

Volume 29 Number 4 July/August 2014

Sierra Club vs. South Carolina Department of Health & Environmental Control and Chem-Nuclear Systems, LLC

# **Appellate Court Orders Development of Barnwell Compliance Plan**

By order dated July 30, 2014, the Court of Appeals of the State of South Carolina affirmed in part and reversed in part an Administrative Law Court (ALC) decision to renew the license under which Chem-Nuclear Systems, LLC operates the disposal facility for low-level radioactive waste in Barnwell, South Carolina.

The appellate court affirmed the ALC as to all issues, except four subsections of the regulation governing the Department of Health and Environmental Control's (DHEC's) issuance and renewal of the license.

As a result, the appellate court ordered DHEC and Chem-Nuclear to submit a written compliance plan to the ALC within 90 days (i.e., by October 31) for prompt review. If the ALC determines that the plan will bring Chem-Nuclear into compliance, the ALC is then required to set a schedule for its prompt implementation. If the ALC determines that the plan will not bring Chem-Nuclear into compliance, the ALC is then required to issue an order revoking Chem-Nuclear's license.

"While the court has requested a compliance plan, it is worth noting that since 2005 Chem-Nuclear Systems have made necessary improvements and changes to the work control processes and facility to ensure the safe disposal of low-level radioactive waste," states a company representative. These improvements and changes are outlined below.

A copy of the appellate court's order can be found at http://www.judicial.state.sc.us/opinions/ HTMLFiles/COA/5253.pdf.

### Background

Chem-Nuclear, which is owned by Energy*Solutions*, operates the 235-acre Barnwell disposal facility pursuant to Radioactive Materials (Continued on page 22)

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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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LLW FORUM, INC.

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

Low-Level Radioactive Waste Forum, Inc.

# Agenda Released for Fall 2014 LLW Forum Meeting

October 30-31, 2014 Denver, Colorado

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

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

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

### Agenda

The agenda is full of interesting and exciting speakers including but not limited to

- Frank Marcinowski, Deputy Assistant Secretary for Waste Management, U.S. Department of Energy;
- Leo Drozdoff, Director of the Nevada Conservation and Natural Resources Department;
- David Martin, Cabinet Secretary of the New Mexico Energy, Minerals and Natural Resources Department;
- Tom Peake, Director of the Center for Waste Management and Regulation, U.S. Environmental Protection Agency;
- Larry Camper, Director of the Division of Waste Management & Environmental Protection, Office

of Federal & State Materials & Environmental Management, U.S. Nuclear Regulatory Commission;

- Kelly Crooks, Chief of the Radioactive Waste Directorate, U.S. Department of the Army;
- Abigail Cuthbertson, Office of Global Threat Reduction of the National Nuclear Security Administration; and,
- Keith McConnell, Director of the Waste Confidence Directorate at the U.S. Nuclear Regulatory Commission.

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

- the Waste Isolation Pilot Plant the path forward for addressing transuranic waste across the DOE complex;
- state and compact perspectives on the NRC's draft proposed rule language re implementing requirements for a site-specific analysis for nearsurface disposal (Part 61 rulemaking initiative);
- EPA's revision of the nuclear fuel cycle standards in 40 CFR Part 190;
- waste management decision-making and the state/federal relationship at the Nevada National Security Site;
- regulatory oversight regarding oil and gas operations including the management and disposition of the resultant radiological byprodcuts;
- plans for disposition of depleted uranium in the Army and DOE stockpiles;
- submittal of the report to Congress by the Radiation Source Protection and Security Task Force;
- developing alternative technologies and addressing the shortage and high costs of Type B containers for sealed sources; and,
- issuance of draft final documents for the Continued Storage Rulemaking (formerly known as "Waste Confidence").

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

#### Attendance

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

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

#### **Location and Dates**

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

The meeting will be held at:

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

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

### Registration

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

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

#### Reservations

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

A limited block of hotel rooms has been reserved for Wednesday (October 29) and Thursday (October 30) for meeting attendees at the special, discounted rate of \$163 plus tax (single rate). A limited number of rooms may be available for 3 days before and after the meeting on a first-come, first-served basis.

