 hours of the determination that a shipment of Category 2 quantities of radioactive material is lost or missing and must call the NRC Operations Center after 24 hours if the shipment has not been located. [§37.81(b)]

2. The shipping licensee must notify the NRC as soon as possible upon discovery of any actual or attempted theft or diversion of a shipment or suspicious activities related to a shipment of a Category 2 quantity of radioactive material. [§37.81(d)]

3. The shipping licensee must notify the NRC as soon as possible upon recovery of any lost or missing Category 2 quantities of radioactive material. [§37.81(f)]

4. The shipping licensee must submit a written report to the NRC within 30 days of an initial report of lost or missing material or attempted or actual theft or diversion of a shipment of Category 2 quantities of radioactive material. [§37.81(g)]

Security Incident Information Access NRC maintains a database, called the Protected Web Server (PWS), to report and analyze suspicious activities. Information provided on this web site is considered "law enforcement sensitive." Authorized PWS users, such as homeland security and law enforcement officials, emergency management personnel, NRC licensees, and Agreement State officials and licensees, may access the suspicious activity reports on the PWS to maintain situational awareness of security incidents.

Authorized Agreement State and licensee personnel may request access to the PWS by visiting https://pws.nrc.gov/ and clicking on the link to register for a new account. The applicant will be prompted to enter his or her name, e-mail address, and other applicable information. After the request is submitted, it is reviewed by the NRC. Applicants will be notified via e-mail if their PWS account is approved. The approval e-mail contains initial login credentials which the user updates when they log in to the system for the first time.

Background

Following the attacks of September 11, 2001, NRC issued orders and, in some cases, license conditions requiring implementation of interim security measures to a number of categories of licensees, including fuel cycle facilities, licensees who transport radioactive materials in quantities of concern, manufacturers and distributors, large panoramic and underwater irradiators, and licensees with risk-significant quantities of radioactive material. These orders required licensees to notify NRC of security incidents involving certain types of byproduct material. Agreement States issued similar requirements to their licensees.

In a final rule published in the *Federal Register* on March 19, 2013 (78 *Federal Register* 16,921), the NRC added a new Part 37 to its regulations in Title 10 of the *Code of Federal Regulations*, and made conforming changes to other parts of NRC regulations regarding radioactive materials. This

rule, in large part, replaces the orders referred to above. The new regulation—which NRC licensees had to comply with by March 19, 2014—established, among other things, physical security requirements for the possession and use of Category 1 and Category 2 quantities of radioactive material.

Agreement States will issue similar updated requirements to their licensees by March 19, 2016. The new regulation includes provisions in 10 CFR 37.57 and 10 CFR 37.81 to standardize the reporting of actual incidents and of suspicious activity.

A notice of opportunity for public comment on RIS 2015-03 was not published in the *Federal Register* because it is informational and does not represent a departure from current regulatory requirements.

The new rule, 10 CFR Part 37, can be found at http://www.nrc.gov/reading-rm/doc-collections/cfr/part037/. The related implementation guidance can be found at http://www.nrc.gov/reading-rm/doc-collections/nuregs/staff/sr2155/.

RIS 2015-03 can be found in the NRC Public Documents Room under Accession Number ML14255A037 at http://www.nrc.gov/reading-rm/doc-collections/gen-comm/reg-issues/2015/.

For additional information, please contact Paul Goldberg of the NRC at (301) 415-7842 or at Paul.Goldberg@nrc.gov or Irene Wu of the NRC at (301) 415-1951 or at Irene.Wu@nrc.gov.

NRC to Prepare Yucca Mountain SEIS

By press release dated March 12, 2015, the U.S. Nuclear Regulatory Commission notified the public that the agency's staff will prepare a supplement to the U.S. Department of Energy's environmental impact statement (EIS) on the proposed geologic repository for spent nuclear fuel and high-level radioactive waste at Yucca Mountain in Nevada.

Overview

In a *Federal Register* notice, the NRC staff explains the decision to supplement the EIS that DOE submitted in 2008. During its review, the NRC staff found the EIS did not adequately address all of the repository-related effects on groundwater, or from surface discharges of groundwater. In 2013, the Commission asked DOE to prepare a supplement. Instead, DOE updated its analysis of potential groundwater impacts after closure of a repository at the site, and in February 2015 the Commission directed the NRC staff to prepare the supplement. The NRC staff will use the DOE analysis in preparing the supplement.

