

# LLW *notes*

Volume 27, Number 4 July/August 2012

## ***National Nuclear Security Administration/Global Threat Reduction Initiative (NNSA/GTRI)***

### **SCATR Announces Sealed Source Collection for Disposal at WCS**

In mid-July 2012, the Source Collection and Threat Reduction Program (SCATR), administered by the Conference of Radiation Control Program Directors (CRCPD), announced that it is providing sealed source licensees in states which do not have access to a low level radioactive waste disposal facility an opportunity to dispose of certain NRC/Agreement State licensed unwanted radioactive sealed sources.

On April 25, 2012, the Waste Control Specialists' (WCS) Compact Waste Facility (CWF) located in Andrews County, Texas was authorized to collect and dispose of sealed sources. This effort is supported by the Department of Energy's Global Threat Reduction Initiative (GTRI), the Texas Low-Level Radioactive Waste Disposal Compact Commission (Texas Compact Commission), and Waste Control Specialists. CRCPD may offer financial assistance as needed to generators who participate in the SCATR program.

#### **Requirements for Disposal at WCS**

WCS' license allows for disposal of Class A, B, and C sealed sources in accordance with the following requirements:

- An Import Agreement from the Texas Compact Commission is required for all shipments from generators located in states other than Texas and Vermont. Waste brokers can assist with import authorizations.
- All sources which meet the NRC's definition of a sealed source and by-product or special form radioactive material, with the exception of check sources (<100 uCi), disposed of in WCS' containerized waste facility shall be doubly-packaged and encased in concrete or similar inert material within the outer package.
- For waste classification purposes, the activity in a waste package may be averaged over the  
*(Continued on page 32)*

#### **In This Issue**

FEIS Issued for International Isotopes' Proposed Uranium Deconversion Facility—page 9

San Onofre Augmented Inspection Team Report Issued—page 10

Appeals Court Delays Yucca Mountain Decision—page 18

NRC to Delay Licensing Decisions While Analyzing Effects of Waste Storage—page 34

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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

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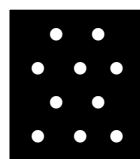
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## Table of Contents

|   |    |
|---|----|
| States and Compacts (Cover Story) .....   | 1  |
| SCATR Announces Sealed Source Collection for Disposal at WCS .....              | 1  |
| Low-Level Radioactive Waste Forum, Inc. ....                                    | 4  |
| Register Now for Fall 2012 LLW Forum Meeting .....                              | 4  |
| Low-Level Radioactive Waste Forum Meetings <i>Fall 2012 and Beyond</i> .....    | 5  |
| States and Compacts (continued) .....   | 6  |
| IEMA and CMW Compact to Host LLW Generators' Conference .....                   | 6  |
| Utah DEQ Issues Proposed Rulemaking re Adjudicative Proceedings .....           | 7  |
| Utah DRC Terminates Cavanagh Services Group License .....                       | 8  |
| Utah RCB Cancels September Meeting .....  | 9  |
| FEIS Issued for Proposed Uranium Deconversion Facility .....                    | 9  |
| Nuclear Fuel Services Inc. Operating License Renewed .....                      | 10 |
| San Onofre Augmented Inspection Team Report Issued .....                        | 10 |
| Texas Compact Commission Holds August Meeting .....                             | 12 |
| Exelon Withdraws Early Site Permit for New Victoria Nuclear Plants .....        | 14 |
| New York Issues LLW Status Report .....   | 15 |
| Courts .....  | 16 |
| AIF Joins Andrews County Lawsuit re WCS Facility .....                          | 16 |
| Appeals Court Delays Yucca Mountain Decision .....                              | 18 |
| Congress .....  | 19 |
| Annual Security Inspection Report to Congress Published .....                   | 19 |
| Industry .....  | 20 |
| News Briefs for Nuclear Power Plants Across the Country .....                   | 20 |
| International .....   | 25 |
| Post-Fukushima Requirements Guidance Documents Finalized .....                  | 25 |
| NRC Discusses Implementing Orders for Post Fukushima Improvements .....         | 26 |
| NRC Holds Fukushima Related Meetings .....                                      | 26 |
| National Report Issued for Convention on Nuclear Safety Meeting .....           | 27 |
| Attaché Named to U.S. Mission to International Organizations .....              | 28 |
| Uranium One USA Issued CAL Following Uranium Release Event in Canada .....      | 28 |
| Federal Agencies and Committees (continued) .....                               | 29 |
| NRC Joins DHS Intellectual Property Rights Coordination Center .....            | 29 |
| Public Meeting Held re MOX Facility .....                                       | 30 |
| Public Input Sought re Updating Emergency Preparedness Guidance .....           | 30 |
| LANL Sets Waste Shipping Record for Fourth Consecutive Year .....               | 31 |
| NRC Presents at NAS Meeting on Fukushima Study .....                            | 31 |
| NRC to Delay Licensing Decisions While Analyzing Effects of Waste Storage ..... | 34 |
| Potential Design Vulnerability in Plant Electrical Power Systems .....          | 35 |
| License Renewals Continue to Move Forward .....                                 | 36 |
| Proposed Enhancements to Force-on-Force Inspections .....                       | 38 |
| Public Input Sought re Consideration of Economic Consequences .....             | 38 |
| Security Inspection Results Reintegrated into ROP Assessment Program .....      | 39 |
| NRC Entered Monitoring Mode in Advance of Hurricane Isaac .....                 | 40 |
| NRC Issues FY 2012 Annual Fees Rule .....                                       | 40 |
| Air Force Fined for Loss of Small Sealed Radioactive Source .....               | 41 |
| Obtaining Publications .....  | 43 |



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## Key to Abbreviations

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

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

## **Register Now for Fall 2012 LLW Forum Meeting**

***Chicago, Illinois on October 11-12, 2012***

*Optional Zion Decommissioning Site Tour on October 10, 2012*

Registration continues for the fall 2012 meeting of the Low-Level Radioactive Waste Forum. The meeting will be held in downtown Chicago, Illinois on October 11-12, 2012. There will also be an optional site tour of decommissioning at the Zion facility on October 10, 2012.

*The meeting documents can be found on the Home Page of the LLW Forum's web site at [www.llwforum.org](http://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 Embassy Suites Downtown/Lakefront Hotel in Chicago, Illinois on October 11-12, 2012. It will be a one and one-half day meeting.

There will also be an optional site tour of decommissioning at the Zion facility on October 10, 2012.

### **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 Marcia Marr of the Central Midwest Compact Commission 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.)

### **Optional Site Tour**

Meeting attendees are invited to participate in an optional site tour of decommissioning at the Zion facility on Wednesday, October 10, 2012. Transportation and box lunches will be provided.

The bus will leave the hotel at approximately 12:00 noon and return between approximately 4:00 - 5:00 pm, depending upon traffic. It is an approximately 75 minute ride to the facility and the tour is anticipated to take approximately two hours to complete. Advance registration is required.

### **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 has been reserved for site tour attendees for Tuesday (October 9) at \$219/night plus tax and for regular meeting attendees for Wednesday (October 10) and Thursday (October 11) at the prevailing federal per diem rate (which is currently \$190/night) plus tax. A limited number of rooms are available at this rate for Friday (October 12, 2012) and Saturday (October 13, 2012).

*To make a reservation, please call 1-800-HILTONS and ask for a room in the “LLW Forum block” at the Embassy Suites Downtown – Lakefront Hotel. Please be sure to make your reservation no later than **September 11, 2012** in order to receive the discounted rate.*

### **Transportation and Directions**

Super Shuttle offers transportation from both Chicago O’Hare International Airport and Chicago Midway Airport for a minimum charge of \$25. Driving directions from both airports can be found at <http://chicagoembassy.com/>.

Please note that self-parking at the hotel is \$43/day and valet-parking is \$51/day.

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

## **Low-Level Radioactive Waste Forum Meetings** *Fall 2012 and Beyond*

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

*For the most up-to-date information, please see the LLW Forum’s web site at [www.llwforum.org](http://www.llwforum.org).*

### **Fall 2012 Meeting**

The Central Midwest Interstate Low-Level Radioactive Waste Commission and the State of Illinois have agreed to cohost the LLW Forum’s fall 2012 meeting. This will be the third time that the Commission and Illinois have cohosted a meeting of the LLW Forum since we began operations as an independent, non-profit organization in 2000. The meeting will be held at the Embassy Suites Lakefront Hotel in downtown Chicago on October 11-12, 2012. There will be an optional site tour of the Zion decommissioning site on October 10, 2012. (See related story, this issue.)

### **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 EnergySolutions have agreed to co-host the fall 2013 meeting of the LLW Forum. There will be an optional site tour of the EnergySolutions’ Clive facility for interested attendees as well. The state is currently looking at various facilities in both Salt Lake City and Park City, Utah. Once completed, we will provide additional information regarding specific dates and so forth.

### **2014 Meetings**

The State of Texas and Waste Control Specialists LLC (WCS) have agreed to co-host the spring

## States and Compacts

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 [LLWForumInc@aol.com](mailto:LLWForumInc@aol.com).*

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

## **IEMA and CMW Compact to Host LLW Generators' Conference**

On November 8, 2012, the State of Illinois Emergency Management Agency (IEMA) and the Central Midwest Interstate Low-Level Radioactive Waste Commission (Central Midwest Commission) will host a low-level radioactive waste generators/radioactive materials licensee conference.

The purpose of the conference is to bring users and regulators together to highlight recent activities and discuss program and regulatory changes.

### **Logistics**

The conference will be held at The Lisle/Naperville Hilton at 3003 Corporate West Drive in Lisle, Illinois. The number of attendees for this conference is limited to 150.

For information regarding lodging arrangements, please contact the hotel directly at (630) 505-0900 and ask for a room in the IEMA/Central Midwest Compact block. The rate of \$80/room plus taxes has been secured for November 7 and a few rooms are available for the night of November 8.

*To register online, please go to [www.iema.illinois.gov](http://www.iema.illinois.gov) and look for the LLRW Generator/Licensee Conference logo/button.*

### **Draft Agenda**

A variety of topics will be discussed, speakers from the industry will participate in the conference, and there will be ample time for discussion and questions from attendees. Topics

## States and Compacts *continued*

of interest for waste generators will be discussed in the morning session. The afternoon session will be tailored to radioactive materials licensees.

The draft agenda includes, among others, the following items:

- Bureau of Environmental Radiation Safety (BERS) overview (Adnan Khayyat, IEMA, Acting Chief, BERS);
- sealed source disposal at the Clive facility (Dan Shrum, EnergySolutions, Senior Vice President of Regulatory Affairs);
- overview of Texas Compact facility/sealed source disposal at Waste Control Specialists (Jeff Havlicak, WCS Business Development);
- broker/processor requirements regarding disposal at WCS (John McCormick, Bionomics, Vice President);
- university/hospital waste management (Matt Hadden, University of Chicago, Health Physicist and Laser Safety Officer); and,
- low-level radioactive waste generator program (Marcia Marr, Central Midwest Commission Executive Director and IEMA Policy Analyst, and Michael Klebe, IEMA Engineer).

*For additional information, please contact Marcia Marr of the Central Midwest Commission/ State of Illinois at (217) 785-9982 or at [Marcia.Marr@Illinois.gov](mailto:Marcia.Marr@Illinois.gov).*

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### ***Northwest Compact/State of Utah***

## **Utah DEQ Issues Proposed Rulemaking re Adjudicative Proceedings**

On September 6, 2012, the Utah Department of Environmental Quality (DEQ) issued a Notice of Proposed Rulemaking, pursuant to Utah Code Ann. § 19-1-201, to make rules governing adjudicative proceedings.

The proposed rule, which has been assigned DAR file number 36553, was filed on July 30, 2012. It is scheduled to become effective on October 8, 2012.

### **Proposed Rule**

The following is a brief overview of the proposed rule as taken directly from the Utah State Bulletin. Persons interested in additional information are directed to the proposed rule themselves.

**Purpose of the Rule or Reason for the Change** S.B. 11, creating a new "permit review adjudicative proceeding" under Section 19-1-301.5, passed during the 2012 General Session. DEQ's existing administrative procedures, which are based on UAPA, no longer apply to these proceedings and new rules are required to implement them. This new rule also addresses enforcement and other proceedings that will still be handled under UAPA. Although the rules for UAPA proceedings are mostly unchanged, a few changes have been made to clarify or improve the process. DEQ is also proposing to repeal the prior administrative procedures rule, R305-6. (DAR NOTE: The proposed repeal of Rule R305-6 is under DAR No. 36554 in this issue, August 15, 2012, of the Bulletin.)

**Summary of the Rule or Change** The rule is based on current Rule R305-6, which is simultaneously proposed for repeal, but adds procedures in new Sections R305-7-201 through R305-7-217 for the permit review adjudicative proceedings that were mandated by S.B. 11 (2012 General Session). Key choices made in these rules include: (1) allowing a party to address standing and questions of law during proceedings on the merits of the case rather than through separate motions and (2) specifying deadlines and page limits for motions. Some changes not required by S.B. 11 have also been made, such as clarifying language related to service and filing of papers.