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

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

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

# Low-Level Radioactive Waste Forum Meetings

Fall 2014 and Beyond

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

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

### Fall 2014 Meeting

The Midwest Interstate Low-Level Radioactive Waste Compact Commission and the Rocky Mountain Low-Level Radioactive Waste Board have agreed to co-host the fall 2014 meeting in Denver, Colorado. The meeting is scheduled to be held at the Embassy Suites Hotel in downtown Denver, Colorado on October 30-31, 2014.) See related story, this issue.)

### Spring 2015 Meeting

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

### Fall 2015 Meeting

The LLW Forum is currently seeking volunteers to host fall 2015 meeting and those thereafter. Although it may seem far off, substantial leadtime is needed to locate appropriate facilities.

If your state or compact has not hosted a meeting in the past two years, we ask that you consider doing so. If necessary, we may be able to assist you in finding a co-host. Non-state and non-compact entities are eligible to co-host LLW Forum meetings, so please let us know if your company or organization is interested in doing so.

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

### States and Compacts

### Northwest Compact/State of Idaho

# Katina Dorton Appointed to US Ecology Board of Directors

On August 20, 2014, US Ecology, Inc. announced the appointment of Katina Dorton to the company's Board of Directors, increasing the number of Directors to seven. Dorton was also appointed to the Board's Audit Committee.

"We are pleased to have Katina join our Board," commented Board Chairman Stephen Romano. "Her [B]oard experience advising public and private companies in securities law, corporate governance, investment banking, investor relations, regulatory disclosure and accounting will be a valuable addition to our growing organization."

Dorton brings more than 20 years of investment banking experience advising corporate clients and their Board of Directors to US Ecology. She is currently a partner at Corise Co., a merchant banking and advisory firm, and provides consulting services to public and private companies in the areas of M&A and strategic finance. Dorton previously served as Managing Director at Needham & Co., Managing Director-Investment Banking at Morgan Stanley and as an attorney in private practice with Sullivan & Cromwell. Dorton holds a J.D. from the University of Virginia School of Law, an M.B.A. from George Washington University and a B.A. from Duke University.

US Ecology is a North American provider of environmental services to commercial and government entities. The company addresses complex waste management needs of its customers, offering treatment, disposal and recycling of hazardous and radioactive waste, as well as a wide range of complementary field and industrial services. US Ecology is headquartered in Boise, Idaho with operations in the United States, Canada and Mexico.

For additional information, please go to US Ecology's web site at www.usecology.com or contact Allison Ziegler at (212) 554-5469.

Northwest Compact/State of Utah

# Comment Period re Clive Groundwater Permit and Monitoring Plan

On August 8, 2014, the Utah Department of Environmental Quality, Division of Radiation Control (DRC), announced that it is soliciting comments on changes to the Environmental Monitoring Plan (EMP) and Ground Water Quality Discharge Permit No. UGW450005 (permit) associated with the Energy*Solutions*' Clive facility.

### Overview

The EMP is a supporting document to both existing Energy*Solutions*' Radioactive Materials Licenses for the disposal of low-level radioactive waste and 11e.(2) byproduct material. The EMP review is part of both license renewal applications which are currently being reviewed by the DRC. The proposed permit revision is associated with the five-year renewal of the current permit.

As per R313-17-2(1)(a), there are major and minor changes to both the EMP and permit. A description and explanation of the changes are documented in the Statement of Basis (SOB) for proposed changes to the EMP and the SOB and memorandum for the permit.

### **Comment Period**

On August 8, 2014, a forty-five-day public comment period commenced by publication of a notice on the DRC's webpage and distribution by electronic mail server. Public comments will be accepted any time prior to 5:00 p.m. on September 22, 2014.

Written comments may be directed to Rusty Lundberg, Utah Division of Radiation Control, P.O. 144850, Salt Lake City, UT 84114-4850, or by email at radpublic.utah.gov. Comments sent via email should be identified by putting the following in the subject line: Public Comment on Energy*Solutions* Environmental Monitoring Plan and GW Permit.

The deadline for submitting a request for a hearing expired at 5:00 p.m. on August 18, 2014.

Copies of the draft EMP and draft permit, along with both Statement(s) of Basis can be found on the DRC web page at http://www.deq.utah.gov/ businesses/E/EnSolutions/currentactivities.htm.

