

Volume 27, Number 5 September/October 2012

### U.S. Government Accountability Office/U.S. Nuclear Regulatory Commission GAO Issues Report re Security of Radioactive Materials in Hospitals NRC Publishes Response

On September 10, 2012, the Government Accountability Office (GAO) released its final report on the security of radioactive materials at medical facilities in the United States titled, "Additional Actions Needed to Improve Security of Radiological Sources at Medical Facilities," GAO-12-295. Among other things, the report recommends that NRC provide medical facilities with specific measures to develop and sustain a more effective security program; ensure that state inspectors receive more comprehensive training; supplement existing guidance regarding equipment security; conduct trustworthiness and reliability determinations; and, that NNSA increase outreach regarding its security upgrade program.

Finding that the subsequent media coverage contained several misconceptions and inaccuracies, the U.S. Nuclear Regulatory Commission subsequently issued a "For the Record" bulletin dated September 24, 2012. The document clarifies information about the GAO report and the agency's security requirements for risk-significant radioactive materials.

The GAO report can be found at http:// www.gao.gov/assets/650/647931.pdf. The NRC response bulletin is available in the agency's Public Documents Room at www.nrc.gov under FTR 09-24-12 GAO-FSEM.pdf.

#### **GAO Report**

**Findings** The following is a summary of GAO's findings contained in the report. Persons interested in more detailed information are directed to the report itself.

The Nuclear Regulatory Commission's (NRC) requirements do not consistently ensure the security of high-risk radiological sources at the 26 selected hospitals and medical facilities GAO visited. One reason for this is that the requirements are broadly written and do *(Continued on page 23)* 

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

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

#### LLW Notes

Volume 27, Number 5 September/October 2012 Editors and Writers: Todd D. Lovinger and Cecilia Snyder and Sebastian Christian Layout and Design: Rita Houskie, Central Interstate Low-Level Radioactive Waste Compact

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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
0	

Key to Abbreviations

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

### Registration Open for Spring 2013 LLW Forum Meeting Charleston, South Carolina: March 25-26, 2013

The Low-Level Radioactive Waste Forum is pleased to announce that registration is now open for the spring 2013 meeting—which will be held in downtown Charleston, South Carolina on March 25-26, 2013. There will also be a panel discussion and virtual video tour of the Barnwell facility for meeting.

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

The meeting documents can be found on the Home Page of the LLW Forum's web site at www.llwforum.org.

#### Attendance

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

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

#### **Location and Dates**

The meeting will be held at the Francis Marion Hotel in the Historic District of downtown Charleston, South Carolina on March 25-26, 2013. It will be a one and one-half day meeting.

#### Registration

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

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

#### Reservations

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

A block of hotel rooms have been reserved for Sunday, March 24<sup>th</sup> and Monday, March 25<sup>th</sup> at the rate of \$137 plus tax. Also, a very limited block of rooms at the same rate is available for March 23<sup>rd</sup> and March 26, 2013.

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

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## Low-Level Radioactive Waste Forum Meetings Fall 20123 and Beyond

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

For the most up-to-date information, please see the LLW Forum's web site at <u>www.llwforum.org</u>.

#### 2013 Meetings

The Atlantic Interstate Low-Level Radioactive Waste Commission and State of South Carolina will co-host the spring 2013 meeting of the LLW Forum. The meeting will be held at the Francis Marion Hotel in Charleston, South Carolina on March 25-26, 2013.

The State of Utah and Energy*Solutions* have agreed to co-host the fall 2013 meeting of the LLW Forum. There will be an optional site tour of the Energy*Solutions*' Clive facility for interested attendees as well. The state is currently looking at various dates in October 2012 at the Marriott facility in Park City, Utah. Once finalized, we will provide additional information regarding specific dates and logistics.

#### 2014 Meetings

The State of Texas and Waste Control Specialists LLC (WCS) have agreed to co-host the spring 2014 meeting in Austin, Texas. There will be an optional site tour of the WCS facility for interested attendees as well. The co-hosts are currently making facility arrangements. Once completed, we will provide additional information regarding specific dates and so forth.

# Search for Volunteer Hosts for Fall 2014 and 2015 Meetings

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

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

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

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

### LLW Forum Holds Fall 2012 Meeting Chicago, Illinois with Zion Site Tour

On October 11-12, 2012, the Low-Level Radioactive Waste Forum held its fall 2012 meeting in downtown Chicago, Illinois. In addition, on October 10, interested meeting attendees participated in an optional site tour of decommissioning at the Zion facility.

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

- reports on new developments from states, compacts, federal agencies and industry representatives;
- licensing and activities update for the newly constructed Waste Control Specialists' lowlevel radioactive waste disposal facility in Texas;

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

- generation of estimates of waste volumes from radiological incidents by the U.S. Environmental Protection Agency;
- the U.S. Nuclear Regulatory Commission's low-level radioactive waste activities overview—upcoming guidance development and revisions;
- industry efforts in response to lessons learned from the Fukushima incident;
- NRC's Part 61 site-specific rulemaking analysis rulemaking technical basis document;
- EPA's draft revisions of the Protective Actions Guide (PAG) manual;
- NRC's draft branch technical position on the import of non-U.S. origin waste;
- licensing and activities update regarding the Energy*Solutions*' low-level radioactive waste disposal facility in Clive, Utah;
- updates and developments at American Ecology's low-level radioactive waste disposal facility in Richland, Washington;
- management and disposition of disused sources that may present a national security threat;
- updating the nuclear industry's strategy on low-level radioactive waste management and disposal issues;
- brief overview regarding activities and initiatives being undertaken at the U.S. Department of Energy;
- management of water and wastewater treatment residuals containing radium originating from groundwater; and,
- activities to date and future plans of the Low-Level Radioactive Waste Forum's Disused Sources Working Group and Part 61 Working Group.

The meeting was hosted by the State of Illinois' Emergency Management Agency and the Central Midwest Interstate Low-Level Radioactive Waste Commission.

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

#### (Continued from page 4)

#### **Transportation and Directions**

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

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

#### (Continued from page 34)

Merrifield as Legal Counsel, Deputy Chief of Staff, and Chief of Staff. In 2004, she became Deputy Director of the Office of International Programs.

"I am pleased to announce the appointment of Ms. Doane as the new General Counsel for our agency," NRC Chairman Macfarlane said. "We have important legal matters before us and an outstanding legal staff to address them. Ms. Doane has the legal acumen, executive experience and proven leadership skills that will assure that this talent is fully leveraged in support of NRC's critical regulatory mission."

Prior to joining the NRC, Doane served for three years as an attorney advisor for the Department of Veterans Affairs, Board of Veterans Appeals. Doane received a Bachelor of Arts degree in Economics from Loyola College in Baltimore and a Juris Doctorate from the University of Maryland School of Law.

Doane received the NRC Honorary Meritorious Service Award in 2005.

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### States and Compacts

#### Northwest Compact/State of Utah

# Utah Opens Public Comment Period re 11e(2) Byproduct License

The Utah Department of Environmental Quality (DEQ), Division of Radiation Control (DRC), is requesting public comment regarding an initial decision by the Utah DRC Director to amend the Energy*Solutions'* 11e.(2) Byproduct Material Disposal License (RML UT2300478).

#### **Proposed License Amendment**

The proposed license amendment makes changes to license conditions 10.8.c and 10.8.e. Specific changes include:

- the language has been changed to condition 10.8.c to increase the open cell limit in the 11e.(2) embankment from 753,000 sq. ft. to 840,000 sq. ft.;
- the language in condition 10.8.e has been changed to reduce the maximum volume of 11e.(2) waste that can be stockpiled as in-cell bulk storage from 75,000 cubic yards to 40,000 cubic yards;
- 3. referenced tables and documents in license condition 10.3 have been corrected; and,
- 4. pursuant to the passage of Senate Bill 21 (SB 21) in the 2012 General Session of the Utah Legislature, language has been changed throughout RMLUT2300478 to adjust references to the "Executive Secretary" to the "Director of the Utah Division of Radiation Control."

#### **Availability of Draft License Amendment**

A draft license amendment with Statement of Basis describing the license change is available for review and/or copying between 8:00 a.m. and 5:00 p.m., Monday through Friday, at the address listed below.

In addition, the draft License and Statement of Basis is available on the Division website at: http://www.radiationcontrol.utah.gov/.

#### **Public Comment Period**

On September 10, 2012, a thirty-day public comment period commenced by publication of notice on the DRC's website listed above. In addition, the notice was published in the *Salt Lake Tribune, the Deseret News,* and *the Tooele County Transcript-Bulletin.* 

Written comments will be accepted if received by the close of business on October 10, 2012. Written comments may be directed to the Utah Division of Radiation Control, 195 North 1950 West, P.O. Box 144850, Salt Lake City, UT 84114-4850, or by email to radpublic@utah.gov.

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

# Utah Radiation Control Board Holds October Meeting

On October 9, 2012, the Utah Radiation Control Board held a regularly scheduled meeting in Conference Room 1015 of the Multi Agency State Office Building at 195 North 1950 West in Salt Lake City, Utah. The meeting—which was open to the public—began at 1:30 pm. It was preceded by a working lunch meeting, which began at 11:30 am, during which Board members received information on the Board Members' Handbook.