### Opportunity for Public Comment

On September 20, 2012, the Utah DEQ will host a public hearing to take comments on the proposal. The hearing, which will begin at 3:30 pm, will be held in the DEQ Boardroom located at 195 North 1950 West, 1st Floor, in Salt Lake City, Utah.

Comments may also be submitted in writing. The Notice of Proposed Rulemaking states that comments are due on October 1, 2012; however, DEQ is extending this comment period to October 15, 2012. Comments must be received by this date.

Comments may be submitted to:

Laura Lockhart  
Utah Attorney General's Office  
PO Box 140873  
Salt Lake City UT 84114-0873  
LLockhart@utah.gov

DEQ notes that "all comments submitted are given the same weight, whether they are made orally, submitted by email, or submitted by paper copy."

### Background

A proposed rule was published beginning at page 45 in the August 15, 2012 Utah State Bulletin at [http://www.rules.utah.gov/publicat/bull\\_pdf/2012/b20120815.pdf](http://www.rules.utah.gov/publicat/bull_pdf/2012/b20120815.pdf).

The existing Administrative Procedures rule, at R305-6, has also been proposed for repeal. (See page 28 using the above-identified link.)

*The full text of the proposed rule may be inspected during regular business hours at the Environmental Quality Administration offices at 195 North 1950 West in Salt Lake City, Utah.*

*For additional information, please contact Beverly Rasmussen at (801) 536-4405 or at [bjrasmussen@utah.gov](mailto:bjrasmussen@utah.gov) or Laura Lockhart at (801) 366-0283 or at [llockhart@utah.gov](mailto:llockhart@utah.gov).*

## Utah DRC Terminates Cavanagh Services Group License

On July 13, 2012, the Director of the Utah Division of Radiation Control terminated the Radioactive Material License (No. UT 1800510) issued to Cavanagh Services Group, Inc. The termination is effective immediately. The license number is UT 1800510.

The proposed license termination, associated licensing documents, and Statement of Basis were the subject of a Public Notice dated June 12, 2012. (See *LLW Notes*, May/June 2012, p. 9.) A thirty day comment period closed on July 12, 2012. No comments on the proposed action were submitted to the Division of Radiation Control.

### CSG License

Issued on June 17, 2008, the license allowed CSG authorization to receive pre-packaged radioactive waste material from other entities. The license also allowed the transfer of licensed material to another entity authorized to dispose of the material.

### Background

Associated with the proposed license termination action was the termination of a Standby Trust Agreement between Wells Fargo Bank and CSG. The Standby Trust Agreement was established pursuant to the requirements of Utah Administrative Code §R313-22-35.

Under Section 19-1-301.5, a person who wishes to challenge a permit order may only raise an issue or argument during an adjudicatory proceeding that was raised during the public comment period and was supported with sufficient information or documentation to enable



the Director to fully consider the substance and significance of the issue.

*More information is available at <http://www.radiationcontrol.utah.gov/>.*

*For additional information regarding the CSG license, please contact Craig Jones, Division of Radiation Control, at [cwjones@utah.gov](mailto:cwjones@utah.gov) or at (801) 536-4250.*

### Utah RCB Cancels September Meeting

The Utah Radiation Control Board cancelled the meeting that was previously scheduled for September 11, 2012.

The Board—which is appointed by the Governor of Utah with the consent of the Utah Senate—guides 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 meeting is held at the end of each meeting.

The next meeting is scheduled to take place on October 9, 2012. It will be held in Conference Room 1015 of the Multi Agency State Office Building at 195 North 1950 West, Salt Lake City, Utah.

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

### ***Rocky Mountain Compact/State of New Mexico***

## FEIS Issued for Proposed Uranium Deconversion Facility

On August 22, 2012, the U.S. Nuclear Regulatory Commission issued its Final Environmental Impact Statement (FEIS) on a proposed facility that would deconvert depleted uranium hexafluoride from the uranium enrichment industry to make it more suitable for disposal. The FEIS contains the staff's assessment that there are no impacts that would preclude licensing the proposed facility, which is located in Lea County, New Mexico.

On December 30, 2009, International Isotopes Fluorine Products Inc.—a subsidiary of International Isotopes Inc.—applied for a license to construct and operate the facility. The facility would deconvert depleted uranium hexafluoride from uranium enrichment facilities into fluorine products for commercial use and depleted uranium oxides for long-term stable disposal. The proposed plant would be located 14 miles west of Hobbs, New Mexico.

On January 9, 2012, NRC published a draft EIS for public comment. Shortly thereafter, on February 2, 2012, the agency held a public meeting in Hobbs to present the draft EIS' conclusions and take comments from the public. NRC staff received more than 400 comments from members of the public, government officials and agencies, and nongovernmental organizations. The comments are addressed in the FEIS.

*For additional information, please refer to the FEIS on the NRC website at [www.nrc.gov](http://www.nrc.gov). The International Isotopes application and information about the NRC license review process are also available on the NRC website.*

***Southeast Compact/State of Tennessee***

## **Nuclear Fuel Services Inc. Operating License Renewed**

On August 2, 2012, the U.S. Nuclear Regulatory Commission renewed the operating license of Nuclear Fuel Services Inc. (NFS) for an additional 25 years. NFS is located in Erwin, Tennessee.

NFS manufactures nuclear reactor fuel for the U.S. government and commercial clients.

### **Background**

On June 30, 2009, NFS submitted its renewal application. As permitted under NRC regulations, the firm continued operating past the July 31, 2009 expiration of the previous license while the NRC reviewed the renewal request.

NRC staff performed a detailed technical review and determined that the application demonstrated the company's qualifications, training and experience to use the licensed material according to NRC regulations. NRC also determined that the company's equipment, facilities and procedures are adequate to protect health and minimize danger to life and property.

On October 26, 2011, NRC staff published an environmental assessment and finding of no significant impact in the *Federal Register*. The assessment includes responses to approximately 375 public comments received on a draft environmental assessment published in October 2010.

The NRC staff held several public meetings in Erwin and at NRC Headquarters to explain the license renewal review process, the environmental assessment, and the resolution of certain items identified during the technical safety review.

### **Subsequent Public Meeting**

On August 30, 2012, NRC staff held an information meeting to discuss how the agency arrived at its decision to approve a 25-year extension of the operating license for the NFS facility in Erwin, Tenn.

The meeting was scheduled to run from 6:00 - 8:30 p.m. EDT in the Unicoi County Courthouse at 100 N. Main Street in Erwin. The meeting was open to the public and those attending were invited to ask the NRC staff questions and discuss the renewal of the license.

NRC staff held several previous public meetings in Erwin and at NRC headquarters to explain the license renewal review process, the environmental assessment and the resolution of certain items identified during the technical safety review.

*For additional information about NFS, please go to the NRC website at [www.nrc.gov](http://www.nrc.gov).*

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## ***Southwestern Compact/State of California***

## **San Onofre Augmented Inspection Team Report Issued**

On July 19, 2012, the U.S. Nuclear Regulatory Commission released an inspection report that concludes that faulty computer modeling that inadequately predicted conditions in steam generators at the San Onofre Nuclear Generating Station and manufacturing issues contributed to excessive wear of the components.

The report concerns a January 31, 2012 incident at the plant—when control room operators received alarms at Unit 3 that indicated reactor coolant was leaking into a steam generator—and the operator's response. Following the incident, which occurred approximately one year following

## States and Compacts *continued*

replacement of its steam generators, Unit 3 was shut down.

The plant—which is operated by Southern California Edison Company—is located near San Clemente, California.

### Report Findings

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 inspection was conducted by a team from the NRC's Region IV and Region II offices, the resident inspector from San Onofre Nuclear Generating Station, one engineer from the NRC Office of New Reactors, two engineers from the NRC Office of Nuclear Reactor Regulation, and one engineer from the NRC Office of Research.

### Next Steps and Public Comment Opportunity

The report identifies 10 issues requiring additional follow-up by the NRC including:

- (1) further review of the adequacy of the plant's post trip/transient procedure;
- (2) review of the adequacy of acoustical alarms used to identify loose parts in steam generators;
- (3) evaluation of steam generator retainer bar design for vibration impacts;
- (4) evaluation of and control of the Unit 3 divider plate repair;
- (5) Unit 3 steam generator shipping requirements;

- (6) lack of tube bundle support for steam generators during shipment;
- (7) evaluation and disposition of accelerometer data used to measure unusual movement of steam generator shipping packages;
- (8) review of the process used by the NRC to approve the plant's steam generator replacement;
- (9) control of manufacturing differences; and,
- (10) adequacy of Mitsubishi Heavy Industries' computer simulation modeling.

The NRC plans to schedule a meeting in the near future to receive and respond to public comments and questions about the now-finalized report and the inspection report process, and other issues that may arise. Open items in the report will be subject to follow-up inspections.

### Background

**Chronological Events** On January 31, 2012, operators shut down Unit 3 after the tube leak in one steam generator was identified. Unit 2 had been shut down for a scheduled maintenance outage. Both reactors have remained safely shutdown.

On March 27, the 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.

At San Onofre, NRC requires steam generator tubes with more than 35 percent wear to be plugged. As reported by the company to the NRC in July 2012, in Unit 2, 1,595 tubes showed some wear and 510 were plugged—six tubes had wear of more than 35 percent. In Unit 3, 1,806 tubes

showed wear of some kind and 807 tubes were plugged—381 tubes had wear greater than 35 percent. The licensee chose to plug some tubes with wear less than 35 percent as a preventive measure. Each reactor has two steam generators and each steam generator has 9,727 tubes.

**Inspection Team Direction** The inspection team was directed, in part, to

- identify the circumstances surrounding the tube degradation;
- review the licensee's actions following discovery of the conditions;
- evaluate the licensee's review of potential causes of the unusual steam generator tube wear;
- review the computer modeling used in the design of the steam generators; and,
- assess the differences in wear between the Unit 2 and Unit 3 steam generators, manufactured by Mitsubishi Heavy Industries. (Tube degradation occurred in both units, but it was greater in Unit 3 than Unit 2.)

In an effort to identify the causes, the licensee brought in a large number of outside industry experts, consultants, and steam generator manufacturers, including Westinghouse and AREVA, to perform thermal-hydraulic and flow induced vibration modeling and analysis. The licensee identified the most probable causes of the tube-to-tube wear as a combination of higher than predicted thermal/hydraulic conditions and changes in the manufacturing of the Unit 3 steam generators, a conclusion with which the NRC team agreed. The changes in the manufacturing resulted in less contact forces between anti-vibration bars and the tubes. The combination of these causes allowed excessive vibration to occur.

*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/tube-degradation.html>.*

### ***Texas Low-Level Radioactive Waste Disposal Compact Commission***

## **Texas Compact Commission Holds August Meeting**

The Texas Low-Level Radioactive Waste Disposal Compact Commission (Texas Compact Commission) met beginning at 9:00 am CST on Thursday—August 2, 2012. The meeting was held at the Texas State Capitol Extension, hearing room E1.028, at 1400 North Congress in Austin, Texas.