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

# Utah Radiation Control Board Holds August 2014 Meeting

On August 12, 2014, the Utah Radiation Control Board held a regularly scheduled meeting in Salt Lake City, Utah. The meeting, which was open to the public, began at 1:00 p.m. MDT. It was held in Room 1015 (DEQ Board Room) at the Multi Agency State Office Building, which is located at 195 North 1950 West in Salt Lake City, Utah. The following items, among others, were on the regular Board meeting agenda:

- I. Welcome
- II. Approval of the Minutes from the June 10, 2014 Board Meeting
  - a. Working Lunch
  - b. Board Meeting
- III. Administrative Rulemaking
  - a. Proposed changes to R313-17, Administrative Procedures; R313-24, Uranium Mills and Source Material Mill Tailings Disposal Facility Requirements, regarding public participation procedures for licensing uranium mills and radioactive byproduct material management per 42 U.S.C. §2021(0)(3)
    - i. Approve for rulemaking and public comment
  - b. Proposed changes to R313-26, Generator Site Access Permit Requirements for Accessing Utah Radioactive Waste Disposal Facilities
    - i. Report from Board Subcommittee
    - ii. Approve for rulemaking and public comment
  - c. Proposed changes to R313-70, Payments, Categories and Types of Fees
    - i. Approve for rulemaking and public comment
  - d. Proposed changes to R313-12-3, *Definitions*; R313-22-33, *General*

#### Requirements for the Issuance of Specific Licenses; and, R313-25-2, Definitions (NRC RATS ID – 2011-2)

- i. Approve for rulemaking and public comment
- IV. Information Items
  - a. Nuclear Regulatory Commission activity update
  - b. Uranium Mills
    - i. Energy Fuels Resources—White Mesa Mill—status update
  - c. Low-Level Radioactive Waste— Energy*Solutions* 
    - i. Ground Water Discharge Permit Renewal and Environmental Monitoring Plan Revisions— Public Comment
    - ii. Depleted Uranium Performance Assessment update
  - d. Other Items
    - i. Second Quarter 2014 Activities Report
- V. Public Comment
- VI. Next Scheduled Board Meeting:

Tuesday, September 9, 2014, 1:00 p.m. Multi Agency State Office Building Board Conference Room #1015 195 North 1950 West Salt Lake City, Utah

The Board—which is appointed by the Utah Governor with the consent of the Utah Senate guides development of Radiation Control policy and rules in the state. The Board holds open meetings ten times per year at locations throughout the state. A public comment session is held at the end of each meeting.

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

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

### Southeast Compact/State of Georgia

# Probation Lifted for Georgia's Agreement State Regulatory Program

Heightened Oversight to Continue

On August 27, 2014, the U.S. Nuclear Regulatory Commission announced that the agency is taking Georgia's Agreement State program off probation after finding that the state has made significant progress in addressing several areas of unsatisfactory performance found in an earlier review.

The program will remain under "heightened oversight," which involves frequent interaction with NRC staff, including bimonthly conference calls and periodic status reports.

### Background

Georgia is one of 37 states that have entered into agreements with the NRC giving them authority to license and regulate certain nuclear materials users within their borders. The agency reviews the Agreement State programs regularly. The NRC placed Georgia's program on probation in August 2013, the first time the agency has taken such action. (See *LLW Notes*, September/October 2013, pp. 17-18.) Oversight of nuclear reactors remains under NRC authority.

The managers of Georgia's program have been addressing performance concerns and recommendations identified in an October 2012 review, and implementing a program improvement plan approved by NRC staff. The NRC has remained closely involved with the state program managers throughout this process. The problems identified in 2012 related largely to prioritization of work, responding to incidents promptly and prioritizing inspections of licensees using radioactive materials with the greatest potential for harm. These weaknesses did not immediately threaten public health and safety. Probation is an option for ensuring continued protection of public health and safety in cases where program weaknesses exist.

### **Review and Findings**

A review team comprised of technical staff from the NRC and the Commonwealth of Massachusetts re-evaluated the Georgia program in January 2014. They found the state has made significant progress in addressing all previous recommendations, has improved communications between management and staff, and is committed to continued improvements.

Based on these findings, the team recommended moving the Georgia program from probation to heightened oversight. A management review board of senior NRC managers agreed and proposed the change to the Commission, which made the final decision.