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

- I. Welcome and Introduction of Board Members
- II. Introduction of Division of Radiation Control Management Staff
- III. Election of Chair Pro Tempore
- IV. Minutes (Board Action)
  - a. Approval of the Minutes from the May 8, 2012 Board Meeting
- V. Administrative Rules (Board Action)

   a. Five-year Review of R3l3-15, Standards for Protection Against Radiation
- VI. X-Ray Registration/Inspection (Board Action) a. Mammogaphy Imaging Medical Physicists (MIMPs) approval
- VII.Informational Items
  - a. Low-Level Radioactive Waste
    - **Energy**Solutions
    - i. Class A West combined disposal embankement
    - ii. Sealed Sources one-year variance iii.SempraSafe
  - b. Uranium Mill Licensing and Inspection
    - i. Energy Fuels (Denison Mines) White Mesa Uranium Mill
      - 1. Ownership Change to Energy Fuels Resources
      - 2. License Renewal, Re-Opening of Public Comment Period
  - c. Other Division Items
    - i. Division Quarterly Activity Reports (Second and Third Quarters)
       ii Logiclative Audit Pepert
      - ii. Legislative Audit Report
- VIII.Public Comment

IX. Next Scheduled Board Meeting: November 13, 2012 (Tuesday) Multi Agency State Office Building, Conference Room 1015

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195 North 1950 West Salt Lake City, Utah

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

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

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

# *Rocky Mountain Compact/State of New Mexico*

# Uranium Deconversion Facility License Issued to International Isotopes

On October 2, 2012, the U.S. Nuclear Regulatory Commission issued a license to International Isotopes Fluorine Products (IIFP) Inc. to construct and operate a facility—which will be located in in Lea County, New Mexico—to extract fluorine from uranium hexafluoride left over from the uranium enrichment process.

#### **Licensing and Operation**

The plant, which will be subject to NRC inspections during construction and operation, is the first major deconversion facility licensed by the NRC for the purpose of recovering fluoride products for commercial sale. Commercial uses for fluorine can include manufacturing electronics, solar panels and semiconductors.

Under the license, IIFP can process about 8 million pounds per year of depleted uranium hexafluoride, or DUF6. The facility will "deconvert" the DUF6 by chemically extracting high purity fluoride compounds and anhydrous hydrogen fluoride. That process leaves behind depleted uranium oxide compounds that are more chemically stable than DUF6 and are generally suitable for disposal as low-level radioactive waste.

#### Background

IIFP, a subsidiary of International Isotopes, submitted its application to the NRC on December 30, 2009. NRC staff completed thorough safety and environmental reviews of the proposed facility.

In a May 2012 Safety Evaluation Report (NUREG-2116), the staff published its conclusion that IIFP's proposed facility complies with NRC regulations, and would not pose an undue risk to the health and safety of workers or the public. The final environmental impact statement (NUREG-2113), published in August 2012, documents the NRC's finding that there would be no environmental impacts that would prohibit the NRC from licensing the facility.

The NRC held public meetings near the plant site in July 2010 and February 2012 to exchange information with the public about the proposed facility and receive public comments as part of the NRC's review of potential environmental impacts. The NRC offered an opportunity for members of the public to ask for a hearing on the license application, but the agency did not receive any hearing requests. The NRC plans to hold a public meeting near the site to provide additional information on the agency's plans for overseeing facility construction and operations.

The IIFP application and more information about the facility are available on the NRC website at www.nrc.gov.

# Public Meeting Held re Construction of URENCO USA Facility September 25, 2012 in Atlanta, Georgia

On September 25, 2012, staff of the U.S. Nuclear Regulatory Commission hosted a public meeting to discuss the quality verification process utilized by URENCO USA in the construction of its facility—which is located five miles east of Eunice, New Mexico.

#### **Meeting Logistics**

During the meeting, NRC and URENCO USA officials discussed the quality verification process used by the company in the construction of the Cylinder Receipt and Dispatch Building and the proposed construction plans for the Separations Building Module 1005 at the facility.

The meeting began at 10:00 am EDT in the NRC's Region II office, which is located at 245 Peachtree Center Ave., NE., Suite 1200, in Atlanta, Georgia.

The public was invited to observe and NRC officials were available to answer questions. However, portions of the meeting were closed to the public because the staff determined that some information to be discussed is proprietary in nature.

#### Background

In 2006, URENCO USA was granted a license by the NRC to build a uranium enrichment facility— the first in the nation to utilize centrifuge enrichment technology.

Although construction continues, the facility began limited operations in June 2010. (See *LLW Notes*, May/June 2010, p. 14.)

For additional information, please contact Leonard Pitts of the NRC at (404) 997-4708 or at leonard.pitts@nrc.gov.

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#### Southwestern Compact

# Southwestern Compact Commission Hosts 65<sup>th</sup> Meeting

On October 5, 2012, the Southwestern Low-Level Radioactive Waste Commission hosted its 65<sup>th</sup> meeting in Sacramento, California beginning at 9:00 am PDT at the Hyatt Regency Sacramento at 1209 L Street in Sacramento, California.

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

- call to order
- roll call
- welcome and introductions
- statement regarding due notice of meeting
- reports: Commission Chair, Executive Director, licensing agency, license designee and party states
- exportation: ratification of approved petitions; amend export policy and requirements to extend date; discuss exportation for recycling and issues with Texas-Vermont requirements; review and amend annual petition forms; and, discuss long-term petitions for WCS
- discuss status of NRC incompatibility issues
- update of sealed source issues
- review and approve annual financial audit report and discuss audit contract
- review and approve annual Governor's report
- discuss staff performance evaluations and contracts
- amend fiscal year 2012-13 budget
- approve fiscal year 2013-14 budget
- update/amend office procedures manual and related bylaws
- discuss annual fall meeting options for location
- review and adopt fee schedule
- public comment
- election of officers
- future agenda items
- next meeting
- 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 lowlevel 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.

# Southwestern Compact/State of California

# Action Plan Proposed for San Onofre Unit 2

In early October 2012, Southern California Edison (SCE) submitted a letter to the U.S. Nuclear Regulatory Commission indicating that the company has addressed issues raised in an earlier NRC Confirmatory Action Letter (CAL). In addition, SCE submitted a proposed action plan that includes operating Unit 2 at the San Onofre plant at reduced power for an initial five-month period followed by more inspection. Nonetheless, according to an NRC press release, "months of NRC inspection and analysis will precede any decision on whether to restart the reactor."

#### **NRC Review**

"Our primary focus now must be on analyzing SCE's response to the CAL before addressing the restart question. The agency will not permit a restart unless and until we can conclude the

reactor can be operated safely," said NRC Chairman Allison Macfarlane. "This could take a number of months. Our inspections and review will be painstaking, thorough and will not be rushed."

As the process progresses, the agency plans to convene public meetings near the plant. According to NRC's press release, one will be scheduled soon to discuss the licensee's letter to the NRC responding to the CAL the agency sent the company.

#### Background

On January 31, 2012, a leak in a Unit 3 steam generator tube led to the shutdown of that unit. The other reactor, Unit 2, was off-line at the time. Subsequent inspections of the nearly new generators in both units found unexpected wear. The two-reactor plant is located just south of San Clemente, California.

SCE is seeking NRC permission to operate Unit 2 at 70 percent power for approximately five months after which it would shut down for an inspection to examine the steam generators again. NRC expects to spend several months reviewing documents submitted by the licensee and performing a thorough and independent assessment prior to making any decisions about restart.

NRC staff will evaluate the licensee's analysis of the excessive tube wear and the ability of the Unit 2 steam generator tubes to maintain integrity during the proposed five-month cycle. Unit 3 remains shutdown for further evaluation.

The CAL and SCE'S response letter are publicly available in ADAMS and on NRC's web site at http://www.nrc.gov/info-finder/reactor/songs/ tube-degradation.html.

## Public Meeting Held re San Onofre Plant Issues October 9, 2012 in Dana Point, California

On October 9, 2012, the U.S. Nuclear Regulatory Commission held a public meeting to discuss the status of its oversight of the San Onofre Nuclear Generating Station (SONGS) and respond to questions about current plant issues.

#### **Public Meeting**

The two-part meeting was held from 6:00 - 9:30 p.m. at the St. Regis Monarch Beach Hotel, which is located at One Monarch Beach Resort in Dana Point, California.

The first part of the meeting was a facilitated roundtable discussion on topics of significant public interest. The second part of the meeting was a question and answer session between NRC staff and the public on topics related to SONGS and the NRC's regulatory process.

Representatives for the roundtable were chosen by the NRC in consultation with local interest groups.

"We want to provide members of the public with an opportunity to get their questions answered on a broad range of topics related to San Onofre," said Region IV Administrator Elmo Collins. "We think the roundtable discussion along with an open question and answer session will provide people with a means of doing this."

#### **Panelists**

Representatives from the California Public Energy Commission, the California Public Utilities Commission and local community organizations and residents participated in the October 9 panel discussion on issues related to SONGS.

The following individuals participated in the meeting:

#### U.S. Nuclear Regulatory Commission

• Elmo Collins, Regional Administrator, Region IV

#### Southern California Edison

• Pete Dietrich, Chief Nuclear Officer, SONGS

#### California State Government

- Robert Oglesby, California Energy Commission
- Ed Randolph, California Public Utilities Commission

#### Public Representatives

- Cathy Iwane, resident Solano Beach
- Grace Van Thillo, resident San Clemente
- Donald Mosier, Scripps Research Institute
- Rochelle Becker, Alliance for Nuclear Responsibility
- Ted Quinn, Californians for Safe and Clean Nuclear Energy
- Ken Schultz, resident north San Diego County
- Richard McPherson, resident Laguna Niguel
- Gene Stone, Residents Organized For A Safe Environment
- Daniel Dominguez, Utility Workers Union of America

"We have a panel that reflects the diverse interests of Californians who have expressed interest in the safe operation of the San Onofre Nuclear Generating Station," said Region IV Administrator Elmo E. Collins. "The facilitated panel discussions will provide an opportunity to allow these representatives to express their thoughts and opinions on a variety of issues. This will be followed by a facilitated question and answer session that will also provide an opportunity for members of the public to share their views on issues of pressing concern."

#### Background

The SONGS plant—which is operated by Southern California Edison Company—is located near San Clemente, California. On January 31, 2012, control room operators received alarms at Unit 3 that indicated reactor coolant was leaking into a steam generator. Following the incident, which occurred approximately one year following replacement of its steam generators, Unit 3 was shut down. Prior to this incident, Unit 2 had been shut down for a scheduled maintenance outage. Both reactors have since remained safely shutdown.