The following is an abbreviated overview of the agenda for the 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;
- consideration of and possible action pursuant to 31 Texas Administrative Code (TAC) §675.23(j) on the application and proposed agreement for importation of low-level radioactive waste to the Compact Waste Disposal Facility (CWDF) from Philotechnics, LTD;
- consideration of and possible action pursuant to 31 TAC §675.23(1)(2) on the following applications to amend the agreements for importation of non-party low level radioactive waste for disposal at the CWDF that were previously approved by the Texas Compact Commission on June 29, 2012:
  - Exelon Generation Company;
  - Tennessee Valley Authority – 1; and,
  - ZionSolutions;

## States and Compacts *continued*

- consideration of and possible action to request the Consulting Supervisory Director to prepare and to authorize the Chair to sign letters addressed to party-state generators of low-level radioactive waste and other interested parties to encourage timely response to the Texas Commission on Environmental Quality's (TCEQ) Capacity Survey in order to ensure that the agency's study and report required by Section 401.208 of the Texas Health and Safety Code (THSC) will be of maximum benefit to all interested parties;
- consideration of and possible action to renew or extend the contract with Leigh Ing as Consulting Supervisory Director;
- receive reports from the TCEQ on its actions related to low-level waste disposal operations in Andrews County, including reports on the following:
  - any pending license amendment applications filed by Waste Control Specialists LLC (WCS);
  - the current status and schedule in the rate case pending to establish disposal rates at the facility;
  - TCEQ initiatives on contract provisions between generators and the site operator that were discussed on April 25, 2012;
  - shipping expectations for in-compact and non-party state waste;
  - revenue predictions related to site operations during the remaining Texas fiscal year 2012 and for Texas fiscal year 2013;
  - on waste acceptance and disposal operations at the facility; and,
  - on environmental monitoring at the facility;
- receive reports from WCS about site operations, including reports on the following:
  - pending license amendment applications;
  - status of rate case;
  - information about projected volumes of shipments for disposal during the facility's first operational year;
  - updates in revenue predictions related to site operations to be used for estimating funds available for operations of the Texas Compact Commission and for funds to be contributed to the State of Texas and to Andrews County; and,
  - on projected capacity requirements for waste disposal operations at the CWDF during the first operational year (ending April 26, 2013) expressed both in curies and volume including reports on whether there are any radionuclide limits in the license that are projected to have more than 50% of capacity consumed within the first operational year and other matters reported at the discretion of WCS;
- update on activities of the Board's Fiscal Advisory Committee related to funding of Texas Compact Commission activities and with the development of a budget for Texas Compact Commission operations during Texas FY 2013 in connection with funds that may be available for Commission operations during the upcoming 2013 fiscal year;
- consideration of and possible action to adopt the Texas Compact Commission's annual budget for FY 2013 pursuant to Article VI, Section Two of the Texas Compact Commission's Bylaws;
- update on activities of the Legislative Committee related to development of the Legislative Appropriation Request pursuant to Article IV, Section Nine (e)(6) of the Texas Compact Commission's Bylaws;
- consideration of and possible action to approve or to authorize the Chair and the Consulting Supervisory Director to finalize and submit the Legislative Appropriation Request to the Legislative Budget Board and

to the Governor's Office of Planning and Budget;

- report from Leigh Ing, Consulting Supervisory Director of the Texas Compact Commission, on her activities and questions related to Texas Compact Commission operations;
- Chairman's report on Texas Compact Commission activities including reporting on the following:
  - fiscal matters;
  - activities since the June 29, 2012 meeting;
  - status of filling needs for staffing; and,
  - other actions to be taken by the Texas Compact including (1) discussion and possible action on delegations of authority with respect to canceling, amending, and/or entering into contracts for web-hosting and accounting services and (2) consideration and possible action on Texas Compact Commission bylaws with respect to meetings in non-host party states.

*Agendas for meetings of the Texas Compact Commission can be found on the "Public Meetings & Information" tab of their website at <http://www.tllrwdcc.org/index.html>.*

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

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

## **Exelon Withdraws Early Site Permit for New Victoria Nuclear Plants**

In late August 2012, Exelon announced that the company is halting efforts to gain initial federal regulatory approvals for new nuclear construction in Victoria County, Texas. Exelon is the nation's largest nuclear power plant operator.

### **ESP Withdrawal and Continued Texas Presence**

The company, which had previously filed an Early Site Permit (ESP) application for an 11,500-acre tract southeast of Victoria, has notified the U.S. Nuclear Regulatory Commission that it will withdraw the application. Exelon made the decision in response to low natural gas prices and economic and market conditions that have made construction of new merchant nuclear power plants in competitive markets uneconomical now and for the foreseeable future.

"While we have decided to withdraw our application for this particular project, Exelon's presence in Texas is growing and will continue to grow," said Charles Pardee, Chief Operating Officer of Exelon Generation. "We like doing business in Texas. It has a welcoming environment for business and industry, the competitive market is strong and the people are great. Exelon is in Texas for the long haul."

Exelon, which years ago merged with Constellation Energy, operates more than 4,000 megawatts of natural gas and wind generation capacity in Texas. It also sells electricity to more than 144,000 residential accounts through its StarTex brand, and to nearly 35,000 commercial customers through Constellation New Energy.

Exelon and its subsidiaries have offices in Austin, Dallas and Houston.

### Background

In 2008, Exelon submitted an application for a combined construction and operating license (COL) for the Victoria County site. The company never made a final decision to build a nuclear power plant at the location, however, and instead applied for an Early Site Permit in 2010. This change in licensing strategy allowed Exelon to continue pursuing some aspects of site evaluation and regulatory approvals while deferring a construction decision for up to 20 years. Exelon's recent decision to withdraw the ESP application brings an end to all project activity.

“Victoria County was Exelon's location of choice because of its strong community support. People made us feel at home in their community from the very first day, and they still do,” said Marilyn Kray, Vice President of Nuclear Project Development for Exelon Generation. “This is all about the economics of the project, which are driven by commodity and financial markets. I cannot stress enough how important it was to us to have partnered with Victoria, and we look forward to other Texas partnerships in the future.”

### ***State of New York***

## New York Issues LLW Status Report

On August 21, 2012, the New York State Energy Research and Development Authority (NYSERDA) announced the availability of the twenty-sixth annual *New York State Low-Level Radioactive Waste Status Report*, which covers calendar year 2011.

The New York State Low-Level Radioactive Waste Management Act (Chapter 673, Laws of 1986) requires facilities in the state that produce low-level radioactive waste to file annual reports with NYSERDA detailing the types and quantities of waste generated. The Act further requires NYSERDA to prepare an annual status report summarizing this information and to submit the report to the Governor and the New York State Legislature.

The 2011 Status Report provides data on the volume and activity of low-level radioactive waste shipped to out-of-state disposal sites and data on low-level radioactive waste stored at the end of the year pending disposal.

The [New York State Low-Level Radioactive Waste Status Report](http://www.nyserda.ny.gov/Publications/Energy-Analysis-Reports.aspx) is available on NYSERDA's website at <http://www.nyserda.ny.gov/Publications/Energy-Analysis-Reports.aspx>.

*For additional information, please contact Alyse Peterson of NYSERDA at (518) 862-1090 ext. 3274 or at [alp@nyserda.ny.gov](mailto:alp@nyserda.ny.gov).*

***Andrews County v. Sierra Club***

**AIF Joins Andrews County Lawsuit re WCS Facility**

On June 28, 2012, the Andrews Industrial Foundation (AIF) joined a lawsuit that was earlier filed by Andrews County in the state’s 109<sup>th</sup> District Court. The suit seeks legal action to block efforts by the Sierra Club to enjoin future shipments to the Waste Control Specialists LLC (WCS) low-level radioactive waste disposal facility.

According to AIF’s press release, the lawsuit “could mean as much as \$500,000 in new revenue for the county by the end of August by preventing third-party groups from restricting the disposal of waste at the Texas Compact Disposal Facility.”

**AIF Statements and Press Release**

“The citizens of Andrews have more than 20 years invested in this project and now that it’s finally generating revenue a special interest group from Austin is threatening to try and stop its operations,” stated AIF President Lloyd Eisenrich. “That is unacceptable.”

“Under state law, Andrews County is to receive a percentage of the gross from all disposal of low-level radioactive waste,” continued Eisenrich. “And now that the facility is finally ready to begin that disposal, we cannot sit idly by and let some Austin extremists take away the revenue that our community has earned.”

Eisenrich further claims that, in addition to opposing WCS, “the Sierra Club is also trying to shut down coal-fired power plants, hydraulic fracturing, natural gas and has a goal of eliminating the use of fossil fuels in the next 40 years.”

“We recruited this project because the vast majority of Andrews residents view it as a new source of non-tax revenue for the county and it broadens our employment base with good-paying jobs that are not subject to the boom-and-bust cycles of the industrial oil industry,” concluded Eisenrich. “We also take pride in the fact that Andrews County is providing a Texas solution to an important environmental problem—the safe, permanent disposal of low-level radioactive waste.”

**Background**

**Lawsuit** On June 18, 2012, the Commissioners Court of Andrews County approved for the county to seek legal action to block efforts by the Sierra Club to enjoin future shipments to the Waste Control Specialists LLC (WCS) low-level radioactive waste disposal facility. (See *LLW Notes*, May/June 2012, pp. 32-34.) According to local news reports, the issue arose after at least one compact generator decided to hold back a waste shipment to WCS based on recent actions by the Sierra Club.

The commissioners reportedly discussed the issue during a 20-minute Executive Session that included an update from representatives of WCS. Thereafter, the commissioners unanimously agreed to file a declaratory judgment action in the 109th District Court seeking to preclude the Sierra Club from obtaining a temporary restraining order against future shipments to the WCS facility.

The following day—on June 19, 2012—both the Andrews Industrial Foundation and Andrews Chamber of Commerce agreed to join the county’s legal action.

**Recent Filings by Sierra Club** On May 21, 2012, the Sierra Club submitted a motion to the Texas Commission on Environmental Quality (TCEQ) that seeks to overturn the Executive Director's April 25, 2012 decision authorizing WCS to begin accepting waste and to begin waste



disposal activity under Radioactive Material License R04100.

The filing by the Sierra Club comes on the heels of a May 8, 2012 decision by a Texas State District Court judge that ordered the TCEQ to hold a contested case hearing on the WCS low-level radioactive waste disposal facility in Andrews County, Texas. The ruling was issued after a hearing in a pending lawsuit by the Sierra Club which argues that the TCEQ licensed the facility without holding a required contested case hearing.

The State Attorney General's Office has filed an appeal of the district court's ruling, arguing that the WCS license is valid. The appeal has the legal effect of superseding the district court's judgment and WCS remains authorized to continue its low-level radioactive waste disposal operation. The Sierra Club has also filed an identical lawsuit against the TCEQ in Travis County, which is currently pending.

**Licensing and Waste Acceptance** By letter dated April 25, 2012, TCEQ authorized WCS to "accept waste and begin disposal activity as authorized by its amended license R04100 and subject to applicable rules and statutes." (See *LLW Notes*, March/April 2012, pp. 1, 17-18.) In so doing, TCEQ noted that the Executive Director, in coordination with its consultants, has inspected the constructed CWDF and found as follows: the facility is in conformance with the description, design and construction requirements; the requirements of License Condition 41 relating to ownership and financial assurance have been met; in accordance with License Condition 83, the Executive Director staff has reviewed WCS' final geotechnical report and as-built construction drawings of the facility, which were certified by a registered professional engineer licensed in the State of Texas; the Executive Director staff has reviewed information submitted under License Conditions 66 and 75; and, other applicable submittals and approvals relating to receipt and acceptance of low-level radioactive waste—such

as waste acceptance, safety and inspection procedures—have also been processed.

"Please be aware, however, that Executive Director staff is closely monitoring activities associated with wells OAG-21, OAG-22, OW-1, and OW-2," states the April 25 letter. "It is important to ensure that saturated conditions do not exist within 100 feet of the disposed waste." The letter also notes that, in accordance with the license, prior agency approval is required for any future expansion of the currently constructed disposal unit.

On April 27, 2012, WCS announced that the first shipment of low-level radioactive waste has been disposed of in the CWDF. The shipment was received from Bionomics Inc. TCEQ leadership was at the site overseeing the entire operation along with TCEQ resident inspectors, who are at the site full-time on a daily basis.

*For additional information on TCEQ's licensing activities, please contact Charles Maguire of the TCEQ at (512) 239-5308 or at Charles.Maguire@tceq.texas.gov.*

*For additional information on the WCS facility, please contact WCS President Rodney Baltzer at (972) 450-4235 or at rbaltzer@valhi.net.*

***Aiken County v. U.S. Nuclear  
Regulatory Commission***

## Appeals Court Delays Yucca Mountain Decision

On August 3, 2012, by a vote of 2 to 1, the U.S. Court of Appeals for the District of Columbia Circuit declined to force the U.S. Nuclear Regulatory Commission to rule on a license application for the proposed Yucca Mountain waste repository, instead delaying the case for up to four months.

The ruling was the latest in two years of litigation, government agency decisions and moves by members of Congress in response to the Obama administration's decision to effectively shut down the project for long-term storage of spent nuclear fuel in Nevada.

### Background

Aiken County filed the lawsuit in 2011 in response to a decision by the U.S. Department of Energy to withdraw the license application pending before the NRC on the proposed repository for used nuclear fuel from commercial nuclear power plants and high-level waste from U.S. defense programs. In the suit, Aiken County petitioned the court for a writ of mandamus ordering the NRC to complete its review of the proposed Yucca Mountain repository license application and issue a final decision approving or disapproving it.

In response to the lawsuit, NRC claimed, among other things, that it does not have the funds to complete the license review and issue a decision on the project. Accordingly, the court granted NRC the extension until after Congress finishes its 2013 appropriations related to the federal government's nuclear waste management program.

Earlier this year, in June 2012, the same court ruled in another case that the NRC must reevaluate the adequacy of its environmental review of a rule change that extended by 30 years the time that spent fuel may be stored at nuclear plants—which is the only current storage alternative to the repository.

### Statement from NEI

In response to the ruling, NEI Vice President and General Counsel Ellen Ginsberg stated, in part, as follows:

The nuclear energy industry is disappointed that the Court of Appeals did not take the opportunity to directly address the unambiguous statutory obligation imposed on the Nuclear Regulatory Commission by the Nuclear Waste Policy Act. However, it is noteworthy that both the concurrence by Judge Kavanaugh and the dissent by Judge Randolph agree that the Nuclear Regulatory Commission has a clear statutory obligation under the Nuclear Waste Policy Act. Although he supported holding the case in abeyance, Judge Kavanaugh rejected the NRC's bases for its action and opined the NRC "appears to have no legal authority to defy the law."