The supplement will describe a key aquifer at the site and look at the potential for contaminants to reach it. It will analyze the degree of potential contamination and how water and contaminants could move. It will also discuss how soil, surface materials and the surrounding environment might be impacted by contaminated groundwater.

The NRC staff expects to issue a draft supplement for public comment in late summer 2015. Notifications will be made through the *Federal Register*, an email distribution list, a press release, the NRC website and media announcements in Nevada. During the comment period, the staff plans to hold three public meetings—two in Nevada and one at NRC headquarters in

Rockville, Maryland—and a public webcast and teleconference. Details on those meetings will be announced later. After considering the comments received, the staff expects to issue a final supplement in the spring of 2016.

Safety Evaluation Report

On January 29, 2015, NRC published the final two volumes of its Safety Evaluation Report on the proposed Yucca Mountain geologic high-level nuclear waste repository. (See *LLW Notes,* January/February 2015, pp. 34-35.) Publication of the final two volumes completed the technical safety review of DOE's application. The Safety Evaluation Report included the staff's recommendation that the Commission should not authorize construction of the repository because DOE has not met certain land and water rights requirements and a supplement to DOE's Environmental Impact Statement has not yet been completed.

The Safety Evaluation Report included the following:

- Volume 2 covers repository safety before permanent closure. (See *LLW Notes,* January/February 2015, pp. 34-35.)

- Volume 3 covers the period after a repository at Yucca Mountain would be permanently closed should NRC authorize construction following completion of the remaining steps in the licensing process. (See *LLW Notes,* September/October 2014, pp. 29-30.)

- Volume 4 covers administrative and programmatic requirements for the repository. (See *LLW Notes,* November/December 2014, pp. 23-24.)

- Volume 5 covers proposed conditions on the construction authorization, probable subjects of license specifications, and the NRC staff's overall conclusions. (See *LLW Notes,* January/February 2015, pp. 34-35.)

Completion of the Safety Evaluation Report did not represent an agency decision on whether to authorize construction of the repository. A final licensing decision, should funds beyond those currently available be appropriated, could come only after completion of the supplement to DOE's Environmental Impact Statement, hearings on contentions in the adjudication, and Commission review.

Background

DOE submitted its Yucca Mountain application in June 2008. The NRC staff published Volume 1 (General Information) of the Safety Evaluation Report in August 2010. After DOE moved to withdraw the application and Congress stopped appropriating funds for the NRC's review, the agency closed out its application review and published three technical evaluation reports containing the staff's technical analyses to that point but no regulatory conclusions. The adjudication of nearly 300 contentions filed by various parties contesting the application was also suspended in September 2011.

The U.S. Court of Appeals for the District of Columbia Circuit ordered the NRC in August 2013 to resume the licensing process using currently available funding appropriated from the Nuclear Waste Fund. The NRC subsequently published the Safety Evaluation Report via individual volumes.

Additional information on the Yucca Mountain licensing process is available on the NRC website at www.nrc.gov. For additional information, please contact Dave McIntyre of the NRC at (301) 415-8200.

Meeting re Fukushima Lessons at Non-Power Plant Facilities

On March 13, 2015, U.S. Nuclear Regulatory Commission staff met with the public to discuss the agency's ongoing efforts to implement lessons from the March 2011 Fukushima Daiichi nuclear accident.

The meeting was scheduled from 9:00 a.m. to 3:00 p.m. in Room O8B4 in the NRC's One White Flint building, which is located at 11555 Rockville Pike in Rockville, Maryland. The agenda sought to encourage public comment on the staff's preliminary assessment of how the agency's lessons-learned effort applies to NRC-regulated sites other than operating nuclear power plants. Facilities covered by the assessment include decommissioning reactors, spent fuel storage sites, industrial irradiators, research and test reactors, and sites that play a role in creating nuclear fuel.

The meeting included a teleconference and webinar for those unable to attend in person. The public was also invited to comment on the preliminary assessment via e-mail at JLD_Public.Resource@nrc.gov until March 13, 2015. Comments received after that date will be considered to the extent possible.