On March 27, 2012, NRC issued a Confirmatory Action letter documenting actions that Southern California Edison officials have agreed to take prior to seeking permission to restart the reactors. The NRC has been conducting inspections to determine the extent and cause of the tube degradation. The plant will not be permitted to restart until the licensee has developed a plan to prevent further steam generator tube degradation and the NRC independently verifies that it can be operated safely.

On July 19, 2012, NRC released an inspection report that concludes that faulty computer modeling that inadequately predicted conditions in steam generators at SONGS and manufacturing issues contributed to excessive wear of the components. (See *LLW Notes*, July/August 2012, pp. 10-12.) Among other findings, the augmented inspection team report determined that

- plant operators responded appropriately to the unexpected leak by shutting down the reactor;
- plant safety systems functioned as designed in the shutdown; and,
- Southern California Edison provided the NRC with all the information required under existing regulations about proposed design changes to its steam generators prior to replacing them in 2010 and 2011.

The report identifies 10 issues requiring additional follow-up by the NRC. Open items in the report will be subject to follow-up inspections.

For additional information, the NRC report is available on the NRC web page for San Onofre's steam generator tube degradation at: http:// www.nrc.gov/info-finder/reactor/songs/tubedegradation.html.

*Texas Low-Level Radioactive Waste Disposal Compact Commission* 

# Texas Compact Commission Meets in Austin October 18, 2012

The Texas Low-Level Radioactive Waste Disposal Compact Commission (Texas Compact Commission) recently met on October 18, 2012. The meeting was held in Room E1.028 of the Texas State Capitol in Austin, Texas.

The following is an abbreviated overview of the agenda for the October 18 Texas Compact Commission meeting. Persons interested in additional detail are directed to the formal agenda themselves.

- call to order;
- roll call and determination of quorum;
- introduction of commissioners, elected officials and press;
- public comment on any matter within the Commission's purview, subject to such time constraints as may be established by the Chair;
- consideration of and possible action on applications and proposed agreements for importation of low-level radioactive waste from RAM Services as a broker, RAM services as a generator, and QalTek;

- consideration and possible action with respect to taking the vote required by Commission Rule 675.21(1) in order to implement Commission Rule 675.21 for the purpose of processing future applications for exportation of low-level radioactive waste to a non-party state for disposal;
- discussion of issues and progress on resolving the question of when waste becomes a waste for the purposes of the applicability of Commission Rules;
- receiving reports from the Texas Commission on Environmental Quality (TCEQ) on the status of the TCEQ rate case; status of pending Waste Control Specialists (WCS) license amendment applications; method of tracking out of compact disposal quantities in connection with current WCS license limits and in connection with Texas law; and, update on status of capacity study;
- receive report from WCS about recent site operations; pending license amendment applications; expectations for utilizing the full allocation of volume and curies for the noncompact waste through April 26, 2013; and, actions to install additional capability of processing Class A waste;
- Chairman's report on Texas Compact Commission activities including reporting on fiscal matters and on other actions to be taken by the compact;
- report from Leigh Ing—Consulting Supervisory Director of the Texas Compact Commission—on her activities and questions related to compact commission operations;
- discussion and possible changes of dates and locations for remaining fiscal year 2013 meetings; and,
- adjourn.

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

A copy of the agenda for the Texas Compact Commission meeting is attached, for your information and convenience.

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

# Texas Compact Commission Meets in Montpelier September 16, 2012

The Texas Low-Level Radioactive Waste Disposal Compact Commission (Texas Compact Commission) recently met on September 26, 2012. The meeting was held at the Vermont State House, Room 11, at 115 State Street in Montpelier, Vermont.

Vermont Governor Peter Shumlin addressed the Texas Compact Commission at approximately noon.

The following is an abbreviated overview of the agenda for the September 26 Texas Compact Commission meeting. Persons interested in additional detail are directed to the formal agenda themselves.

- call to order;
- roll call and determination of quorum;
- introduction of commissioners and elected officials;
- Honorable Elizabeth Miller, Commissioner of the Vermont Department of Public Service and other Vermont officials;
- public comment on any matter within the Commission's purview, subject to such time constraints as may be established by the Chair;

- presentation by Waste Control Specialists (WCS) describing the Compact Waste Disposal Facility (CWDF) and its operations, capacity needs and availability, imports from non-Compact states, the status of contracts with shippers and other recent developments;
- discussion by Entergy Vermont Yankee, and potentially other Vermont generators, regarding waste shipments to the CWDF during operations and upon decommissioning, projected capacity requirements, disposal of Class A waste and recent developments;
- presentation by Advocates for Responsible Disposal in Texas (ARDT);
- presentation by Bionomics;
- discussion of when waste becomes waste and potential next steps;
- update on the rate case from the Texas Commission on Environmental Quality (TCEQ);
- set a process and timetables which allow disposal to meet statutory capacity at the CWDF during operating year 2012;
- discuss when the Commission will begin accepting applications for operating year 2013;
- update on efforts to document volume and curies authorized at the CWDF and volume and curies received monthly at the CWDF;
- presentation by the TCEQ on its jurisdiction and actions related to low-level radioactive waste acceptance and disposal operations in Andrews County and the site's licensing and operations— including pending license amendment applications filed by WCS and the shipping expectations for in-compact and nonparty state waste;
- Chairman's report on Texas Compact Commission activities, fiscal matters, staffing, and other matters of concern;
- report from Leigh Ing—Consulting Supervisory Director of the Texas Compact Commission;
- update on date and location of 2013 meetings; and,
- adjourn.

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

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

#### State of North Carolina

# GE-Hitachi Receives License for Uranium Enrichment Plant

On September 25, 2012, the U.S. Nuclear Regulatory Commission issued a license to General Electric-Hitachi Global Laser Enrichment LLC (GLE) to construct and operate a uranium enrichment plant using laser technology in Wilmington, North Carolina.

GLE plans to construct the plant at the site of GE-Hitachi's existing Global Nuclear Fuel-America's fuel fabrication plant.

#### License Conditions and Oversight

The license authorizes GLE to enrich uranium up to 8 percent by weight in the fissile isotope U-235, using a laser-based technology. This lowenriched uranium will be used in fuel for commercial nuclear power reactors.

The NRC staff will conduct inspections during the construction and operation of the GLE facility. The agency plans to hold a public meeting in Wilmington before construction begins to explain its oversight plans to the public.

#### **NRC Safety Review and Findings**

In February 2012, a Safety Evaluation Report (NUREG-2120) and Final Environmental Impact Statement (NUREG-1938) were published. The Safety Evaluation Report documented the staff's conclusions that GLE's proposed facility complies with NRC regulations and would not pose an undue risk to the health and safety of workers or the public. The Environmental Impact Statement concluded there would be no significant environmental impacts that would preclude licensing the facility.

The NRC's review of the GLE license application provided several opportunities for public comment and participation, including public meetings in Wilmington in July 2008 to discuss the review process; May 2009 to discuss the scope of the NRC's environmental review; July 2010 to present the draft EIS and receive public comment; and, May 2012 to present the final safety and environmental reports.

#### Background

On June 26, 2009, GLE submitted its license application. The NRC staff conducted thorough safety and environmental reviews of the proposed facility.

On January 13, 2010, a notice of opportunity to request an adjudicatory hearing was published. No hearing requests were received.

Under NRC regulations, an Atomic Safety and Licensing Board conducted a mandatory hearing on the staff's review in July 2012. The Board issued its decision authorizing the staff to issue the license on September 19, 2012.

# Industry

# *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.

#### Altantic Compact/State of South Carolina

Catawba Nuclear Station On September 11, 2012, U.S. Nuclear Regulatory Commission staff held a regulatory conference with officials of Duke Energy to discuss inspection findings and apparent violations related to an event in April 2012 where the Catawba plant lost offsite power. During the meeting, NRC and Duke officials discussed the safety significance of the inspection findings and violations, which involved the loss of offsite power after a modification to the generator protection circuitry on Unit 1. The public was invited to observe the conference and NRC officials were available to answer questions. NRC evaluates regulatory performance at commercial nuclear power plants with a colorcoded system which classifies findings as green, white, yellow or red, in increasing order of safety significance. The NRC's preliminary evaluation determined that the issues at Catawba could be as high as Yellow, which means at least one may have substantial safety significance. The NRC staff continues to evaluate the significance, including any additional information presented at the conference. No decisions on the final safety significance or other NRC actions were made at the conference. Those decisions will be made by NRC officials at a later time. Catawba Nuclear Station is located on Lake Wylie in York County,

South Carolina. The lake, created in 1904, is the oldest lake on the Catawba River, and provides cooling water for both Catawba Nuclear Station and Allen Steam Station. *The NRC inspection report in which the issues are documented is publicly available online at www.nrc.gov/reading-rm/adams.html under accession number ML12207A614*.

# Appalachian Compact/Commonwealth of Pennsylvania

Susquehanna Nuclear Power Plant On October 16, 2012, NRC staff met with representatives of PPL to discuss the company's progress on improvements in the areas of corrective actions and human performance at the Susquehanna nuclear power plant. PPL owns and operates the twin-reactor plant, which is located in Salem Township (Luzerne County), Pennsylvania. The meeting was open to the public and included an opportunity for members of the public to ask questions of the NRC staff regarding the plant's performance, as well as the agency's oversight of the facility. In the NRC's 2012 Mid-Cycle (midyear) Assessment Letter for Susquehanna, issued on September 4, the agency reported that there continues to be a substantive cross-cutting issue involving the plant's corrective action program. The issue was first identified in the 2011 Mid-Cycle Assessment Letter for the plant. A substantive cross-cutting issue results when there is a trend in a certain aspect of performance for which the NRC has a concern. Specifically, the NRC has reported a number of inspection findings over the past two years associated with the company's evaluation of identified problems. The issue remains open because PPL had not demonstrated sustained improvement in this area at the time of the NRC's last assessment. The NRC has also continued to identify a second substantive cross-cutting issue, this one in the area of human performance. Specifically, there have been a number of inspection findings over the past 18 months involving procedures. At the meeting on October 16. the NRC discussed with PPL its

assessment of (1) the causal factors associated with the two substantive cross-cutting issues; (2) the implementation, effectiveness and timeliness of corrective actions to address the issues; and, (3) plans to use a safety culture assessment at the plant in 2013 to gain further insights into the issues.