Ginsberg went on to state, "In his dissent, Judge Randolph describes the issue perfectly, consistent with the industry's view, in stating that the court's responsibility in deciding whether to order compliance with the law "has never depended on the possibility that a later Congress might do something to excuse the violation."

Like Judge Randolph, we believe the court should have acted under the current circumstances. As the judge stated, "There is no reason to delay issuing a writ of mandamus to correct this transparent violation of the law."

## ***Congress***

# Annual Security Inspection Report to Congress Published

On August 21, 2012, the U.S. Nuclear Regulatory Commission made available to the public an unclassified version of an annual report to Congress outlining the previous year's security inspection program. The report is required under the Energy Policy Act of 2005.

The report covers the NRC's security inspection program, including force-on-force exercises, for commercial nuclear power reactors and Category I fuel cycle facilities for calendar year 2011.

"We are pleased to provide this report to Congress, which demonstrates the NRC's ongoing commitment to ensuring nuclear power facilities in this country operate securely," said NRC Chairman Allison Macfarlane. "This report reflects the rigor of our regulations, the expertise of our inspectors and the responsiveness of our licensees."

According to the report, NRC conducted 193 baseline security inspections at commercial nuclear power plants and 24 force-on-force inspections, which use a well-trained mock adversary force to test a facility's security posture. These inspections identified 151 findings as follows:

- 140 findings of very low security significance (or a green finding); and,
- 11 findings of more than "very low" significance, although the specifics of the severity violations are not public.

By comparison, there were 197 inspections (172 baseline and 25 force-on-force) and 144 findings in 2010, of which 133 were of very low security significance and 11 were of greater than very low security significance.

Whenever a finding is identified during a security inspection, the NRC ensures the issue is corrected immediately or compensatory measures are put in place, if necessary. Details of security findings are considered sensitive and not released to the public.

*For additional information, the public version of the report can be found on the NRC website at [www.nrc.gov](http://www.nrc.gov).*

## ***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.*

#### **Central Compact/State of Louisiana**

**River Bend Nuclear Plant** On July 11, 2012, the U.S. Nuclear Regulatory Commission held a public meeting to discuss the preliminary findings of the Augmented Inspection conducted at the River Bend nuclear power plant after an electrical switchgear malfunction forced operators to power down the reactor after an electrical fault occurred in a main feed-water pump on May 24, 2012. Protective relays should have isolated the electrical fault. Instead, in a cascading effect, other pieces of equipment were affected, causing a complete loss of non-safety related cooling water to the plant. The team included fire protection, electrical, and operations specialists and they reviewed the licensee's actions in response to the incident. The team subsequently issued a written report 30 days after the meeting that identifies areas for further inspection follow-up. The plant, which is operated by Entergy Operations, is located 24 miles northwest of Baton Rouge.

**Waterford 3 Nuclear Plant** On August 22, 2012, NRC hosted an open house in New Orleans, Louisiana to discuss the agency's assessment of safety performance last year at the Waterford 3 nuclear plant. "The NRC continually reviews the safety performance of Waterford 3 and each of the

nation's commercial nuclear power plants," said Region IV Administrator Elmo E. Collins. "This meeting will allow us to speak directly with the local community about the plant's performance last year and the NRC's actions to make sure the plant continues to operate safely, including the additional inspections performed during 2011 in response to the events at Fukushima Daiichi to evaluate the safety of U.S. nuclear plants. Those reviews showed that Waterford 3 and other U.S. plants continue to operate safely." The NRC said Waterford 3—which is operated by Entergy Operations—operated safely during 2011 and will receive the very detailed inspection regime during 2012 used by the NRC for plants that are operating well. These inspections are performed by resident inspectors stationed at the plant and by specialists from the Region IV office in Arlington, Texas. *Current performance information for Waterford 3 is available on the NRC web site at [http://www.nrc.gov/NRR/OVERSIGHT/ASSESS/WAT3/wat3\\_chart.html](http://www.nrc.gov/NRR/OVERSIGHT/ASSESS/WAT3/wat3_chart.html).*

**Quality Inspection and Testing** Quality Inspection and Testing (QIT) of New Iberia, Louisiana has agreed to pay a \$3,500 fine and take corrective actions related to securing radiography equipment and complying with job site procedures under an agreement reached with NRC. The settlement with QIT was achieved under the NRC's Alternative Dispute Resolution (ADR) process, which was requested by QIT. The object was to reach a settlement agreement and address four apparent violations that included failures to secure radiography equipment used to photograph pipe welds, wear required dosimetry, and carry the required documents in a vehicle on site. These were detailed in an inspection report on June 5, 2012. ADR is a process in which a neutral mediator with no decision-making authority assists the parties in reaching an agreement or resolving any differences regarding a dispute. Under the agreement, QIT's actions will include the following: (1) develop and implement a comprehensive training program for all employees that clearly explains the consequences for violating NRC regulations, the

importance of following proper procedures when using a radioactive source, and properly securing the material, and (2) revise procedures to improve how employees conduct work at job sites, how they report concerns, and address the securing of licensed material and equipment. *Copies of the enforcement actions have been posted on the NRC web site at <http://www.nrc.gov/reading-rm/doc-collections/enforcement/actions>.*

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

**Honeywell Metropolis Works** In July 2012, NRC issued a Confirmatory Action Letter to Honeywell Metropolis Works outlining actions the company has agreed to take before restarting its uranium conversion operations. During an inspection that examined how the Metropolis, Illinois facility would fare in a major earthquake or a tornado, the NRC concluded that a credible seismic event could result in a higher risk to the public than currently assumed. The inspection raised concerns that Honeywell may have underestimated the amount of uranium hexafluoride that could be released into the environment should the process equipment be damaged by such an event. However, this issue does not currently impact the safety of the facility because it is shut down. In a shutdown configuration, a seismic event or a tornado would not result in a significant release of material. “Honeywell has committed to the NRC that it will not resume operations until these safety concerns have been resolved,” said Victor McCree, the NRC’s Region II Administrator. “Ensuring the safety of the people who live near the plant and the workers at the facility must be our primary objective.” Honeywell Metropolis Works takes milled uranium and converts it into uranium hexafluoride gas which is then enriched at other facilities in order to make fuel for commercial power reactors. Issuance of a Confirmatory Action Letter does not preclude the NRC from taking other actions for any violations of NRC requirements that may be identified. *A copy of the confirmatory action letter is available on the NRC website at [\*based.html\* or using the number ML12195A212 or from the Region II Office of Public Affairs.](http://www.nrc.gov/reading-rm/adams/web-</a></i></p></div><div data-bbox=)*

### **Midwest Compact/State of Ohio**

**Davis-Besse Nuclear Plant** On August 9, 2012, NRC held a public meeting to discuss its independent review of FirstEnergy Nuclear Operating Co.’s (FENOC) causal analysis of, and proposed corrective actions for, cracks in the shield building at the Davis-Besse Nuclear Power Station—which is located approximately 21 miles southeast of Toledo in Oak Harbor, Ohio. The NRC has determined the plant’s root cause analysis established a sufficient basis for its conclusions. NRC conducted a thorough, independent review of the plant’s root cause determination to make sure the reasons for the internal cracks in the shield building are well understood. The agency evaluated the company’s proposed actions to ensure the continued safety of the shield building going forward. These actions included additional tests and laboratory analysis of the shield building; applying a protective moisture coating on the building; and, plan to restore the plant’s design and licensing basis. These reviews were performed by a team of four NRC inspectors that evaluated whether the company’s data and analysis were thorough and rigorous. The NRC team concluded that the actions proposed by the company should prevent recurrence of the laminar cracking if properly implemented. In addition, the NRC’s license renewal experts are evaluating the implications of this issue in the context of Davis-Besse’s request to extend its operating license. *The NRC documented the results of its independent inspection in a publicly available inspection report at: <http://adams.nrc.gov/wba/> by entering accession number ML12173A023.*

### **Northwest Compact/State of Alaska**

**Colaska** On August 21, 2012, NRC staff held a pre-decisional enforcement conference with representatives of Colaska, dba Secon Southeast Alaska to discuss apparent violations of NRC

regulations regarding radiation safety and the security of portable nuclear gauges at the company's facility in Juneau, Alaska. During the conference, the company was provided with an opportunity to address the five apparent violations that occurred at their facility including failure to properly secure gauges while in storage, periodically review the radiation protection program, conduct an inventory of the gauges every six months, and conduct annual tests of the sealed sources for leakage or contamination. The decision to hold a pre-decisional enforcement conference does not mean that a final determination has been made, that violations have occurred or that enforcement action will be taken. No decision on the apparent violations or any contemplated enforcement actions, such as a civil penalty, were made at the conference. Rather, those decisions will be made by NRC officials at a later time.

### **Southeast Compact/States of Alabama, Florida and Mississippi**

**Browns Ferry Nuclear Plant** In mid-August 2012, NRC staff issued a violation to the Tennessee Valley Authority for an inspection finding at the Browns Ferry nuclear power plant and announced that the agency will increase oversight of units Two and Three. The "white" finding for all three units at Browns Ferry—which is already subject to increased NRC oversight due to an inspection finding discovered in 2010—was based on an NRC inspection that found plant operators and staff would not have been able to satisfactorily perform newly implemented procedures for safe plant shutdown. The NRC identified procedural adherence deficiencies and determined that operators and staff were not adequately trained on the new procedures. On July 25, 2012, the issue was discussed at a regulatory conference in Atlanta where TVA provided the NRC staff additional information on their analysis and corrective actions. After reviewing all the information, the NRC staff decided that the finding should be white. The 2010 inspection finding for Unit One was "red,"

meaning it has high safety significance. That unit remains under increased NRC oversight due to the red finding. TVA has informed the NRC that it is reviewing or revising the procedures, instructing operators and establishing a formal process for procedure changes to ensure that operators are appropriately trained. NRC inspectors will conduct a follow-up inspection to verify that the corrective actions have been effective and address the issue. The three-unit Browns Ferry plant is located near Athens, Alabama—approximately 32 miles west of Huntsville.

**St. Lucie Nuclear Plant** In early July 2012, NRC approved a request by Florida Power & Light (FP&L) to increase the power level of St. Lucie Unit 1 by 12 percent. The power uprate for the pressurized-water reactor—which is located approximately 10 miles southeast of Ft. Pierce, Florida—will increase the unit's thermal power level from 2,700 to 3,020 megawatts thermal. The uprate translates into an increase in the plant's electricity generating capacity of 15 percent, from approximately 853 to 982 megawatts electric. The NRC staff's evaluation determined that FP&L could safely increase the reactors' power output primarily by carrying out significant upgrades to several plant systems and components, including the feed-water pumps and the high-pressure turbine. 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 nuclear steam supply systems, instrumentation and control systems, electrical systems, accident evaluations, radiological consequences, fire protection, operations and training, testing, and technical specification changes. FP&L intends to implement the uprate in the next few months. The NRC previously published a notice about the power uprate application in the *Federal Register*. *The agency's evaluation of the St. Lucie Unit 1 power uprate is available through the NRC's ADAMS electronic document database by searching for accession number ML12181A019.*

**Grand Gulf Nuclear Power Plant** On July 19, 2012, NRC announced approval of a request by Entergy Operations Inc. to increase the power generating capacity of Grand Gulf Nuclear Station Unit No. 1 by 15 percent. The power uprate for the boiling-water reactor, located approximately 25 miles south of Vicksburg, will increase the plant's power generating capacity from approximately 1,300 to 1,500 megawatts electric. The NRC staff's evaluation determined that Entergy could safely increase the reactor's power output primarily by replacing significant portions of several plant systems and components including the turbine rotors for the reactor feed pumps, power range neutron monitoring system, steam dryer, and the high-pressure turbine. 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 proposed power uprate focused on several areas including the nuclear steam supply systems, instrumentation and control systems, electrical systems, accident evaluations, radiological consequences, fire protection, operations and training, testing, and technical specification changes. Entergy intends to implement the uprate following the spring 2012 refueling outage. *The agency's evaluation of the Grand Gulf power uprate is available through the NRC's ADAMS electronic document database using accession number ML121210020.*

### State of Michigan

**D.C. Cook Nuclear Power Plant** In late June 2012, NRC issued a Confirmatory Order to the D.C. Cook Nuclear Power Plant for an access control related violation. The two-unit plant operated by Indiana Michigan Power Co. is in Stevensville, Michigan—roughly 60 miles southwest of Kalamazoo. The violation stems from two D.C. Cook supervisory-level individuals who failed to ensure a high level company official who was offsite when randomly selected for Fitness-for-Duty (FFD) testing was tested when the individual came onsite at the earliest available time. As a result of an Alternative Dispute Resolution (ADR) meeting which used a mediator

to resolve the issues, Indiana Michigan Power Co. has agreed to abide by a Confirmatory Order—a legally binding commitment that outlines a number of actions the company must take to ensure the NRC's concerns will be addressed. Some of the commitments for the company include: conduct unannounced FFD on the high level official; revise aspects of the FFD procedure; develop a lessons-learned presentation of the events that occurred emphasizing the procedural and NRC requirements regardless of pressure due to organizational structure and time constraints; and, make the presentation at an industry FFD forum so that others in similar positions may receive the information. Indiana Michigan Power Co. has agreed to address these issues according to the timelines established in the Confirmatory Order and to send the NRC a letter documenting completion of the actions within 30 days after they are done.