For additional information, please contact Maureen Conley of the U.S. Nuclear Regulatory Commission at (301) 415-8200.

Texas Compact/State of Texas

# TCEQ Denies Contested Case Hearing re WCS Major License Amendment

Authorizes Disposal of Waste Streams Containing Depleted Uranium Increases Storage Capacity to 9 Million Cubic Feet

On August 20, 2014, by a vote of 3 to 0, Commissioners from the Texas Commission on Environmental Quality (TCEQ) denied requests for a contested case hearing regarding a major amendment to the operating license for the lowlevel radioactive waste disposal facility operated

by Waste Control Specialists LLC (WCS) in Andrews County, Texas.

The amendment impacts the type, quantity, and concentration limits of radioactive wastes that may be received at WCS.

#### Amendment

The major amendment

- authorizes the disposal of waste streams containing depleted uranium in concentrations greater than 10 nanocuries per gram;
- authorizes the disposal of all waste streams to the Class C limit and removes the limits on carbon-14, technetitum-99 and iodine-129;
- increases the capacity limit for the WCS compact facility from 2.3 million cubic feet to 9 million cubic feet; and,
- reduces the financial assurance that WCS is required to post from \$136 million to \$86 million.

State regulators at TCEQ determined that the changes will not have any adverse effect on the environment and human health. In regard to the financial assurance, TCEQ noted that the WCS site is smaller than anticipated in the original license. TCEQ may recalculate the amount of financial assurance, however, if the site is expanded.

According to WCS, the amendment authorizing the disposal of waste streams containing depleted uranium will provide "the U.S. Department of Energy with a much-needed option as it looks for safe, secure disposal of orphaned waste that it has been storing for up to 40 or 50 years." WCS adds that the amendment syncs up the license with the actual disposal operations taking place and that the West Texas site is ideal for handling depleted uranium and other waste because of its design which includes a steel-reinforced concrete liner and a repository more than 100 feet below grade. The U.S. Nuclear Regulatory Commission has concluded that large quantities of depleted uranium can be disposed of in a near-surface disposal facility under certain conditions and still meet the performance objectives of 10 CFR Part 61. NRC staff is currently developing a proposed rule to change the existing regulations to incorporate those conditions. (See *LLW Notes*, January/February 2014, pp. 1, 32-33.)

#### Background

WCS began accepting commercial low-level radioactive waste for disposal in April 2012. (See *LLW Notes*, March/April 2012, pp. 1, 17-18.) The facility is currently authorized to accept out-ofcompact waste, subject to specified curie and volume limitations. In June 2013, WCS began accepting federal low-level radioactive waste for disposal. (See *LLW Notes*, May/June 2013, pp. 16-17.)

The WCS site in western Andrews County is licensed to dispose of Class A, B and C and mixed low-level radioactive waste. It is the site for the Texas Low-Level Radioactive Waste Disposal Compact facility for commercial lowlevel radioactive waste and the federal waste disposal facility for low-level radioactive waste from the U.S. Department of Energy (DOE). The State of Texas will take title to any waste disposed in the compact facility and the DOE will take title to any waste disposed in the federal facility following closure of the facilities.

WCS is also licensed for the treatment and storage of mixed low-level radioactive waste and serves as a temporary storage facility for transuranic wastes from the Los Alamos National Laboratory (LANL) that were originally destined for disposal at the Waste Isolation Pilot Plant (WIPP) in New Mexico.

For additional information, please contact Rod Baltzer, President of WCS, at (972) 450-4235 or at rbaltzer@valhi.net.

### Texas Compact Commission

# Comments Accepted re Texas Compact Commission Import and Export Rules

On August 18, 2014, the Texas Low-Level Radioactive Waste Disposal Compact Commission (Texas Compact Commission) announced the setting of a deadline for submitting comments on working drafts of proposed revisions to 31 Texas Administrative Code (TAC) §675.21, §675.22 and §675.23 related to exportation and importation of waste.

The comment period deadline has been set for September 5, 2014. Comments that are received will be reviewed in order to develop rules for proposal in the *Texas Register*. No stakeholder meetings have yet been scheduled.