#### **Central Compact/State of Kansas**

Wolf Creek Nuclear Plant On September 21, 2012, NRC staff determined that an inspection finding at the Wolf Creek nuclear power plant related to a loss of off-site power event is "yellow," meaning the issue has substantial safety significance and will result in additional NRC inspections and oversight. The event occurred on January 13, when plant operators declared an Unusual Event after the failure of a main generator electrical breaker, followed by an unexplained loss of power to a transformer. This caused the switchyard to lose power, which removed the plant's connection to the electrical power grid. All safety systems responded as expected and emergency diesel generators automatically powered safety-related equipment. NRC conducted an Augmented Inspection and determined that actions by the licensee set the stage for the incident because the company failed to provide adequate oversight of contractors while they performed work that could affect safetyrelated equipment in April 2011. As a result, the licensee failed to identify that electrical maintenance contractors had improperly connected wires on an electrical component. This allowed an electrical short to prevent transfer of power to a transformer. The "yellow" finding moves Wolf Creek-which is located near Burlington, Kansas and is operated by Wolf Creek Nuclear Operating Corporation-into the "degraded cornerstone" column of the NRC action matrix, resulting in a higher level of NRC oversight. This is the third highest level of NRC oversight and Wolf Creek joins six other U.S. nuclear units in that column. The position of all nuclear units within the NRC Action Matrix is available on the NRC web site at

http://www.nrc.gov/NRR/OVERSIGHT/ASSESS/ actionmatrix\_summary.html#am\_summary.

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

#### Honeywell Metropolis Works Facility In

October 2012, NRC issued a Confirmatory Order to Honeywell International, Inc., outlining actions that the company must take before it can resume its uranium conversion operations at the Honeywell Metropolis Works facility. Honeywell Metropolis Works takes milled uranium and converts it into uranium hexafluoride gas which is then enriched at other facilities to make fuel for commercial power reactors. During an inspection in May that examined how the facility would fare in a major earthquake or a tornado, the NRC concluded that such an event could result in a higher risk to the public than originally assumed. The inspection identified that process equipment in the facility lacks seismic restraints, support and bracing that would assure integrity during a significant seismic or wind event. Specifically, the amount of uranium hexafluoride that could be released into the environment should the process equipment be damaged by such an event could be significantly larger than assumed in the facility's Emergency Response Plan. The material that could be released poses more of a chemical hazard than a radiation hazard. There is no current safety concern at the facility since it shut down on May 9, 2012. In a shutdown configuration, a seismic event or a tornado would not result in a significant release of material. A copy of the Confirmatory Order is available on the NRC website at adams.nrc.gov/wbaby using the number ML12289A800.

#### **Midwest Compact/State of Minnesota**

**Prairie Island Nuclear Power Plant** NRC and the Prairie Island Indian Community (PIIC) recently signed a Memorandum of Understanding (MOU) outlining the path forward to work together to review the potential environmental impacts of renewing the spent fuel storage facility license at the Prairie Island nuclear plant in

Minnesota. The plant is located near Red Wing, adjacent to the PIIC reservation. The MOU describes the roles and responsibilities of both the NRC and the PIIC. The NRC will lead the environmental review and retains final authority over whether to renew the storage facility license. The Prairie Island Indian Community will be a cooperating agency throughout the environmental review process. The MOU recognizes the community's special expertise and access to information regarding historic and archeological resources, socioeconomics, land use and environmental justice. The NRC will give extra weight to the community's comments in those areas. The agency will give the Prairie Island Indian Community copies of technical reports, data and other pertinent information, allowing tribal officials to share their special expertise on environmental issues of concern. The complete text of the MOU is publicly available in the NRC Public Document Room located at the agency's headquarters or from the NRC's document management system under accession number ML12284A456.

#### Northwest Compact/State of Washington

Columbia Nuclear Generating Station On September 20, 2012, NRC staff held a regulatory conference with Energy Northwest officials to discuss the significance of three inspection findings at the Columbia Generating Station. During the meeting, NRC and Energy Northwest officials discussed three inspection findings associated with the site's emergency preparedness program. Specifically, the licensee incorrectly calculated emergency action levels on several occasions which could have delayed recognition of some radiological emergency conditions, and incorporated incorrect data into site dose assessment software that caused some dose assessments to be inaccurate. These conditions existed from 2000 until 2011 when they were corrected. NRC evaluates regulatory performance at commercial nuclear power plants with a color coded process that classifies regulatory findings as green, white, yellow or red, in increasing order

of safety significance. NRC staff has preliminary determined that the significance of the violation is "greater than green," meaning it has a greater than very low safety significance. No decision on the final significance of the apparent violations or any contemplated enforcement action will be made during the conference. Those decisions will be made by NRC officials at a later date. The meeting, which was open to public observation, was held in the NRC's Region IV offices in Arlington, Texas. The plant is located near Richland, Washington

#### Southeast Compact/State of Florida

St. Lucie Nuclear Plant On September 24, 2012, NRC approved a power uprate request by Florida Power & Light (FP&L) that will increase the power output of St. Lucie Unit 2 by 17 percent, from approximately 853 to 1,002 megawatts electric. On July 9, 2012, a similar uprate was approved for St. Lucie Unit 1. The two pressurized-water reactors are located approximately 10 miles southeast of Ft. Pierce, Florida. On February 25, 2011, FP&L submitted a license amendment request-which was supplemented several times since-to raise the thermal output of St. Lucie Unit 2 from 2,070 to 3,020 megawatts thermal, which translates into the 17 percent increase in electricity generation. The NRC staff's evaluation determined that FP&L could safely increase the reactor's power output primarily by carrying out significant upgrades to several plant systems and components, including the steam and power conversion system and the condensate and feedwater system. As part of its evaluation, NRC staff reviewed the company's analysis showing the plant's design can accommodate the increased power level.

The NRC's safety evaluation of the plant's proposed power uprate focused on several areas, including the plant's steam generators, the reactor pressure vessel material surveillance program, pressurized thermal shock, and reactor internal and core support materials. FP&L intends to

implement the uprate in the next few months. The NRC previously published in the *Federal Register* a notice about the power uprate application. *The agency's evaluation of the St. Lucie Unit 2 power uprate will be available through the NRC's ADAMS electronic document database by selecting accession number ML12235A463.* 

#### Southwestern Compact/State of California

Diablo Canyon Nuclear Power Plant NRC's latest analysis of faults near the Diablo Canyon nuclear power plant in California continues to conclude the plant's design would withstand earthquakes near the site. The NRC's work is laid out in Research Information Letter (RIL) 12-01, "Confirmatory Analysis Of Seismic Hazard At The Diablo Canyon Power Plant From The Shoreline Fault Zone." The RIL, part of the ongoing effort to better understand earthquake sources near Diablo Canyon, focuses on the latest identified source, the "Shoreline fault" about a kilometer offshore from the plant. Pacific Gas & Electric (PG&E)—which operates the plant 12 miles southwest of San Luis Obispo, Californiafirst notified the NRC in November 2008 about the Shoreline fault. PG&E updated that information in early 2011, and a team of NRC staff visited the site in October 2011. Based on the available information and the site visit, the NRC team analyzed ground motion from earthquakes the Shoreline fault could potentially generate. All of those ground motions fell within Diablo Canyon's existing design limits, which are based on ground motion associated with an earthquake from the larger Hosgri fault near the plant. Diablo Canyon must still carry out additional earthquake evaluations, as well as a "walkdown" to identify any near-term actions for enhancing earthquake resistance. These measures are included in the NRC's recent information request to all U.S. nuclear power plants as the agency implements lessons learned from the Fukushima Dai-ichi nuclear accident. The letter is available in the NRC's electronic document database, ADAMS, by entering "ML121230035" in the ADAMS search engine.

San Onofre Nuclear Generating Station On October 9, 2012, NRC held a public meeting to discuss the status of its oversight of the San Onofre Nuclear Generating Station (SONGS) and respond to questions about current plant issues. The two-part meeting was held at the St. Regis Monarch Beach Hotel in Dana Point, California. The first part of the meeting included a facilitated roundtable discussion on topics of significant public interest. The second part was conducted as a question and answer session between the NRC and the public on topics related to SONGS and the NRC's regulatory process. Representatives for the roundtable were chosen by the NRC in consultation with local interest groups. "We want to provide members of the public with an opportunity to get their questions answered on a broad range of topics related to San Onofre," said Region IV Administrator Elmo E. Collins in the meeting announcement. "We think the roundtable discussion along with an open question and answer session will provide people with a means of doing this."

#### **Texas Compact/State of Texas**

Individual at Texas Gamma Ray LLC In September 2012, NRC issued a Confirmatory Order banning an individual from engaging in NRC-licensed activities for 18 months for safety and security violations involving radioactive materials. NRC issued the Confirmatory Order after conducting an inspection and investigation that determined that the individual, as a former area supervisor and lead radiographer, engaged in deliberate misconduct while performing licensed activities when employed by Texas Gamma Ray LLC of Houston, Texas. Specifically, while employed by the company in Rock Springs, Wyoming, the individual deliberately failed to comply with NRC regulations by storing a device containing radioactive materials used to photograph pipe welds at a location not authorized by the company's license periodically from December 2009 through April 2010, even though he knew the facility did not meet NRC security requirements. The individual chose

alternate dispute resolution (ADR)—which uses a mediator to resolve issues. The Confirmatory Order is the result of an agreement reached during an ADR session conducted on July 26. It imposes an 18-month ban on engaging in NRC licensed activities, followed by limited work restrictions for a period of four years and requires the individual to successfully complete 80 hours of specialized training. *The NRC's letter to the individual has been made available to the public through the agency's electronic reading room at http://www.nrc.gov/reading-rm/adams/html.* 

#### State of Michigan

Palisades Nuclear Power Plant On September 12, 2012, NRC held a public meeting to discuss the Palisades nuclear plant's 2012 safety culture assessment results and subsequent actions to improve safety culture. The meeting was open for the public, which was permitted to ask questions of the NRC after the presentations. The purpose of the public meeting was to better understand the results of the plant's safety culture assessment, which was conducted by an outside contractor, and resulting corrective actions. NRC defines safety culture as the core values and behaviors resulting from a collective commitment by leaders and individuals to emphasize safety over competing goals to ensure protection of people and the environment. Based on the NRC's ongoing inspections and assessments, the agency has concluded the plant continues to operate safely. Subsequently, on October 1, 2012, NRC held a webinar on the preliminary results of the agency's August 2012 special inspection of a leak from a control rod drive mechanism at the plant. NRC dispatched a three-person special inspection team to the plant on August 15 to better understand the circumstances around the leak from the control rod drive mechanism. The drive mechanism moves the rods in the reactor to control reactor power levels. NRC regulations prohibit any leaks in this equipment. NRC inspectors ensured the leak was fixed and proper testing was done to ensure plant safety. They independently verified that the leak did not

challenge public health. The Palisades Plant is located in Covert, Michigan—approximately 40 miles west of Kalamazoo. It is owned by Entergy Nuclear Operations. *The report on the August* 2012 special inspection will be issued and publicly available in the November timeframe through the NRC's online public documents system, ADAMS.