**Palisades Nuclear Power Plant** In mid-July 2012, NRC issued a CAL documenting actions that the Palisades Nuclear Power Plant has agreed to take in order to provide assurance that an apparent leak in the safety injection refueling water storage tank and a potential leak in the control room do not affect public health and safety. The plant is owned by Entergy Nuclear Operations and is located in Covert, Michigan—approximately 40 miles west of Kalamazoo. Some of the Entergy commitments to the NRC include: measure and trend daily leakage from the tank; declare the tank inoperable if the leakage reaches 38 gallons per day; if the tank is actively leaking, take actions to repair the tank in accordance with applicable safety standards; continue to inspect the concrete support structure above the control room, control room hallway and control room ceiling; and, correct the condition related to water seepage through the concrete support structure into the control room prior to the restart from the 2013 refueling outage. NRC will review and evaluate the plant's actions in response to the CAL in order to make sure they are thorough and complete. Failure to meet the commitments in the CAL may result in additional regulatory action if

the utility does not provide reasonable assurance that the NRC can rely on Entergy to meet the NRC's requirements and protect public health and safety.

### **State of Nebraska**

**Fort Calhoun Nuclear Power Plant** On September 11, 2012, NRC staff will meet with officials from the Omaha Public Power District to discuss the status of the Fort Calhoun nuclear plant's performance improvement activities. OPPD operates the plant, which is located 19 miles north of Omaha. The meeting, which is open to public observation, will be held from 6:00 – 9:00 p.m. CDT at Dana College's Gardner-Hawks Center at 2848 College Drive in Blair, Nebraska. Fort Calhoun is shut down and remains in a safe mode following flooding along the Missouri River in 2011. OPPD officials and the NRC staff will discuss work underway at the plant and efforts to prepare it for restart, including the status of performance improvement items outlined in a Confirmatory Action Letter the NRC sent to OPPD on June 11. This meeting is one of a series the NRC is holding to keep the public informed about OPPD's efforts to address performance issues.

### **State of New Hampshire**

**Seabrook Nuclear Plant** On August 7, 2012, NRC finalized a "white" (low to moderate safety significance) inspection finding for the Seabrook nuclear power plant. The inspection finding stems from an emergency exercise conducted in April 2012 at the plant—which is located in Seabrook, New Hampshire and operated by NextEra Energy Seabrook, LLC. All U.S. nuclear power plants are required to undergo a graded full-scale emergency exercise once every two years. During these exercises, the NRC assesses the company's on-site emergency response capabilities—including the ability to evaluate and respond to a significant event and to communicate what is going on to state, county and local authorities. Meanwhile, the Federal Emergency Management Agency assesses off-site

response. During the most recent emergency exercise for the Seabrook plant, NextEra personnel did not develop and make proper initial protective action recommendations to the states, based on radiological conditions at the time, although their recommendations did become correct as the exercise scenario progressed. While some deficiencies can be expected in a challenging exercise scenario, the NRC requires plant operators to identify the issues, critique them and take appropriate corrective actions. The NRC will perform a supplemental inspection at Seabrook to evaluate the company's root-cause evaluation of the problem identified during the emergency exercise and its corrective actions. NextEra will notify the agency once it is ready for that review.

### **State of North Carolina**

**Harris Nuclear Power Plant** On August 24, 2012, NRC staff held a pre-decisional enforcement conference with officials of Duke Energy to discuss apparent violations of NRC requirements involving the ventilation systems for facilities at the Harris nuclear power plant that would be staffed during emergencies. The Harris plant, which is operated by Duke Energy, is located near New Hill, North Carolina—approximately 20 miles southwest of Raleigh. During the conference, NRC staff and company officials discussed the safety significance of the two inspection findings related to the ventilation systems for the plant's Emergency Operations Facility, or EOF, and Technical Support Center, or TSC. One apparent violation involves multiple examples of the company's failure to maintain the EOF ventilation system, which was out of service for extended periods of time during a two-year period. The other apparent violation related to a change the company made to calculations for how much unfiltered air could get into the TSC without a technical basis for such a change. Both of the issues that led to the apparent violations have now been corrected. The two apparent violations have preliminarily been classified as "white"—i.e., of low to moderate safety significance. No decision on the final safety



significance or any possible enforcement action was made at the regulatory and enforcement conference. Those decisions will be made by NRC officials at a later time.

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### ***Japan/Fukushima Dai-ichi Nuclear Plant***

## **Post-Fukushima Requirements Guidance Documents Finalized**

By press release dated August 31, 2012, the U.S. Nuclear Regulatory Commission 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.

### **First Order**

Pursuant to the first Order, all U.S. nuclear power plants are required to better protect portable safety equipment put in place after the terrorist attacks of September 11, 2011. Plants are also required to obtain sufficient equipment to support all reactors and spent fuel pools at a given site simultaneously. The ISG for this Order endorses the industry's updated guidance for dealing with a scenario that knocks out all of a plant's alternating current electric sources. The updated approach includes the use of backup power supplies for

devices that would burn off accident-generated hydrogen before it could accumulate to explosive levels. The staff concludes that the updated approach will successfully implement the Order.

*The first ISG is available in the NRC's electronic document database, ADAMS, under accession number ML12229A174. The associated industry document is available under accession number ML12242A378.*

### **Second Order**

The second Order applies only to U.S. boiling-water reactors that have "Mark I" or "Mark II" containment designs. Mark I reactors must improve installed venting systems that help prevent core damage in the event of an accident. Mark II reactors must install these venting systems. The ISG for this Order provides more detailed technical information on the vents, as well as how vent designs and operating procedures should avoid, where possible, relying on plant personnel taking actions under hazardous conditions.

*The second ISG is available in ADAMS under accession number ML12229A475.*

### **Third Order**

Under the third Order, all plants are required to install enhanced equipment for monitoring water levels in each plant's spent fuel pool. The ISG for this Order largely endorses an industry document that the staff concludes will successfully implement the Order. The ISG defines in more detail the water levels that the new equipment must accurately report, as well as standards for equipment mounting, powering and testing, personnel training and other criteria. The final ISG notes several areas, including instrument qualifications and instrument protection from falling debris, where the industry revised its initial approach. An exception in the staff's endorsement sets specific seismic criteria to ensure the instruments will survive an earthquake.

*The third ISG is available in ADAMS under accession number ML12221A339. The associated industry document is available under accession number ML12240A304.*

### **Background**

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

## **NRC Discusses Implementing Orders for Post Fukushima Improvements**

On July 27, 2012, U.S. Nuclear Regulatory Commission staff met with industry representatives to continue discussions on schedules and guidance for the Orders and related request for information 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 March 2011.

The meeting was held from 1:00 – 3:00 p.m. in the Commission Hearing Room on the first floor of the White Flint North complex at 11555 Rockville Pike in Rockville, Maryland. During the meeting, senior 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. The discussions also covered longer-term evaluations and studies related to possible lessons learned from the Fukushima accident. During the

meeting, the public was provided the opportunity to ask the NRC staff questions about the process.

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 William Reckley at (301) 415-7490 or [william.reckley@nrc.gov](mailto:william.reckley@nrc.gov).*

## **NRC Holds Fukushima Related Meetings**

Recently, the U.S. Nuclear Regulatory Commission held various meetings related to efforts to improve the nuclear industry and learn from lessons following last year's accident at the Fukushima Dai-ichi reactors in Japan.

### **Post-Fukushima Regulatory Framework**

On June 20, 2012, NRC staff met with members of the public and other interested parties to discuss the staff's preliminary approach to implementing one of the broadest recommendations of the NRC's Japan Near-Term Task Force, which examined issues raised by the Fukushima nuclear accident in March 2011. During the meeting, the public was provided with an opportunity to ask the NRC staff questions about the Recommendation 1 effort.

In particular, NRC staff explained their current thinking regarding the Task Force's Recommendation 1—which calls for “establishing a logical, systematic, and coherent regulatory framework for adequate protection that appropriately balances defense-in-depth and risk considerations.” The staff is exploring possible alternatives on how to revise the NRC's approach to regulating U.S. nuclear power plants. The agency's five Commissioners directed the staff to provide, by February 2013, options on how to act on Recommendation 1.

### **Lessons Learned from Fukushima Accident**

On August 7, 2012, the NRC was briefed by its staff and other stakeholders on the agency's efforts to implement lessons learned from the Fukushima Dai-ichi accident.

The briefing, which was conducted as a public meeting, was held at NRC headquarters at 11555 Rockville Pike in Rockville, Maryland. It began at 9:00 am and was webcast.

### **Background**

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 NNTF recommendations and related activities.

*For additional information, please contact Richard Dudley at (301) 415-1116 or at richard.dudley@nrc.gov or contact the NRC's Office of Public Affairs at (301) 415-8200 or at opa.resource@nrc.gov. Additional information can be found on the agency's web site at [www.nrc.gov](http://www.nrc.gov).*

## ***International Convention on Nuclear Safety***

### **National Report Issued for Convention on Nuclear Safety Meeting**

On August 10, 2012, the U.S. Nuclear Regulatory Commission announced the issuance of a report on the safety of U.S. nuclear power plants to be considered at the Convention on Nuclear Safety's Extraordinary Meeting—which was held at the International Atomic Energy Agency in Vienna, Austria on August 27-31.

The report discusses the actions taken by the United States to improve nuclear safety in response to the accident at the Fukushima Daiichi nuclear power plant in Japan on March 11, 2011. It is intended to add to the knowledge base for parties to the Convention on lessons learned and actions taken following the Fukushima accident.

In particular, “The United States of America National Report for the 2012 Convention on Nuclear Safety Extraordinary Meeting” describes how the United States addressed six topics in relation to the Fukushima accident including:

- external events;
- design issues;
- severe accident management and recovery;
- national organizations;
- emergency preparedness and response; and,
- post-accident management, and international cooperation.

Because license holders are responsible for the safety of U.S. nuclear power plants, the report includes a section developed by the Institute of Nuclear Power Operations describing the U.S. nuclear industry's response to the Fukushima accident.

Copies of “The United States of America National Report for the 2012 Convention on Nuclear Safety Extraordinary Meeting” are available for public inspection in the NRC Public Document Room at NRC headquarters, One White Flint North, 11555 Rockville Pike, Rockville, Maryland or through the NRC’s website at [www.nrc.gov](http://www.nrc.gov).

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## ***U.S. Mission to International Organizations***

### **Attaché Named to U.S. Mission to International Organizations**

On June 25, 2012, the U.S. Nuclear Regulatory Commission named Dr. Cynthia G. Jones to a term as the agency’s new Nuclear Safety Attaché at the U.S. Mission to International Organizations in Vienna, Austria. As attaché, Jones will serve as the U.S. Mission’s expert on nuclear safety issues and programs, and provide programmatic and policy oversight of the International Atomic Energy Agency’s (IAEA) safety program on behalf of the United States.

Jones will transition to the attaché position this summer and will assume the position formally in September. She is replacing Mark Shaffer, who was selected as the NRC’s Office of International Programs Deputy Office Director, effective July 1, 2012.

Jones has extensive international experience in both radiation safety and nuclear security, and has published more than 95 publications, reports or speeches in the fields of nuclear science and radiological protection. Prior to her selection, Jones served as the Senior Level Advisor for Nuclear Security in NRC’s Office of Nuclear Security and Incident Response. As such, she was responsible for providing technical expertise and policy guidance on nuclear security, safeguards, and radiological protection issues. She also served as the U.S. National Officer and Advisory

Committee member for the IAEA’s International Nuclear and Radiological Event Scale (INES). In 2011, she was elected as one of 100 scientific experts worldwide to serve as a Council Member to the U.S. National Council on Radiation Protection and Measurements.

Prior to her career with NRC, Jones worked for several governmental and university institutions in the areas of nuclear engineering, radiation protection and environmental sciences. Jones has a Doctorate and Master’s Degree in Nuclear Engineering from the University of Maryland, a Master’s Degree in Health Physics from the Georgia Institute of Technology, and a Bachelor’s Degree in Physics from Augsburg College in Minneapolis, Minnesota.

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## ***Canada/Uranium One USA***

### **Uranium One USA Issued CAL Following Uranium Release Event in Canada**

On July 6, 2012, the U.S. Nuclear Regulatory Commission issued a Confirmatory Action Letter documenting actions that Uranium One USA has agreed to take following an incident in Canada in which three workers were exposed to yellowcake from a drum shipped from a U.S. facility.