The working draft rules for comment include redline/strikeout versions in PDF format and clean versions in PDF format. Links are provided to the current rules in the TAC, and clean versions of the revised working drafts are also provided in Word to assist reviewers in developing comments. The working draft rules and associated links can be found at http:// www.tllrwdcc.org/rules/.

### **Submitting Comments**

The working drafts of the Texas Compact Commission rules have been posted to the Rules Page of the Texas Compact Commission's website at http://www.tllrwdcc.org/rules/.

The Texas Compact Commission is requesting that interested stakeholders submit comments in writing via e-mail to both of the following e-mail addresses: Administration@tllrwdcc.org and Audrey.Ferrell@tllrwdcc.org Stakeholders submitting comments are advised to include "COMMENTS TO THE WORKING DRAFT OF TLLRWDCC RULES" in the subject line of the email.

### Background

At its June 6, 2013 meeting, the Texas Compact Commission Chairman established the Rules Committee to review the Texas Compact Commission's existing rules under 31 TAC §675.21, §675.22 and §675.23 and to develop any proposed changes. Members of the Rules Committee include Commissioners Linda Morris and Richard Saudek, as well as Chairman Robert Wilson.

Key to the rule development process is to seek input to the Rules Committee deliberations prior to the development of a draft rule proposal. The draft would then be submitted to the full Texas Compact Commission for its action prior to proposal in the *Texas Register*. Toward that end, the Texas Compact Commission has released the working drafts for review and comment in order to develop rules for proposal in the *Texas Register*.

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

# Texas Compact Commission Holds July and August Meetings

On July 10, 2014, the Texas Low-Level Radioactive Waste Disposal Compact Commission (Texas Compact Commission) held a regularly scheduled meeting at the Texas State Capitol in Austin, Texas.

The following month, on August 14, 2014, the Texas Compact Commission held another regularly scheduled meeting in Manchester, Vermont.

#### July 2014 Meeting Agenda

The following is an abbreviated overview of the agenda for the July 2014 Texas Compact Commission meeting. Persons interested in additional detail are directed to the formal agenda themselves.

- call to order;
- roll call and determination of quorum;
- introduction of commissioners, elected officials and press;
- public comment;
- discussion of revisions to 31 Texas Administrative Code §675.21, §675.22 and §675.23 related to exportation and importation of waste;
- report of the Texas Compact Commission's Resource Conservation Recovery Act (RCRA) Subcommittee;
- consideration of and possible action on requests for amendments to agreements for importation of low-level radioactive waste from Alaron Nuclear Services, Southern Nuclear Operating Company, and ZionSolutions;
- consideration of and possible action on applications and proposed agreements for importation of low-level radioactive waste

from Next Era Energy-Point Beach, RAM Services Inc., Florida Power and Light—Plant St. Lucie, GE Hitachi Nuclear Energy, and Philotechnics Ltd.;

- consideration of and possible action on application and proposed agreement for exportation of low-level radioactive waste from Bionomics Inc. for Southwest Research Institute;
- receive a petition from John Hageman of the Texas Radiation Advisory Board (TRAB) on

   (a) organizational description including purpose, mission and committee structure;
   (b) matters within TRAB jurisdiction that may be of interest to the Texas Compact Commission; and (c) any other matter TRAB wishes to bring to the attention of the Texas Compact Commission;
- receive a petition from Hans Honerlah of the US Army Corps of Engineers, Baltimore District on the decommissioning of the barge, *Sturgis;*
- receive reports from Waste Control Specialists LLC (WCS) about recent site operations and any other matter WCS wishes to bring to the attention of the Texas Compact Commission;
- discussion and possible action to renew or extend the contracts with Leigh Ing as Consulting Executive Director and Audrey Ferrell as Executive Assistant;
- discussion and possible action to renew or extend the contract with DigITech Web Design for web development, hosting and maintenance services;
- discussion and possible action to proceed with a contract, not to exceed \$10,000, to conduct an audit of the Texas Compact Commission operational procedures, identify gaps in procedures, develop a Texas Compact Commission Operational Procedures Manual which documents all procedures and policies;
- update on activities of the Commission's Fiscal Advisory Committee related to funding of Commission activities and the development of a budget of Commission operations during Texas FY 2014 in connection with funds that

are available for Commission operations during the upcoming 2014 fiscal year;

- consideration of and possible action to adopt the Commission's annual budget for FY 2014 pursuant to Article VI, Section Two of the Commission's Bylaws;
- Chairman's report on Texas Compact Commission activities including reporting on fiscal matters and on other actions to be taken by the compact;
- report from Leigh Ing, Consulting Supervisory Director of the Texas Compact Commission, on her activities and questions related to Commission operations;
- discussion and possible changes of dates and locations of future Texas Compact Commission meetings; and,
- adjourn.