#### State of New Hampshire

Seabrook Nuclear Plant On September 14, 2012, NRC announced that the agency will conduct additional inspections and reviews to independently verify and assess work being done to address concrete degradation identified at the Seabrook nuclear power plant. The NRC's Reactor Oversight Process does not prescribe increased oversight based on the company's performance in this area. However, "the (agency) staff believes the additional inspections and assessments are needed to support the review of licensee commitments and planned large-scale concrete specimen testing by the licensee, the development of staff technical guidance, and stakeholder communications and outreach activities," NRC Region I Administrator Bill Dean wrote in a memorandum to Executive Director for Operations William Borchardt. That request for further resources has now been approved via the "Deviation Memorandum," which refers to a deviation from the Reactor Oversight Process. The degradation of concrete in some areas of specific structures at the Seabrook plant is being caused by an alkali silica reaction, or ASR, which is a chemical combining of reactive silica from the concrete aggregate with the alkali from the cement paste in the presence of moisture. The result of the reaction is a gel, which can expand and may cause micro-cracks in the concrete. While the extent of the problem at Seabrook is still being evaluated, the NRC has determined that the structures identified to be affected by ASR can perform their safety function when called upon. The single-reactor facility is located in Seabrook, New Hampshire. It is operated by NextEra Energy Seabrook, LLC. A

copy of the Deviation Memorandum and other documents related to the Seabrook ASR issue are available on the NRC's web site at www.nrc.gov.

#### State of New York

Indian Point Nuclear Power Plant On October 15, 2012, three judges of the Atomic Safety and Licensing Board (ASLB) conducted an evidentiary hearing addressing 10 technical and environmental challenges to the pending Indian Point nuclear power plant license renewal application. The application was submitted by Entergy Nuclear Operations Inc., the owner and operator of the plant, which is located in Buchanan (Westchester County), New York. The issues to be considered have been raised by three intervenors: the State of New York and two public interest organizations (Hudson River Sloop Clearwater Inc. and Riverkeeper). In addition to these intervenors, several governmental bodies have been granted status as participants in the proceeding. The hearing will last over the course of several weeks including: October 15-18, October 22-24 and December 10-14. Entergy submitted its application for a 20-year extension of the Indian Point operating license on April 30, 2007. The initial 40-year operating licenses for Indian Point Units 2 and 3 are due to expire on September 28, 2013 and December 12, 2015, respectively. However, those initial licenses will remain in effect until the Commission has issued a final ruling on the renewal application. Documents related to the Indian Point license renewal application are available on the NRC's web site athttp://www.nrc.gov/reactors/operating/ licensing/renewal/applications/indian-point.html. Documents for the Indian Point license renewal proceeding are available at http://adams.nrc.gov/ ehd/.

#### State of North Carolina

Harris Nuclear Power Plant On October 4, 2012, NRC announced that the Harris nuclear power plant faces increased oversight from the agency due to violations linked to the ventilation

systems for facilities that would be staffed during emergencies. One violation involves the company's failure to maintain the Emergency Operations Facility, or EOF, ventilation system, which was out of service for extended periods over two years. There was not an immediate safety concern because no emergencies requiring use of the facility occurred during that time. The company was also cited for not notifying the NRC during the times that the ventilation system was degraded or out of service. NRC staff determined that the violation involving the EOF ventilation system is a white finding, meaning it has low to moderate safety significance. The finding puts Harris into the Regulatory Response Column on the NRC Action Matrix, meaning the plant will be subject to additional NRC inspections beyond the baseline inspections that are conducted at all nuclear plants. The Harris plant, which is operated by Duke Energy, is located near New Hill, North Carolina—approximately 20 miles southwest of Raleigh.

#### **Industry & Companies**

Constellation Energy Nuclear Group LLC On September 19, 2012, NRC staff met with senior management from Constellation Energy Nuclear Group LLC to discuss topics related to the performance of the company's nuclear power plants. The purpose of the meeting, which was open to the public, was for Constellation to brief the NRC on activities and licensing actions involving its plants. The meeting was held at the Royal Sonesta Harbor Court Hotel at 550 Light Street in Baltimore, Maryland. It was an NRC Category 1 meeting, meaning that it involved a session with one company to discuss particular regulatory issues regarding specific facilities. Following the business portion of the meeting, members of the public were provided with an opportunity to discuss with NRC staff topics such as Constellation's performance and the role of the NRC in ensuring safe plant operation. Constellation operates a fleet of nuclear power plants, including Calvert Cliffs, in Lusby (Calvert County), Maryland; Ginna, in Ontario (Wayne

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# International

County), New York; and, Nine Mile Point, in Scriba (Oswego County), New York.

Entergy Operations, Inc. On September 10, 2012, NRC staff met with officials from Entergy Operations, Inc. to discuss the performance of four of its nuclear power plants. The meeting, which was open to the public, was held in NRC's Region IV offices at 1600 E. Lamar in Arlington, Texas. During the meeting, NRC staff and Entergy officials discussed topics of mutual interest including performance at Arkansas Nuclear One, near Russellville, Arkansas; Grand Gulf, near Port Gibson, Mississippi; River Bend, near Baton Rouge, Louisiana; and, Waterford, west of New Orleans, Louisiana. During the meeting, plant officials had an opportunity to respond to NRC staff on issues of interest and the public had an opportunity to ask questions at various times during the meeting.

#### International Atomic Energy Agency

# Safety Culture and Fukushima Progress Highlighted at IAEA Meeting

In mid-September 2012, U.S. Nuclear Regulatory Commission Chairman Allison Macfarlane spoke to the International Nuclear Safety Group Forum at the start of the International Atomic Energy Agency's annual General Conference in Austria.

As part of her remarks, Macfarlane said safety culture is among the key lessons of the Fukushima tragedy and told international regulators the United States is beginning the process of transitioning implementation of its post-Fukushima efforts into the daily routine of reactor regulation. Macfarlane also said it is important to avoid focusing on planning for a single type of accident.

#### Safety Culture

"We must remember that natural hazards come in many forms... We should not focus on planning for the next 'expected' accident but rather have measures in place to address a variety of permutations," said Macfarlane. "Our focus on external events must continue to be broad to make nuclear reactors worldwide as safe as possible."

Among the lessons to draw from Fukushima is the importance of "safety culture," said Macfarlane, stressing that the lessons learned must be shared. "I commend the courage of our Japanese colleagues in demonstrating self-reflection and transparency so that all nations can benefit from their experiences."

A strong safety culture is only part of the issue, Macfarlane said in her first international meeting. "It is critically important for all countries to have strong inspection and enforcement programs with transparent processes and objective criteria," said Macfarlane. "Workers in the nuclear industry need a questioning attitude and an environment in which they feel free to raise concerns."

She noted the "whistleblower" protections available in the United States, and added that even with all the protections in place in the United States for raising safety concerns, "safety culture is still a challenge for the United Sates to promote and assess."

#### **Fukushima Progress**

Macfarlane, a geologist and academic before becoming the NRC Chairman in early July 2012, reviewed the post-Fukushima steps being taken in the United States—with upgrades prioritized in terms of their safety benefit.

First, she said, there was a task force to develop recommendations, and then a special office to implement the ensuing recommendations. The NRC is now beginning to transition responsibility

for implementation of the lessons learned to the offices dealing with reactors.

"Far from minimizing these activities' importance, this will ensure that the lessons we have learned are fully integrated into our regulatory work," said Macfarlane. "We believe that by weaving the lessons learned from Fukushima into nearly all of our regulatory activities, we are ensuring their long-term sustainability, encourage our international colleagues to do the same."

During the course of the IAEA General Convention, Macfarlane met with approximately 20 national regulators and signed a number of bilateral cooperation agreements that will contribute to sharing global nuclear safety expertise. Among the nations signing agreements with the United States will be Mexico, Switzerland, Jordan, Korea and Turkey.

#### (Continued from page 1)

not prescribe specific measures that hospitals and medical facilities must take to secure medical equipment containing sealed sources, such as the use of cameras or alarms. Rather, the requirements provide a general framework for what constitutes adequate security practices, which is implemented in various ways at different hospitals. Some of the medical equipment in the facilities visited was more vulnerable to potential tampering or theft than that of other facilities because some hospitals developed better security controls than others. Some examples of poor security GAO observed included: an irradiator, used for medical research and containing almost 2,000 curies of cesium-137, was stored on a wheeled pallet down the hall from, and accessible to, a loading dock at one facility; at a second facility, the combination to a locked door, which

housed an irradiator containing 1,500 curies of cesium- 137, was clearly written on the door frame; and at a third facility, an official told GAO that the number of people with unescorted access to the facility's radiological sources was estimated to be at least 500. In addition, some NRC and Agreement State inspectors said the training NRC requires is not sufficient.