#### **Background**

The incident occurred at a uranium conversion facility in Blind River, Canada on June 23, 2012. When a worker loosened a ring clamp on a 55-gallon drum containing uranium oxide yellowcake, the lid blew off, ejecting about 26 kilograms of the material into the air. The worker closest to the drum and two others in the area, who were not wearing respirators, were exposed to airborne uranium. According to NRC, any adverse health effects to the workers would likely

be caused by chemical, rather than radiological effects.

The barrel had been shipped from Uranium One's Willow Creek Facility in Wyoming to a Canadian conversion facility on May 29, 2012. Following this incident, several other drums shipped to the Canadian facility containing yellowcake were found to be bulging from internal pressure.

The Canadian facility has stopped opening containers of yellowcake from Uranium One's Willow Creek facility until they can develop a plan to safely do so. The licensee has notified the NRC that it has suspended all shipping from the Willow Creek facility until it determines how the drums became pressurized.

### **Confirmatory Action Letter**

Under the terms of the Confirmatory Action Letter (CAL), Uranium One has agreed to investigate the cause of the event; develop a course of action to ensure the safety of any other unopened drums containing yellowcake previously shipped from its Wyoming facility; and, develop a corrective action plan to ensure the safety of continued storage, shipment or further processing of the yellowcake.

After similar events occurred at several facilities in 1998, corrective actions were adopted by the industry to prevent recurrence. Specifically, new procedures were adopted to ensure that drums containing yellowcake remained unsealed for at least three hours to ensure adequate cooling of the material.

Once the licensee has completed its own investigation, the NRC will conduct an inspection to independently evaluate the circumstances surrounding this event. NRC will also review the licensee's proposed corrective actions to ensure the facility can resume safe shipping.

*For additional information, copies of the CAL letter have been posted on the NRC's web site at [www.nrc.gov](http://www.nrc.gov).*

### ***U.S. Department of Homeland Security/ National Intellectual Property Rights Coordination Center***

## **NRC Joins DHS Intellectual Property Rights Coordination Center**

On July 11, 2012, the U.S. Nuclear Regulatory Commission became the 21st partner agency to the National Intellectual Property Rights Coordination Center—a part of the U.S. Department of Homeland Security's Immigration and Customs Enforcement. The agreement outlines the collaborative investigative efforts and cooperation protocols the two agencies will share related to counterfeit, fraudulent and suspect parts and equipment used in nuclear power plants and devices using nuclear materials.

“This important interagency partnership will play a critical role in the NRC's formal, proactive efforts to address the potential threat that counterfeit parts pose to the global supply chain, which will reduce vulnerabilities as they relate to NRC-regulated activities,” said Cheryl McCrary, Director of the NRC's Office of Investigations. “This partnership initiative will enhance the fight against wrongdoing in support of the NRC's safety and security mission.”

Founded in 2000, the center uses the expertise of its member agencies to share information, develop initiatives, coordinate enforcement actions, and conduct investigations to fight criminal counterfeiting and piracy.

“I'm excited that the NRC is joining the IPR Center, and will be partnering with us to leverage our combined resources, skills and authorities to better combat intellectual property theft and identify and dismantle the criminal organizations that seek to profit from the manufacturing, importation and sale of counterfeit items,” said

IPR Center Director Lev Kubiak. “The Center will continue to take advantage of the strengths of all of our law enforcement partners and work closely with them in the fight against intellectual property theft.”

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### ***U.S. Department of Energy/National Nuclear Security Administration***

## **Public Meeting Held re MOX Facility**

On July 24, the U.S. Nuclear Regulatory Commission held a public meeting to discuss the status of the Mixed Oxide or MOX Fuel Fabrication Facility construction project focusing on NRC inspection and oversight. The meeting was held at the Hydrogen Research Center on the Savannah River Research Campus in South Carolina. NRC staff were available to answer any questions after the formal portion of the meeting.

The MOX facility, being constructed by Shaw Areva MOX Services, is located at the U.S. Department of Energy’s Savannah River site near Aiken, South Carolina. The facility will be owned by the U.S. Department of Energy’s National Nuclear Security Administration (DOE/NNSA) and will convert supplies of surplus weapons-grade plutonium into more proliferation-resistant forms by blending it with uranium. Converting the plutonium into MOX fuel will enable it to be used in commercial reactors to generate electricity. In March 2005, NRC issued a construction authorization for the facility.

### ***Federal Emergency Management Agency / U.S. Nuclear Regulatory Commission***

## **Public Input Sought re Updating Emergency Preparedness Guidance**

On September 13, 2012, officials from the Federal Emergency Management Agency (FEMA) and the U.S. Nuclear Regulatory Commission (NRC) will meet with the public, state and local officials and other interested stakeholders to discuss a proposed update to the agencies’ guidance for emergency preparedness plans at U.S. commercial nuclear power plants.

Both FEMA and the NRC currently evaluate those plans using a single set of guidance, “Criteria for Preparation and Evaluation of Radiological Emergency Response Plans and Preparedness in Support of Nuclear Power Plants.” The agencies are starting what is expected to be a multiyear process for revising these criteria to incorporate what’s been learned since the guidance was published in 1980. This is the second of two explanatory meetings before the process starts. Additional meetings will be held around the country as the process continues.

The meeting will run from 1:00 - 5:00 p.m. in the Commission Hearing Room at the NRC’s White Flint complex at 11555 Rockville Pike in Rockville, Maryland. The public will have the opportunity to ask questions and provide comments during the meeting.

Those planning to attend in person should pre-register online. The meeting will include both a teleconference and Web conference.

*Anyone interested in calling in or viewing the Web conference should contact Carolyn Kahler at (301) 415-0705; Shannon King at (301)415-*

6234, or visit the applicable link on the NRC's web site at [EmergencyPreparedness.Resource@nrc.gov](mailto:EmergencyPreparedness.Resource@nrc.gov) for instructions no later than September 10, 2012.

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### ***Los Alamos National Laboratory/Waste Isolation Pilot Plant***

## **LANL Sets Waste Shipping Record for Fourth Consecutive Year**

For the fourth consecutive year, the Los Alamos National Laboratory has sent a record number of transuranic (TRU) waste shipments for permanent disposal to the Waste Isolation Pilot Plant (WIPP) near Carlsbad, New Mexico. On August 2, 2012, the 172<sup>nd</sup> shipment of TRU left LANL bound for WIPP, exceeding last year's fiscal year record of 171 shipments. There are two months remaining in the current fiscal year.

"Our goal this fiscal year is 184 shipments and we are on track to surpass that by a substantial margin," said Lee Bishop, TRU Waste Manager at the U.S. Department of Energy's (DOE's) LANL Site Office. "We expect to send in the neighborhood of 200 shipments to WIPP this year."

Since WIPP opened in 1999, LANL has transported more than 1,000 shipments to the facility. In 2011, a fire broke out at Las Conchas. Although the fire did not pose an immediate threat and protective measures were in place, the State of New Mexico, the National Nuclear Security Administration (NNSA) and LANL made removal of the waste stored above ground at Area G one of their top environmental priorities. In this regard, the New Mexico Environment Department and DOE entered into an agreement

whereby LANL plans to remove 3,706 cubic meters of waste from Area G by June 30, 2014.

"We are pleased with the progress we've made in our first year of accelerated shipping and we plan to more than double the volume of waste we ship next year," said Dan Cox, Deputy Associate Director of Environmental Programs at LANL.

LANL plans to ship more than 800 cubic meters of waste to WIPP this year; 1,800 cubic meters next year; and, the remaining 1,106 cubic meters by June 30, 2014.

"We are committed to removing the waste stored above ground at Area G as quickly and safely as possible," said Pete Maggiore, Assistant Manager for Environmental Operations at NNSA's LANL Site Office. "We broke our all-time shipping record this year and we plan to set the bar even higher next year."

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### ***National Academy of Sciences/Nuclear Regulatory Commission***

## **NRC Presents at NAS Meeting on Fukushima Study**

The U.S. Nuclear Regulatory Commission discussed its actions following last year's nuclear accident in Japan during the National Academy of Sciences' (NAS) initial committee meeting on an NRC-sponsored study into the accident. The meeting's public session ran from 8:30 a.m. to noon on July 19 at the NAS Auditorium at 2101 Constitution Ave. NW in Washington, D.C.

During the presentation, NRC staff described the agency's Near-Term Task Force report and how the task force's recommendations have been prioritized. The agency also discussed recently issued Orders and a request for information that deals with issues highlighted in the accident at the Fukushima Dai-ichi nuclear power plant in March

## Federal Agencies and Committees *continued*

2011. NRC staff were available to answer committee member questions.

Congress mandated this NAS project following a recommendation from the Blue Ribbon Commission on America's Nuclear Future, which examined alternatives for storing, processing and disposing of spent nuclear fuel. The NAS study, funded from the NRC's budget, will address several issues, including:

- causes of the Fukushima accident;
- re-analysis of previous NAS studies on the safety and security of storing spent fuel and high-level radioactive waste;
- lessons learned from Fukushima to improve commercial nuclear power plant safety; and,
- lessons learned from Fukushima to improve regulation of commercial nuclear power plants.

General questions on the study, "Lessons Learned from the Fukushima Nuclear Accident for Improving Safety and Security at U.S. Nuclear Plants," can be sent via e-mail to Fukushima@nas.edu.

The NAS is expected to provide a final report by mid-2014.

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*(Continued from page 1)*

entire package in accordance with the United States Nuclear Regulatory Commission "Final Branch Technical Position on Concentration Averaging and Encapsulation, Revision in Part to Waste Classification Technical Position," dated January 17, 1995.

- Encapsulation media shall be in the form of structural grade cement or material technologically equivalent or superior to structural grade cement as demonstrated through technical specifications and testing.
- The encapsulation method for sealed sources shall be geometrically centered within a minimum of four (4) inches of encapsulation media distributed uniformly around the source(s).
- More than one source may be placed in a single container as long as the requirements of the WCS waste acceptance criteria, WCS' radioactive material license, and the Texas rules for low-level radioactive waste disposal (30 Texas Administrative Code Chapter 336) are met.
- The maximum concentration of any radionuclide(s) in one or more sources encapsulated in a single container must not exceed the concentration limits specified in 30 Texas Administrative Code §336.362(a)(2) for Class C low-level radioactive waste.
- For the purposes of classification for transportation and for disposal, combinations of radionuclides in a single container shall not exceed unity.
- The maximum amount of cesium-137/barium-137 gamma-emitting radioactivity in a source(s) that may be encapsulated in a single container is 30 curies (Ci). Other gamma emitters shall not exceed Class C limits or have a dose rate that exceeds U.S. Department of Transportation (U.S. DOT) shipping requirements.
- The maximum amount of radioactivity in a source(s) from transuranics, other than plutonium-241 and curium-242 that may be encapsulated in a single container, is 30 millicuries (mCi).
- The maximum amount of carbon-14 radioactivity in a source(s) that may be encapsulated in a single container shall not exceed 1 Ci.



## Federal Agencies and Committees *continued*

- Additional specific notifications to WCS and TCEQ are required to accept any neutron source (e.g., polonium-210, americium-241, radium-226 in combination with beryllium or other target).
- For nationally-tracked sources as defined in 10 CFR 20.1003, referring to sealed sources containing a quantity equal to or greater than Category 1 or 2 levels listed in Appendix E to 10 CFR Part 20, prior to shipping, the generator shall provide WCS and the TCEQ the following information specifically identifying these sources for review and approval:
  - generator's name, shipping address, radioactive material license number, and name of individual preparing the reported information;
  - the manufacturer, model, and serial number of the source or, if not available, other information to uniquely identify the source;
  - the radioactive material in the source and current activity in becquerels and curies. The activity reported must be the same as the activity that will be listed on the shipment manifest;
  - the date for which the source strength is calculated and reported; and,
  - the requested shipping date, estimated arrival date, the waste manifest number, and the waste disposal container number.
- The sealed source must be registered with the Off-Site Source Recovery Project (OSRP) before it can be accepted for disposal under the SCATR program. Go to <http://osrp.lanl.gov/PickUpSources.aspx> for information about how to register your source(s). If your source(s) are already

registered, you may wish to update your registration.

- Each source must be uniquely identified by a serial number or other unique identifier and the site should have ready any documentation available pertaining to a particular source's activity, isotope, and date of manufacture or original assay upon broker's packaging and acceptance of material.

Some radionuclides such as C-14 may have site specific constraints based on concentrations or on total activities allowed based on the performance assessment of the CWF facility. Please check with Waste Control Specialists on sources containing C-14 or those sources that might require specific notifications.