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

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by internet

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

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

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

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

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

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

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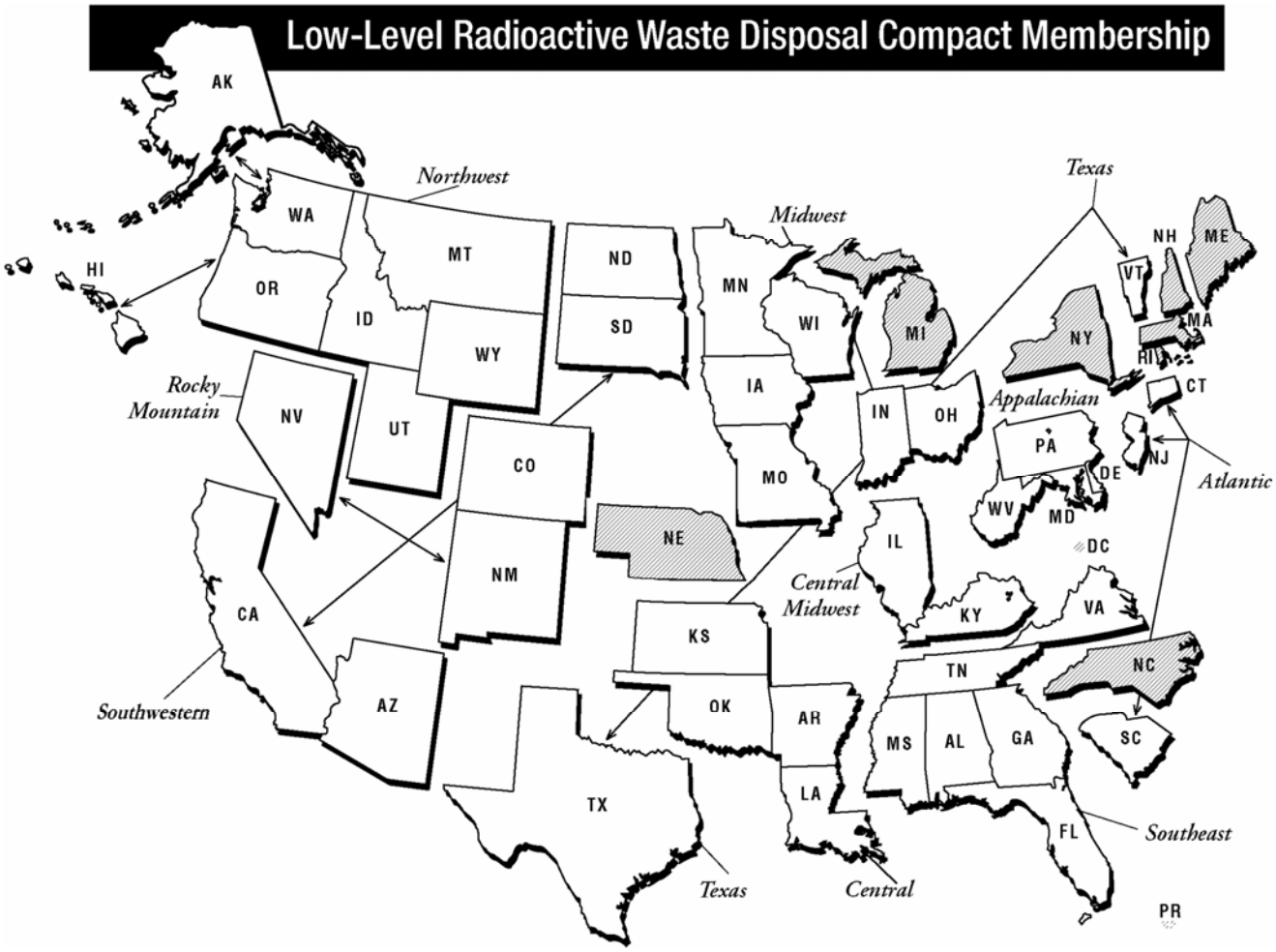

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Oregon
Utah
Washington
Wyoming

Midwest Compact
Indiana
Iowa
Minnesota
Missouri
Ohio
Wisconsin

Rocky Mountain Compact
Colorado
Nevada
New Mexico

Northwest accepts Rocky Mountain waste as agreed between compacts

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Florida
Georgia
Mississippi
Tennessee
Virginia

Southwestern Compact
Arizona
California
North Dakota
South Dakota

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