As of March 2012, the National Nuclear Security Administration (NNSA) had spent \$105 million to complete security upgrades at 321 of the 1,503 U.S. hospitals and medical facilities it identified as having high-risk radiological sources. Of the 26 hospitals and medical facilities that GAO visited, 13 had volunteered for the NNSA security upgrades and had received security upgrades, such as remote monitoring systems, surveillance cameras, enhanced security doors, iris scanners, motion detectors, and tamper alarms; three others were in the process of receiving upgrades. However, NNSA does not anticipate completing all such security upgrades until 2025, leaving a number of facilities potentially vulnerable. In addition, the program's impact is limited because, among other things, it is voluntary, and facilities can decline to participate. To date, 14 facilities, including 4 in large urban areas, have declined to participate in the program. Combined, those 14 facilities have medical equipment containing over 41,000 curies of high-risk radiological material. According to police department officials in a major city, one hospital with a blood irradiator of approximately 1.700 curies has declined the NNSA upgrades due in part to cost concerns, even though the police department considers it to be a high-risk facility.

**Recommendations** The GAO report recommends that NRC should strengthen its security requirements by providing medical facilities with specific measures they must take to develop and sustain a more effective security program. NRC neither agreed nor disagreed with this recommendation and stated that its existing security requirements are adequate. GAO states that the agency continues to believe that implementing its recommendation would contribute to increased security at U.S. hospitals and medical facilities.

Because the security of radiological sources in hospitals and medical facilities has national security implications, and many potentially vulnerable medical facilities with high-risk sources have not received security upgrades, GAO also recommends that the NNSA Administrator, in consultation with the NRC Chairman and Agreement State officials, should increase outreach efforts to promote awareness of and participation in NNSA's security upgrade program. GAO's report states that special attention should be given to medical facilities in urban areas or in close proximity to urban areas that contain medical equipment with high-risk radiological sources.

Finally, to help address the security vulnerabilities at U.S. hospitals and medical facilities that contain high-risk radiological materials, GAO recommends that the NRC Chairman should

- strengthen NRC security requirements by providing hospitals and medical facilities with specific measures they must take to develop and sustain a more effective security program, including specific direction on the use of cameras, alarms, and other relevant physical security measures;
- ensure that NRC and Agreement State inspectors receive more comprehensive training to improve their security awareness and ability to conduct related security inspections; and,

• supplement existing guidance for facility officials (including RSOs) who may be responsible for implementing NRC's security controls, in how to adequately secure equipment containing high-risk radiological sources and conduct trustworthiness and reliability determinations.

#### **NRC Response**

**Requirements to Secure Radiological Materials at Hospitals** "[I]t was widely reported that 'nearly four out of five hospitals nationwide have failed to implement safeguards to secure radiological materials," states the NRC bulletin. "One article even said, 'Medical facilities currently are not required to take any specific actions to make sure these materials are safe.""

NRC responds that such statements are "simply false," pointing out that these facilities are required to implement multiple layers of security measures including:

- background checks, including fingerprinting, to ensure that people with access to radioactive materials are trustworthy and reliable;
- personnel access controls to areas where the materials are stored or used;
- security plans and procedures designed to detect, deter, assess and respond to unauthorized access attempts;
- coordination and response planning between licensees and local law enforcement agencies;
- coordination and tracking of radioactive material shipments; and,
- security barriers to discourage theft of portable devices containing radioactive materials.

The bulletin continues by pointing out that, in 2005, the NRC and its Agreement State partners issued Orders imposing these security requirements, which allow licensees to develop security programs that are appropriate to their facilities and the level of risk posed by the

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radioactive materials they possess. Licensees are routinely inspected for compliance with the requirements and must correct any deficiencies identified. Enforcement actions may include civil penalties.

NNSA's Voluntary Program for Additional Security Enhancements In addition to the above-identified NRC requirements, the bulletin further notes that the U.S. Department of Energy's National Nuclear Security Administration (NNSA) offers a *voluntary* program of additional security enhancements. As the GAO noted, 321 of approximately 1,500 eligible medical facilities have taken advantage of this program.

"These figures are the basis for the misleading statement in some media reports that 'nearly four out of five hospitals nationwide have failed to implement safeguards," according to NRC's bulletin. "All of these hospitals have implemented the NRC's requirements; not all have accepted the NNSA's *voluntary* enhancements."

**Specific Security Concerns** NRC acknowledges that the GAO report identified some specific security concerns that are clear violations of the security requirements, but asserts that others were not described in sufficient detail to determine if they would be violations.

"Such isolated anecdotes do not indicate problems with the requirements themselves; rather they represent enforcement issues that should be referred to the proper regulatory authority – the NRC or the Agreement States," states NRC in the bulletin. "However, the GAO has not responded to several requests from NRC for the details of these security concerns, so action to correct them is not possible."

For additional information about the GAO report, please contact Mark Gaffigan at (202) 512-3841 or gaffiganm@gao.gov.

For additional information about the NRC's approach to the security of radioactive materials, please refer to the following resources on the NRC public website at www.nrc.gov: Radioactive Material Security Homepage; NRC Blog on "Keeping Radioactive Materials Safe and Secure;" Backgrounder on Protection and Security of Radiation Sources; and, YouTube Video on Source Security.

#### U.S. Nuclear Regulatory Commission

# Comment Sought re Handling LLW Spent Ion Exchange Resins

On September 20, 2012, the U.S. Nuclear Regulatory Commission published a *Federal Register* notice seeking comment on the *Draft Comparative Environmental Evaluation of Alternatives for Handling Low-Level Radioactive Waste Spent Ion Exchange Resins from Commercial Nuclear Power Reactors.* 

#### **Agency's Report**

Background and Purpose In the draft report, NRC staff identifies and compares potential environmental impacts of six alternatives for managing low-level radioactive waste spent ion exchange resins (IERs) generated at commercial nuclear power plants. This comparative environmental evaluation has been conducted consistent with Option 2 in the NRC staff's April 2010 paper for the Commission titled "Blending of Low-Level Radioactive Waste"-which identified policy, safety, and regulatory issues associated with the blending of low-level radioactive waste, provided options for an NRC blending position, and proposed that the NRC staff revise the Commission position on blending to be risk-informed and performance based. Option 2 was approved by the Commission in a

Staff Requirements Memorandum dated October 13, 2010.

**Issues and Identified Alternatives** Given current disposal access limitations, low-level radioactive waste processing and disposal companies are exploring alternatives for managing Class B and C concentration spent IERs. Specifically, the six alternatives evaluated in the draft report include:

- *Alternative 1A:* direct disposal of blended Class A, B, and C spent IER low-level radioactive waste from a central processing facility where mechanical mixing would be used to blend the spent IERs to produce Class A waste;
- *Alternative 1B:* direct disposal of blended Class A, B, and C spent IER low-level radioactive waste from a central processing facility where thermal processing would be used to blend the spent IERs to produce Class A waste;
- *Alternative 2:* direct disposal of the Class A, B, and C spent IER low-level radioactive waste (without blending);
- *Alternative 3:* direct disposal of the Class A spent IERs, with long-term onsite storage of the Class B and C concentration spent IERs at the nuclear power plants—including construction (expansion) of the waste storage facilities at the plants—followed by disposal of the Class B and C spent IERs at the end of the long-term storage period;
- *Alternative 4A:* direct disposal of the Class A spent IERs, with volume reduction (by thermal processing) of the Class B and C concentration spent IERs, followed by long-term storage of the volume-reduced Class B and C concentration spent IERs—including construction of a storage facility at an existing waste disposal site—and then disposal at the end of the long-term storage period; and,

• *Alternative 4B:* direct disposal of the Class A spent IERs, with volume reduction (by thermal processing) of the Class B and C concentration spent IERs, then disposal of the volume-reduced Class B and C spent IERs.

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

#### **Submitting Comments**

Comments are due no later than the close of business on January 18, 2013. Comments received after this date will be considered if it is practical to do so, but the NRC is able to assure consideration only for comments received on or before this date.

Comments may be submitted via:

- the federal rulemaking website at www.regulations.gov using Docket ID NRC-2012-0218;
- mail to Cindy Bladey, Chief, Rules, Announcements and Directives Branch (RADB), Office of Administration, Mail Stop: TWB-05-B01M, U.S. Nuclear Regulatory Commission, Washington, DC 20555-0001; or,
- facsimile to RADB at (301) 492-3446.

The draft report can be found in the NRC's Agency wide Documents Access and Management System (ADAMS) by using accession number ML12256A965.

Information and comment submissions related to the document may be found by searching on

http://www.regulations.govunder Docket ID NRC-2012-0218.

For additional information, please contact Stephen Lemont of the NRC's Office of Federal and State Materials and Environmental Management Programs at (301) 415–5163 or via Stephen.Lemont@nrc.gov.

# Comment Sought re Waste Burial Charges for Decommissioning Funds

On September 21, 2012, the U.S. Nuclear Regulatory Commission published a request for public comment in the *Federal Register* on draft revisions to the agency's guidance document for nuclear power plant licensees to determine their decommissioning funding requirements. The document includes a reassessment of low-level waste disposal costs that would result in an increase in the amount of decommissioning funds required.

#### Background

The draft guidance, NUREG-1307, Revision 15, "Report on Waste Burial Charges – Changes in Decommissioning Waste Disposal Costs at Low-Level Waste Burial Facilities," is updated every two years to aid licensees in submitting their biennial reports to NRC on minimum decommissioning funding assurance. The next reports—which are due by March 31, 2013—will cover funding assurance as of the end of this year.

This is the first revision of NUREG-1307 to be issued for public comment. Earlier this year, the Commission directed the staff to seek public comment on future revisions consistent with the agency's "openness" principle of good regulation. The proposed changes were presented publicly at a workshop on decommissioning funding in March 2011.