### **WCS Qualified Radioactive Material Brokers**

To facilitate participation in this program, a current list of sealed source brokers is included as follows:

- Bionomics Inc.  
1550 Bear Creek Rd.  
Oak Ridge, TN 37830  
(865) 220-8501
- Thomas Gray & Associates/EMC  
3106 S Faith Home Road  
Turlock, CA 95380  
(209) 667-1102
- Philotechnics  
201 Renovare Blvd  
Oak Ridge, TN 37830  
(865) 285-3064
- Ecology Services (*WCS qualification pending*)  
9135 Guilford Road, Suite 200  
Columbia, MD 21046  
(301) 362-6700

- Ram Services (*WCS qualification pending*)  
510 County Highway V  
Two Rivers, WI 54241  
(920) 686-3889
- QalTek Inc. (*WCS qualification pending*)  
3998 Commerce Circle  
Idaho Falls, ID 83401  
(208) 523-5557
- B&B Environmental Safety, Inc.  
17416 Murphy Parkway  
Lathrop, CA 95330  
(209) 858-5806
- Nuclear Sources and Services  
(*WCS qualification pending*)  
5711 Etheridge Street  
Houston, TX 77087  
(713) 641-0391

*For additional information regarding the SCATR collection effort, please call or email Russ Meyer of CRCPD at (512)761-3822 or at [rmeyer@crcpd.org](mailto:rmeyer@crcpd.org).*

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### ***U.S. Nuclear Regulatory Commission***

## **NRC to Delay Licensing Decisions While Analyzing Effects of Waste Storage**

On August 7, 2012, the U.S. Nuclear Regulatory Commission unanimously voted to suspend decisions regarding applications for licenses for new nuclear power plants, as well as applications to renew the licenses of existing facilities, while the agency further analyzes the environmental

effects of storing nuclear waste until a more permanent solution can be found.

The five-member panel, which is headed by newly confirmed Chair Allison Macfarlane, voted to delay issuing licenses until it responds to a federal appeals court ruling in June 2012 that the agency did not sufficiently analyze the environmental effects of waste storage. (See related story, this issue.) The process for licensing new and existing plants will move forward, but no final decisions will be made according to NRC.

### **NRC's Action**

The Commission's August 7 action was, in part, impacted by concerns surrounding the storage of spent nuclear fuel following the March 11, 2011 earthquake and tsunami that crippled three nuclear reactors at Japan's Fukushima Daiichi plant. Presenters at the meeting argued that the agency should have a clear understanding of how waste can be safely stored before moving forward with licensing plants and complained that only a handful of safety recommendations have been formalized and issued since the Fukushima disaster. NRC is in the process of implementing recommendations by a task force organized after the Fukushima incident. (See *LLW Notes*, May/June 2012, pp. 44-45.) The task force issued about a dozen safety-related recommendations for protecting plants against floods, earthquakes and other natural disasters.

The August 7 decision will most directly affect Entergy Corporation's Indian Point nuclear power plant, which is closest to receiving a license renewal decision from the Commission. Indian Point's two reactors—which are located in Buchanan, New York—expire in 2013 and 2015. In addition, several other license renewals are pending. Progress Energy Inc.'s Levy plant in north-central Florida is the next in line to receive a combined operating license decision from NRC.

This was the first major action that NRC has taken since Macfarlane was sworn in as the agency's 15<sup>th</sup> Chair on July 10, 2012. (See *LLW Notes*, May/June 2012, p. 45.) Macfarlane, a Geologist and Professor at the George Mason University, replaced former Chairman Gregory Jaczko, who resigned on May 21, 2012. (See *LLW Notes*, May/June 2012, pp. 45-46.) The meeting was only the second for Macfarlane.

### **Background**

In June 2012, the U.S. Court of Appeals for the District of Columbia Circuit vacated the NRC's waste-confidence decision and the storage rule. 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.

The commission said it is now "considering all available options for resolving the waste-confidence issue, which could include generic or site-specific NRC actions, or some combination of both." NRC also vowed to allow the public to comment in advance on any generic waste-confidence document that is issued—whether it is a new rule, a policy statement, an environmental

## **Potential Design Vulnerability in Plant Electrical Power Systems**

On July 27, 2012, the U.S. Nuclear Regulatory Commission issued a bulletin to all nuclear power plant licensees requesting information about their electric power system designs and alerting them to a potential design vulnerability that could affect the operation of key safety equipment.

The bulletin follows an incident at the Byron Station on January 30, 2012. Unit 2 of the plant shut down automatically due to unbalanced voltage entering the onsite power distribution system from the transmission network. The plant's electric power system's protection scheme was not designed to sense the loss of one of three power phases and automatically trip circuits to isolate the degraded outside power source and switch to emergency backup power. Plant operators diagnosed the problem eight minutes later and manually tripped the necessary circuits.

The degraded offsite power source potentially could have damaged the plant's emergency core cooling system. NRC regulations and plant technical specifications require reliable off-site and onsite power systems with sufficient capacity and capability to operate safety-related systems. Therefore, the NRC staff is seeking information to verify compliance with existing regulations and plant-specific licensing bases. The staff will use the information it receives to inform the Commission and determine if further regulatory action is needed.

On March 1, 2012, NRC issued Information Notice 2012-03 to inform licensees of recent experience involving loss of one of three phases of the offsite power circuit, including the Byron event. The current bulletin requests licensees to provide information on their electric system designs within 90 days. It applies to the 104 currently operating commercial power reactors and the four combined licenses for new reactors

issued earlier this year. It does not apply to licensees who have permanently ceased operation and certified that the fuel has been removed from the reactor vessel.

*Bulletin 2012-01, "Design Vulnerability in Electric Power System," is available on the NRC website at [www.nrc.gov](http://www.nrc.gov).*

### License Renewals Continue to Move Forward

The U.S. Nuclear Regulatory Commission continues to process license renewal applications from various nuclear power plant operators. In that regard, the agency recently took the following actions:

- On August 1, 2012, NRC issued a Safety Evaluation Report (SER) with Open Items on the license renewal application for the Limerick Generating Station, Units 1 and 2, in Limerick, Pennsylvania. The SER documents the results of the NRC staff's review of the license renewal application and site audit of Limerick's aging-management programs to address the safety of plant operations during the period of extended operation. Overall, the results show that Exelon has identified actions that have been or will be taken to manage the effects of aging in the appropriate systems, structures and components of the plant, and that their functions will be maintained during the period of extended operation. The open items concern operating experience for aging-management programs and corrosion of the steel liner of the suppression pools and their internal pipes, called "downcomers." A boiling water reactor's suppression pool is a large reservoir of water beneath the reactor designed to cool steam rapidly in the event of a loss-of-coolant accident. After Exelon provides satisfactory information to resolve the open items, the NRC staff will present its final conclusions on the license renewal application in an update to this SER. The staff is currently finalizing a draft Supplemental Environmental Impact Statement on the Limerick license renewal. The SER and the license renewal application have also been provided to the NRC's Advisory Committee on Reactor Safeguards (ACRS), an independent body of experts that advises the NRC on reactor safety matters. An ACRS subcommittee is expected to discuss the SER during a public meeting in September 2012 at NRC Headquarters. The full ACRS will later issue a report discussing the results of its review. In June 2011, Exelon Generation Co., LLC, submitted an application to the NRC to extend the Limerick operating licenses by 20 years. The current 40-year operating licenses expire on October 26, 2024 for Unit 1 and on June 22, 2029 for Unit 2.
- On August 1, 2012, NRC staff issued its SER with Open Items for the proposed renewal of the operating license for the Davis-Besse Nuclear Power Station in Oak Harbor, Ohio. The SER documents the results of the NRC staff's review of the license renewal application and site audit of Davis-Besse's aging-management programs to address the safety of plant operations during the period of extended operation. Overall, the results show that FENOC has identified actions that have been or will be taken to manage the effects of aging in the appropriate systems, structures and components of the plant, and that their functions will be maintained during the period of extended operation. The SER contains four open items: management of shield building cracks during the period of extended operation; operating experience review prior to entering the period of extended operation; time-limited aging analyses of reactor vessel neutron embrittlement; and, pressure-temperature limits. After FENOC provides

## Federal Agencies and Committees *continued*

satisfactory information to resolve the four open items, the NRC staff will present its final conclusions on the license renewal application in an update to this SER. The staff expects to issue that update in October. The SER and the license renewal application have also been provided to the ACRS. An ACRS subcommittee is expected to discuss the SER with open items during a meeting on September 19, 2012. The full ACRS will later issue a report discussing the results of its review. FirstEnergy Nuclear Operation Co. (FENOC) submitted an application to the NRC in August 2010 to extend the Davis-Besse license by 20 years. The current 40-year operating license is due to expire on April 22, 2017.

- On August 1, 2012, NRC held an open house to discuss the results of an inspection for the South Texas Project license renewal application. The open house was held in the Center for Energy Development in Bay City, Texas. Units 1 and 2 of the plant—which is operated by the South Texas Project Nuclear Operating Company—are both pressurized-water nuclear reactors. They are located 12 miles southwest of Bay City. The plant's current operating licenses for Units 1 and 2 will expire on August 20, 2027 and on December 15, 2028, respectively. The licensee submitted the renewal application in 2010. *The application is available on the NRC website at <http://www.nrc.gov/reactors/operating/licensing/renewal/applications/south-texas-project.html>.*
- On June 27, 2012, NRC announced that the agency was seeking public comment on a draft supplement to its final environmental impact statement on the proposed license renewal for the Indian Point nuclear power plant, Units 2 and 3, in Buchanan, New York. The supplement was issued on June 26, 2012. It evaluates data submitted by the plant's owner, Entergy Nuclear Operations Inc., after the NRC issued its final environmental report

in December 2010. These data concern the effect of plant operations on fish and other aquatic life in the Hudson River. As part of its review of the application, the NRC staff performed a detailed assessment of potential environmental impacts if the plant continues to operate for the extended period. During the course of this assessment, the NRC solicited comments from members of the public, local officials and representatives of state and federal agencies and tribal governments. The final environmental impact statement, totaling more than 2,000 pages, was published on December 3, 2010. The report recommended approval of a license extension for the plant. New information evaluated for the current supplement includes: (1) additional details provided by Entergy on the field data units of measure for impingement and entrainment; (2) a new study completed by Entergy and submitted to the New York State Department of Environmental Conservation characterizing the plant's thermal plume in the Hudson River; and, (3) new developments concerning the staff's consultation under the Endangered Species Act with the National Marine Fisheries Service (NMFS) regarding endangered species. The supplement is currently available through the NRC's ADAMS online database by entering accession number ML12174A244. Comments were accepted on the supplement through August 20, 2012. Indian Point is the site of two pressurized-water reactors. The initial 40-year operating license for Indian Point Unit 2 is set to expire on September 28, 2013, while the initial license for Indian Point Unit 3 runs through December 12, 2015. Entergy is seeking a 20-year license extension for each unit. The company submitted an application for the extensions to the NRC on April 23, 2007. Indian Point Unit 1 ceased operations in 1974.

Under NRC regulations, a nuclear power plant's original operating license may last up to 40 years. License renewal may then be granted for up to an

additional 20 years, if NRC requirements are met. To date, NRC has approved license extension requests for 73 reactor units. In addition, NRC is currently processing license renewal requests for several other reactors.

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

### Proposed Enhancements to Force-on-Force Inspections

On July 12, 2012, the U.S. Nuclear Regulatory Commission held a public meeting to discuss proposed enhancements to the agency's Force-on-Force Significance Determination Process—which is one way the NRC inspects the security programs at nuclear power plants through so-called “force-on-force” exercises. The meeting was held at the NRC's Two White Flint North building in Rockville, Maryland.

Force-on-force inspections are part of the overall regime under which the NRC inspects safety and security protocols. In force-on-force inspections, a mock adversary force “attacks” a site, and the NRC assesses the plant's ability to defend itself. These are conducted every three years.

NRC staff members are currently reviewing options for enhancing these inspections, including enhancing the way some of the objectives are assessed. At the July 2012 meeting, the staff briefed the public and stakeholders on status of the proposed changes, and sought input and questions from the audience.

*For additional information, please refer to the full meeting notice at <http://www.nrc.gov/public-involve/public-meetings/index.cfm?action=search.detail&MeetingCode=20120582>.*

### Public Input Sought re Consideration of Economic Consequences

On August 29, 2012, U.S. Nuclear Regulatory Commission staff met with the public to discuss proposed options on modifying the agency's approach to considering economic consequences from nuclear power plant accidents. During the meeting—which was held in the Commission Meeting Room at the NRC's headquarters in Rockville, Maryland—the public was provided the opportunity to ask questions and provide comments.

The staff has provided a paper, available on the NRC website, to the agency's five Commissioners laying out the NRC's current approach to economic consequences and possible revisions. On September 11, 2012, the Commissioners will discuss the economic consequences paper with a panel of external stakeholders, as well as senior NRC staff.