#### **Submitting Comments**

Comments on the draft revisions will be accepted through October 22, 2012. Comments may be submitted via:

- the federal rulemaking website at www.regulations.gov using Docket ID NRC-2010-0362;
- mail to Cindy Bladey, Chief, Rules, Announcements and Directives Branch (RADB), Office of Administration, Mail Stop: TWB-05-B01M, U.S. Nuclear Regulatory Commission, Washington, DC 20555-0001; or,
- facsimile to RADB at (301) 492-3446.

*Revision 15 is available through the NRC's Adams document database using accession number ML12257A191.* 

# Comment Sought re Examining Plant Response to Updated Flooding Hazards

On September 28, 2012, the U.S. Nuclear Regulatory Commission announced that the agency is seeking public comment on proposed Interim Staff Guidance to U.S. nuclear power plants for evaluating how re-analyzed flooding hazards could affect plant performance.

The need to re-analyze the hazard is one of the lessons learned from the Fukushima Dai-ichi nuclear accident.

#### Background

NRC began examining flooding issues, in the form of upstream dam failures, prior to the Fukushima Dai-ichi accident. That work was incorporated into the agency's post-Fukushima

efforts, which include requiring all U.S. plants to re-analyze potential flooding hazards at their sites using the latest available information.

The plants will use present day guidance and analysis methods that have been used in new reactor applications to analyze hazards including stream and river flooding, hurricane storm surges, tsunami, and dam failures. In May 2012, the NRC announced a schedule for all U.S. nuclear power plants to complete the hazard re-analysis by March of 2015.

If the re-analyzed flood hazards exceed the levels a plant was originally designed for, the plant will tell the NRC what interim measures it will use to safely deal with the new hazard. The plant will also perform an "integrated assessment" to identify specific vulnerabilities and examine how existing or planned systems or procedures will prevent or mitigate flood damage.

#### **Proposed Guidance**

The staff's draft guidance lays out several assumptions for the integrated assessment, such as taking into account available onsite resources and systems for responding to flooding. The assessment must also consider any mode of operation (at full power, for example, or during a refueling outage) that could be affected by a flood, as well as simultaneous events such as losing power from the electric grid. The assessment cannot exclude a flooding event based solely on how rare that flood might be.

The new analysis will take advantage of recent advances in understanding flooding hazards. The proposed guidance would provide a means for meeting the requirements in a request for information that was issued by NRC staff on March 12, 2012. The guidance would not be mandatory, but should a plant decide to take a different approach, the NRC would review both the plant's methodology and results when they submit their response.

#### **Submitting Comments**

The NRC will accept comments on the proposed guidance until October 29, 2012.

Comments maybe submitted via regulations.gov using Docket ID NRC-2012-0222.

NRC's proposed Interim Staff Guidance to U.S. nuclear power plants for evaluating how reanalyzed flooding hazards could affect plant performance can be found at www.nrc.gov.

# Draft Guidance Issued re Plant Response to Updated Seismic Hazards

On September 10, 2012, the U.S. Nuclear Regulatory Commission issued draft Interim Staff Guidance to U.S. nuclear power plants for evaluating how re-analyzed earthquake hazards could affect plant performance. The re-analyses and evaluations stem from lessons learned from the Fukushima Dai-ichi nuclear accident and information from companies applying for new reactor licenses.

The guidance provides a means for meeting the requirements in a request for information that was issued by NRC staff on March 12, 2012. The guidance is not mandatory. However, should licensees take a different approach, NRC will review both their methodology and results when they submit their response.

#### **Re-Analysis of Earthquake Hazards**

The NRC is requiring all U.S. plants to re-analyze potential earthquake hazards at their sites using the latest available information. Plants in the eastern and central United States will complete these site-specific analyses by late 2013 and plants west of the Rocky Mountains by early

2015, based on the availability of information from the U.S. Geological Survey. The analyses will update potential ground motions across a spectrum, or range of vibration frequencies, and the plants will compare the new spectrum to their existing design basis. If the new ground motion spectrum exceeds that in the plant's original design basis, the plants have two options for analyzing the risks associated with the new information. One involves a broad examination of probable seismic risks. The other is a "seismic margin analysis," determining how the plant's structures and important components would respond to the ground motion. The guidance provides procedures for performing a seismic margin analysis.

#### **Conditions on the Margin Analysis**

The guidance sets several conditions on the margin analysis, including covering at least 72 hours post-quake, or until the plant would safely shut down, whichever would take longer. Other conditions assume the plant loses all power from the transmission grid, account for the possibility of an earthquake "liquefying" the soil around the plant's buildings, incorporate the ways in which high-frequency vibrations could affect electrical systems and smaller mechanical components, and factor in potential non-earthquake system failures and human errors.

#### **Submitting Comments**

NRC will accept comments on the draft guidance until October 10, 2012.

The guidance is available on the NRC's website at www.nrc.gov in ADAMS under accession number ML12222A327.

### Comment Sought re Tribal Protocol Manual NRC Begins Developing Policy Statement

On October 15, 2012, the U.S. Nuclear Regulatory Commission announced that the agency is seeking comments on draft agency procedures for consulting with Native American tribes and suggestions for a policy statement on tribal consultations that the staff will develop. NRC is producing these documents in response to direction from the Commission earlier this year following an increase in the number and complexity of consultations between the agency and Native American tribes.

#### **Draft Manual and Policy Statement Development**

The draft Tribal Protocol Manual provides guidance on effective interaction between NRC staff and tribal governments, and background on the historic relationship between the federal government and Native Americans. The draft manual is based on internal procedures used since March 2010 to govern the NRC's interactions with tribal governments.

NRC staff will use the draft manual as a starting point for developing a policy statement on agency consultations with tribes. To further aid in developing that policy statement, NRC is seeking comments from tribal governments and organizations, the public, and other interested parties.

#### **Issues for Public Comment**

While the NRC welcomes all input, the agency's press release states that the staff is particularly interested in comments on four questions:

- How can the NRC strengthen government-togovernment relationships with Native American tribes?
- What practices have the NRC or other federal agencies used that have been effective in identifying tribal interests and resolving tribal concerns about proposed actions?
- Are there specific Tribal Policy Statements in other federal agencies that could serve as a starting point for the NRC's efforts?
- What unique tribal issues should the NRC be aware of as a non-landholding regulatory agency that issues licenses under the Atomic Energy Act?

#### **Submitting Comments**

Comments may be submitted via the federal government's rulemaking website at www.regulations.gov using Docket ID NRC-2012-0235; via email to rulemaking.comments@nrc.gov; via a link on NRC's public website; via mail to Secretary, U.S. Nuclear Regulatory Commission, Washington, DC 20555-0001, Attention: Rulemakings and Adjudications Staff; or, via facsimile to (301) 415-1101.

The NRC will take comments on the draft manual and input into the policy statement until April 1, 2013.

The draft manual is available in NRC's document management system under accession number ML12261A423.

# Meeting Held re Post-Fukishima Implementing Orders

On September 27, 2012, industry representatives and staff of the U.S. Nuclear Regulatory Commission met to continue discussions on schedules and guidance for Orders and related requests for information that the agency issued on March 12, 2012.

The actions stem from recommendations of the NRC's Japan Near-Term Task Force (NTTF), which examined issues raised by the Fukushima nuclear accident in Japan in March 2011.

#### Meeting

The meeting was held from 1:00 to 4:00 p.m. in the Commission Hearing Room on the first floor of the White Flint North complex at 11555 Rockville Pike in Rockville, Maryland. NRC management and industry executives discussed guidance for the three Orders (covering strategies to respond to extreme natural events resulting in the loss of power at plants, ensuring reliable hardened containment vents, and enhancing spent fuel pool instrumentation) and a multifaceted request for information, all of which were issued in March 2012. (See *LLW Notes*, July/August 2012, pp. 25-26.)

The discussions covered implementation of the information request's earthquake and flooding hazard "walkdowns," where skilled engineers verify that the plants conform to their current license requirements. The meeting also covered longer-term evaluations and actions related to possible lessons learned from the Fukushima accident.

The public was provided with an opportunity to ask the NRC staff questions about the process during the meeting, which was webcast.

#### Background

On August 31, 2012, NRC announced the issuance of Interim Staff Guidance (ISG) to U.S. nuclear power plants to ensure proper implementation of three Orders that were issued by the agency in March 2012 in response to lessons learned from the Fukushima Dai-ichi nuclear accident.

The ISGs represent acceptable approaches to meeting the Orders' requirements before their scheduled compliance deadline on December 31, 2016. The ISGs are not mandatory, but U.S. nuclear power plants would have to seek NRC approval if they wanted to follow a different compliance approach.

On May 31, 2012, NRC issued draft versions of the ISGs and asked for public input. The final ISGs reflect information gained from the monthlong comment period and subsequent public meetings.

The NRC continues to evaluate and act on the lessons learned from Fukushima to ensure U.S. nuclear power plants implement appropriate safety enhancements. Following direction from the agency's five Commissioners, the NRC's activities are being led by a steering committee comprised of senior NRC management. The agency has also established the Japan Lessons-Learned Project Directorate, a group of more than 20 full-time employees focused exclusively on implementing NTTF recommendations and related activities.

For additional information, please contact Richard Jervey at (301) 415-1073 or richard.jervey@nrc.gov.

# Mid-Cycle Assessments Issued to Nuclear Power Plants

On September 6, 2012, the U.S. Nuclear Regulatory Commission announced that the agency has issued mid-cycle assessment letters to the nation's 104 operating commercial nuclear power plants. As of the end of June, 96 plants were in the two highest performance categories.

"We ensure nuclear power plants are safe, inspecting them and rating their performance regularly, as part of our mission to protect people and the environment," said Ho Nieh, Director of the Division of Inspection and Regional Support in the Office of Nuclear Reactor Regulation.

Of the 96 highest-performing reactors, 62 fully met all safety and security performance objectives and were inspected by NRC using the normal inspection program. Thirty-four reactors were assessed as needing to resolve one or two items of low safety significance. This represents an increase from the previous assessment cycle. The NRC stated in its press release, however, that the agency is confident that the regulatory actions dictated by the Reactor Oversight Process action matrix are appropriate for these plants with one or two items of low safety significance. For this performance level, regulatory oversight includes additional inspection and attention to follow up on corrective actions.