*For additional information, please contact Carolyn Siu at (301) 251-7568 or at [carolyn.siu@nrc.gov](mailto:carolyn.siu@nrc.gov) or Alysia Bone at (301) 251-7602 or at [alysia.bone@nrc.gov](mailto:alysia.bone@nrc.gov).*

## Security Inspection Results Reintegrated into ROP Assessment Program

Effective July 1, 2012, the U.S. Nuclear Regulatory Commission has reintegrated security inspection results into the agency's Reactor Oversight Process (ROP) assessment program. The reintegration was reflected in the August quarterly update to the ROP's Action Matrix.

The NRC previously treated safety and security inputs to the Action Matrix separately. Reintegrating security information provides a holistic representation of licensee performance and will allow NRC staff to more fully leverage supplemental inspection procedures and resources when performance warrants.

The integrated assessment process will provide the public increased transparency through a complete representation of licensees' performance. Under the new process, licensees receive a single assessment letter that covers all seven ROP cornerstones.

On July 30, 2012, letters were issued to nuclear power plant licensees with unresolved security findings notifying them that their Action Matrix assessments on the public website will appear different when the new assessment results are reflected on the NRC's website. Those plants include Farley Units 1 and 2; Fermi; Palo Verde Units 1, 2 and 3; Prairie Island 1 and 2; Salem 1 and 2; and, Hope Creek. These security findings were previously identified under the separate security assessment program, but they have not been shown on the public Action Matrix for these plants until now. Future updates to the Action Matrix will reflect new findings.

From now on, the website will show information on all seven ROP cornerstones, with security inputs displayed in one of two ways. Issues of

very low security significance will show up as "green" findings or performance indicators. Issues of greater security significance will show up as "blue" findings or performance indicators, regardless of their actual significance level. Specific information about all security performance deficiencies will remain non-publicly available, consistent with current NRC policy.

*Information on the ROP and the Action Matrix is available on the NRC website at [www.nrc.gov](http://www.nrc.gov).*

***U.S. Nuclear Regulatory Commission***

## **NRC Entered Monitoring Mode in Advance of Hurricane Isaac**

On August 28, 2012, the U.S. Nuclear Regulatory Commission issued a press release announcing that the agency had activated its Incident Response Center at the RIV office in Arlington, Texas to track Hurricane Isaac and monitor the activities of the nuclear plants in the storm's projected path.

At the time of the announcement, Hurricane Isaac was projected to make landfall near New Orleans early the next morning. Three plants owned by Entergy Nuclear were in or near the projected storm path. The Waterford plant is about 20 miles west of New Orleans; River Bend is about 25 miles northwest of Baton Rouge, Louisiana; and, Grand Gulf is near Port Gibson, Mississippi.

At 3:00 p.m. CDT on August 28, Waterford began a controlled plant shutdown due to the possibility of adverse conditions generated by the storm. Both River Bend Station and Grand Gulf remained at full power. NRC entered "monitoring mode" at 6:08 p.m. CDT.

In preparation for the storm, on August 27, NRC sent additional inspectors to support the resident inspectors at all three sites. Upon arrival, the inspectors observed plant personnel in the process of implementing severe weather procedures and conducting plant walk-downs to ensure that all loose debris and equipment was removed or secured. Plant personnel tested the emergency diesel generators and filled fuel and water tanks at the sites. The inspectors remained at the plants for several days thereafter to monitor plant conditions until the storm was no longer a threat.

*For additional information on NRC's response during a hurricane, see the recently produced YouTube video at [www.youtube.com](http://www.youtube.com) entitled, "NRC Hurricane Preparedness - Are YOU Ready?"*

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## **NRC Issues FY 2012 Annual Fees Rule**

On June 19, 2012, the U.S. Nuclear Regulatory Commission amended its regulations to reflect the licensing, inspection and annual fees it will charge its applicants and licensees for fiscal year (FY) 2012.

The FY 2012 final fee rule was published in the *Federal Register*. It includes fees required by law to recover approximately 90 percent of the agency's budget authority. The NRC received a total appropriation of \$1,038.1 million for FY 2012 and the total amount of fees the NRC has to recover by September 30, 2012 is approximately \$909.5 million—approximately one percent (\$6.3 million) less than in FY 2011.

Congress requires that NRC recover for the U.S. Treasury most of its annual appropriated budget through two types of fees. One is for specific NRC services, such as licensing and inspection activities, that apply to a specific license. The other is an annual fee for generic regulatory expenses and other costs not recovered through fees for specific services. These fees are paid to the U.S. Treasury and go into the general fund. Of the 90 percent recovered NRC budget, approximately 40 percent of the fees (10 CFR Part 170) will be billed for specific services to recover the cost of special benefits to identifiable applicants and licensees. The remaining 60 percent will be billed as annual fees (10 CFR Part 171).



“The NRC is continuing its efforts to keep its fees as low as possible by ensuring its programs are conducted efficiently and effectively, and requesting from Congress only the resources necessary to perform its mission of protecting people and the environment,” said NRC Chief Financial Officer Jim Dyer.

The final fee rule includes several changes from the NRC’s FY 2011 final fee rule. First, the NRC increased the current hourly rate of \$273 to \$274. This increase in hourly rate is a result of an increase in agency direct budgetary resources from FY 2011. Second, the NRC revised the flat license application fees in 10 CFR Parts 170.21 and 170.31 to reflect the new hourly rate. Finally, the FY 2012 annual fees increased for some licenses due to the increased direct budgeted resources for operating reactors, most material users, fuel facilities and transportation. However, the annual fees decreased for research and test reactors, spent fuel storage facilities and most uranium recovery licenses.

The NRC estimates that the FY 2012 annual fees will be paid by licensees of 104 nuclear power reactors; four research and test reactors; 19 spent nuclear fuel storage/reactor-in-decommissioning facilities; 10 fuel cycle facilities; 10 uranium recovery facilities; and, approximately 3,129 nuclear material users.

### ***U.S. Air Force***

## **Air Force Fined for Loss of Small Sealed Radioactive Source**

On July 2, 2012, the U.S. Nuclear Regulatory Commission proposed the imposition of an \$8,500 fine on the United States Air Force (USAF) Wright Patterson Medical Center in Dayton, Ohio for the loss of a small sealed radioactive source used in conjunction with a portable nuclear medical gamma camera.

During an inspection in October 2011, the NRC was notified that a small amount of sealed americium-241, the size of a grain of rice, was missing from a locked storage container. When in service, the sealed source is attached to a wand used to mark areas of interest on images captured using a medical gamma camera. Inspectors found that USAG staff had been verifying that the storage container was locked but not doing a visual check to ensure the source was present. This practice occurred between November 2004 and September 2011 until an employee noticed that the material was missing.

The USAF received a notice of violation for failure to conduct semiannual inventory of a sealed medical source and the failure to properly secure the source. The NRC considers the loss of radioactive material, no matter how small, a safety and security concern. Therefore, the NRC has classified these violations as a severity level III. Severity level I represents the greatest significance and severity level IV the lowest level.

In a letter to the NRC dated March 5, 2012, the USAF accepted the violations and outlined the corrective actions it had taken to include searches of all storage locations in the facility, reviews of

## Federal Agencies and Committees *continued*

all inventory documents, and interviews with past radiation safety officers in an effort to locate the missing source. Also, the USAF has imposed long-term corrective actions to include making a photographic inventory of all radioactive sources; improved record keeping; and, annual radiation safety training for all nuclear medicine staff with emphasis on properly securing and conducting inventory of radioactive material.

Because the licensee has had no prior violations and because it took prompt and effective corrective actions, the NRC is issuing the base penalty of \$8,500 due to the loss of a sealed source. There is no reason to believe that malicious intent was involved and the incident does not pose a significant safety risk to the public.

*Copies of enforcement actions are available on the NRC web site at <http://www.nrc.gov/reading-rm/doc-collections/enforcement/actions>. The results of the NRC inspection can be found in Inspection Report 030-28641/11-006 by using ADAMS Accession Number ML12101A057.*

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

### by internet

- NRC Reference Library (NRC regulations, technical reports, information digests, and regulatory guides). ..... [www.nrc.gov](http://www.nrc.gov)
- EPA Listserve Network • Contact Lockheed Martin EPA Technical Support at (800) 334-2405 or email (leave subject blank and type help in body of message). ..... [listserv@unixmail.rtpnc.epa.gov](mailto:listserv@unixmail.rtpnc.epa.gov)
- EPA • (for program information, publications, laws and regulations) ..... [www.epa.gov](http://www.epa.gov)
- U.S. Government Printing Office (GPO) (for the Congressional Record, *Federal Register*, congressional bills and other documents, and access to more than 70 government databases). ..... [www.access.gpo.gov](http://www.access.gpo.gov)
- GAO homepage (access to reports and testimony) ..... [www.gao.gov](http://www.gao.gov)

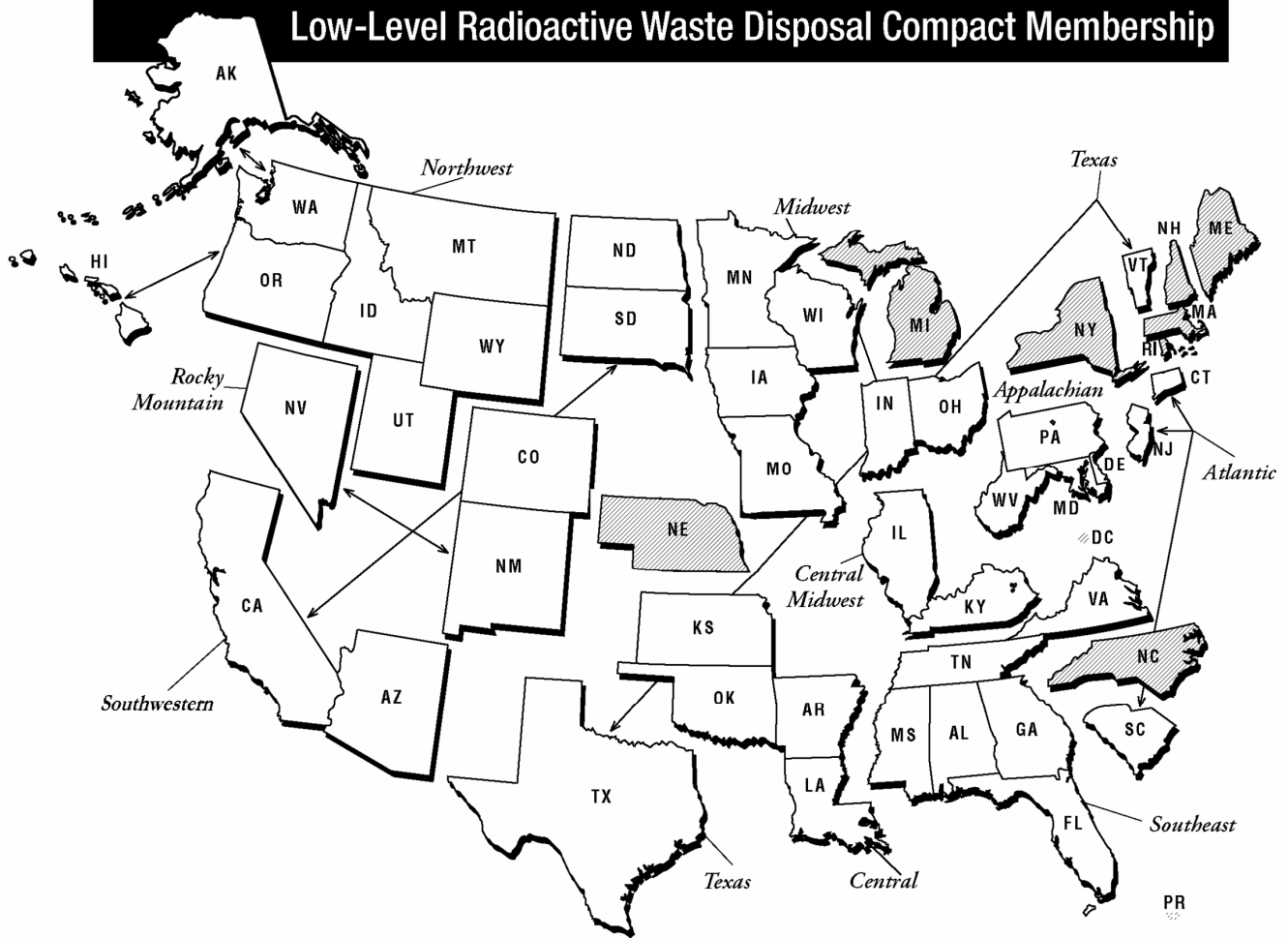
**To access a variety of documents through numerous links, visit the website for the LLW Forum, Inc. at [www.llwforum.org](http://www.llwforum.org)**

### 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](http://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.

# Low-Level Radioactive Waste Disposal Compact Membership



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## Central Compact

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## Midwest Compact

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Minnesota  
Missouri  
Ohio  
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Colorado  
Nevada  
New Mexico

*Northwest accepts Rocky Mountain waste as agreed between compacts*

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Mississippi  
Tennessee  
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North Dakota  
South Dakota

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