The plants requiring additional inspection are: Braidwood 2 (Illinois); Browns Ferry 2 and 3 (Alabama); Brunswick 1 and 2 (North Carolina); Callaway (Missouri); Calvert Cliffs 1 and 2 (Maryland); Crystal River 3 (Florida); Farley 1 and 2 (Alabama); Fermi 2 (Ohio); Limerick 2 (Pennsylvania); Millstone 2 (Connecticut); North Anna 1 and 2 (Virginia); Palo Verde 1, 2 and 3 (Arizona); Pilgrim (Massachusetts); Point Beach 1 and 2 (Wisconsin); Prairie Island 1 and 2 (Minnesota); River Bend (Louisiana); San Onofre 2 and 3 (California); Seabrook (New Hampshire); Susquehanna 1 (Pennsylvania); Turkey Point 3 and 4 (Florida); Waterford (Louisiana); Watts Bar (Tennessee); and, Wolf Creek (Kansas). Callaway, Calvert 1 and 2, Crystal River 3, Limerick 2, Waterford, and Watts Bar have all resolved their issues since the reporting period ended and have transitioned to the highest performing level.

Six nuclear reactors were in the third performance category with a degraded level of performance. For this category, regulatory oversight includes more NRC inspections, senior management attention and oversight focused on the cause of

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the degraded performance. These plants were: Hope Creek (New Jersey); Palisades (Michigan); Perry 1 (Ohio); Saint Lucie 2 (Florida); and, Salem 1 and 2 (New Jersey).

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

Fort Calhoun plant in Nebraska is in an extended shutdown with significant performance issues and is currently under a special NRC oversight program distinct from the normal performance levels. Therefore the plant will not receive a midcycle assessment letter.

In addition to regular inspections, the NRC is currently conducting extra inspections to assess all plants' preparedness to deal with earthquakes and floods. These additional inspections are part of the NRC's post-Fukushima actions.

The NRC routinely provides changes to information on each plant's current performance and posts the latest information as it becomes available to the action matrix summary. The midcycle assessment letters sent to each operating reactor licensee are also available through the NRC's Web page on the Reactor Oversight Process. Mid-cycle construction assessments for new reactors at the Vogtle and Summer sites and at Watts Bar 2 are also on the NRC website.

Every six months each plant receives either a midcycle or annual assessment letter along with an NRC inspection plan. This year's mid-cycle assessments also include security findings after the recent reintegration of the security cornerstone into the Reactor Oversight Process action matrix.

# Meeting Held re Economic Consequences of Reactor Accidents

On September, 11, 2012, the U.S. Nuclear Regulatory Commission was briefed by its staff and other stakeholders in a public meeting at agency headquarters on proposed options for modifying the agency's approach to considering economic consequences from nuclear power plant accidents.

The meeting began at 9:00 a.m. in the Commission Hearing Room at 11555 Rockville Pike in Rockville, Maryland. The commission meeting was open to public observation and was webcast.

For additional information, please go to the NRC web site at www.nrc.gov.

# Study and Revision to Waste Confidence Rule Scheduled

On September 6, 2012, the U.S. Nuclear Regulatory Commission directed the agency's staff to develop an environmental impact statement (EIS) and a revised waste confidence decision and rule on the temporary storage of spent nuclear fuel.

The EIS and rule, which are in response to a June 2012 ruling of the U.S. Court of Appeals for the District of Columbia Circuit, are to be completed within 24 months.

#### **Environmental Study & Revised Rule**

In a Staff Requirements Memorandum, the Commission directed the staff to "proceed directly" with development of the EIS and a revised waste confidence rule to satisfy the

deficiencies that the appellate court found in the NRC's 2010 waste confidence revision. The Commission said the staff should draw on the agency's "long, rich history" with waste confidence determinations as well as work performed by other agencies including, but not limited to, environmental assessments, technical studies and reports addressing the impacts of transportation and consolidated storage of spent fuel.

"Resolving this issue successfully is a Commission priority," said NRC Chairman Allison Macfarlane. "Waste confidence plays a core role in many major licensing actions, such as new reactors and license renewals. I applaud my fellow Commissioners for their swift action in setting a path forward to resolve the Court's remand, and we have confidence in the staff's ability to meet this demanding deadline."

#### Waste Confidence Decision

"Waste confidence' is a generic finding that spent nuclear fuel can be safely stored for decades beyond the licensed operating life of a reactor without significant environmental effects," states the NRC's press release. "It enables the NRC to license reactors or renew their licenses without examining the effects of extended waste storage for each individual site pending ultimate disposal."

On August 7, the Commission issued an Order that NRC will not issue licenses dependent on the waste confidence rule—such as new reactors and renewal of existing reactor operating licenses until the court's remand is appropriately addressed. (See *LLW Notes*, July/August 2012, pp. --.)That order remains in effect.

#### Waste Confidence Directorate

The Commission directed the staff to "provide ample opportunity for public comment" on the EIS and rule, even while looking for ways to make the EIS and rulemaking process more efficient. It said the staff should form an interoffice team of the agency's most-accomplished environmental experts to develop the EIS and resolve comments "with the urgency that this matter deserves."

The NRC's Office of Nuclear Material Safety and Safeguards, which has regulatory responsibility over spent fuel storage and disposal, has established a Waste Confidence Directorate to develop the waste confidence EIS. The new directorate will be headed by Keith McConnell, who currently serves as Deputy Director of the Division of Waste Management and Environmental Protection in the Office of Federal and State Materials and Environmental Management Programs.

#### Background

On June 8 2012, the U.S. Court of Appeals for the District of Columbia Circuit vacated the NRC's waste-confidence decision and the storage rule. (See *LLW Notes*, July/August 2012, pp. --.)In so doing, the court found that the agency had failed to conduct an environmental impact statement or a "finding of no significant environmental impact" before deeming the storage of waste in wet pools and dry casks to be safe. The court also faulted NRC for assuming a national repository would be built within the next 60 years, despite decades of political deadlock over the proposed Yucca Mountain facility and how to move forward.

The lawsuit was filed by environmental groups and states that had challenged two NRC decisions. In particular, the Natural Resources Defense Council (NRDC) claimed the agency violated the National Environmental Policy Act (NEPA) by not adequately considering the environmental implications of storing spent fuel at nuclear plants when it issued its most recent approval of the practice, known as the "waste confidence decision," in December 2010. Waste is sometimes stored on-site for years after operations have ceased.

For additional information, please refer to the Commission's SRM, a staff paper outlining options to address the appellate court's ruling (COMSECY-12-0016), and the Commissioners' vote sheets with comments—all of which can be found on the NRC's website at www.nrc.gov.

# Nuclear Education Grants & Federal Funding Opportunities

During fiscal year 2012, through the Nuclear Education Program, the U.S. Nuclear Regulatory Commission has awarded approximately \$18.6 million to academic institutions. The grants are used for scholarship, fellowship, trade school and community college scholarship, faculty development and curricula development. In addition, in mid-September 2013, NRC announced the availability of its fiscal year 2013 funding opportunities, with deadlines the first week in October.

Congress authorized the NRC, through the Nuclear Education Program, to provide federal funding opportunities to qualified academic institutions to encourage careers and research in nuclear, mechanical and electrical engineering, health physics and related fields to meet expected future workforce needs. This fiscal year, NRC awarded 75 grants to 55 higher education institutions located in 29 states and Puerto Rico. These grants will help to develop a future workforce capable of designing, constructing, operating and regulating the next generation of nuclear facilities.

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

The complete list of grants awarded is posted on the NRC's website along with more information on the NRC's Nuclear Education Program and future grant opportunities.

# Margaret Doane Named NRC General Counsel

On October 11, 2012, the U.S. Nuclear Regulatory Commission issued a press release announcing that Margaret Doane has been named the new General Counsel of the agency by Chairman Allison Macfarlane, after consultation with the Commission. Doane will succeed Stephen Burns, who retired March 31 after 34 years of service to the NRC.

Most recently, Doane was Director of the NRC's Office of International Programs. That office supports U.S. interests abroad in the safe and secure use of nuclear materials and in guarding against the spread of nuclear weapons. It also licenses the export and import of nuclear materials and equipment.

Doane began her employment with the NRC in 1991 as a Special Assistant (Legal) in the Office of the Secretary. She subsequently served as an attorney in the Office of Commission Appellate Adjudication from 1991 to 1998. During this time, she was responsible for drafting opinions on novel issues related to the NRC's licensing and regulatory responsibilities. She completed a temporary assignment as an Attorney in the Office of the General Counsel's Enforcement Branch in 1996. From 1998 to 2004, Doane served on the staff of Commissioner Jeffrey *(Continued on page 6)* 

# **To Obtain Federal Government Information**

#### by telephone

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

### by internet

• NRC Reference Library (NRC regulations, technical reports, information digests, and regulatory guides)	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) <b>listserver@unixmail.rtpnc.epa</b> .	gov
• EPA • (for program information, publications, laws and regulations)www.epa.	gov
• U.S. Government Printing Office (GPO) (for the Congressional Record, <i>Federal Register</i> ; congressional bills and other documents, and access to more than 70 government databases)	gov
• GAO homepage (access to reports and testimony)www.gao.	gov

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

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

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

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



#### Delaware Maryland Pennsylvania West Virginia

- **Atlantic Compact**
- Connecticut New Jersey South Carolina

#### **Central Compact**

Arkansas Kansas Louisiana Oklahoma

**Central Midwest Compact** Illinois Kentucky

#### Alaska Hawaii Idaho

#### Montana Oregon Utah Washington Wyoming

Iowa

Ohio

**Midwest Compact** Indiana Minnesota Missouri Wisconsin

#### Colorado Nevada New Mexico

Northwest accepts Rocky Mountain waste as agreed between compacts

#### **Southeast Compact**

Alabama Florida Georgia Mississippi Tennessee Virginia

Arizona California North Dakota South Dakota

**Texas Compact** Texas Vermont

#### **Unaffiliated States**

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