### August 2014 Meeting Agenda

The following is an abbreviated overview of the agenda for the August 2014 Texas Compact Commission meeting. Persons interested in additional detail are directed to the formal agenda themselves.

- call to order;
- roll call and determination of quorum;
- introduction and remarks of commissioners and elected officials in attendance;
- public comment;
- discussion by Entergy Vermont Yankee of the closure and decommissioning of the Vermont Yankee nuclear power plant;
- discussion of revisions to 31 Texas Administrative Code §675.20, §675.21, §675.22 and §675.23 related to exportation and importation of waste;
- consideration of and possible action on requests for amendments to agreements for importation of low-level radioactive waste from Southern Nuclear Operating Company and Bionomics;
- consideration of and possible action on applications and proposed agreements for importation of low-level radioactive waste

from San Onofre Nuclear Generating Station, Florida Power and Light—Turkey Point Plant, and Xcel Energy;

- receive reports from WCS about recent site operations, status of Amendment No. 26 to Radioactive Material License R04100, and any other matter WCS wishes to bring to the attention of the Texas Compact Commission;
- Chairman's report on Texas Compact Commission activities including reporting on fiscal matters and on other actions to be taken by the compact;
- report from Leigh Ing, Consulting Supervisory Director of the Texas Compact Commission, on her activities and questions related to Commission operations;
- discussion and possible changes of dates and locations of future Texas Compact Commission meetings; and,
- adjourn.

### Background

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

Texas Compact Commission meetings are open to the public.

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

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

### State of New York

# New York State LLRW Status Report for 2013 Now Available

The twenty-eighth annual *New York State Low-Level Radioactive Waste Status Report* is now available. The report, which covers calendar year 2013, can be found on the New York State Energy Research and Development Authority's (NYSERDA's) web site at www.nyserda.ny.gov/ llrw-reporting.

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 2013 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.

For additional information, please contact Alyse Peterson of NYSERDA at (518) 862-1090 ext. 3274.

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and publicly available results of the inspections are discussed in the report.

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

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Documents related to the Dewey Burdock application are available on the NRC website. Documents regarding this ASLB proceeding are available on the NRC's Electronic Hearing Docket by clicking on the folder entitled "Powertech\_USA\_40-9075-MLA" on the left side of the page. More information about the role of the ASLB in the licensing process is available on the NRC website.

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

### International

International Atomic Energy Agency (IAEA)/Operational Safety Review Team (OSART)

# International Safety Review Team Visits Clinton Plant

An international team of nuclear safety experts visited the Clinton nuclear power plant from August 12 through 28 to review operational safety practices. The facility is located in Clinton, Illinois—approximately 28 miles southeast of Bloomington.

The International Atomic Energy Agency (IAEA) —which is based in Vienna, Austria—led the voluntary peer review, known as an Operational Safety Review Team (OSART) visit. The 14member team included reviewers from Canada, Slovakia, Belgium, Mexico and other countries.

Established by the IAEA in 1982, the OSART program is designed to assist member states in enhancing the operational safety of nuclear power plants and fostering continuous improvements through the dissemination of information on best practices. This will be the eighth OSART review of a U.S. nuclear power plant since the program was initiated.

Areas to be covered during the review include, but are not limited to, operational experience, training and qualifications, radiation protection, chemistry, emergency planning and preparedness and maintenance.

"While the NRC does not conduct the OSART review, the staff does closely follow it and any outcomes, both for their safety significance and any possible safety improvements," said Region III Administrator Cynthia Pederson.

The OSART reviewers will produce a report identifying best practices and suggesting possible

safety improvements. This report will be provided to the plant's operator, Exelon Generation Co., LLC, and the United States government.

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

#### (Continued from page 42)

reactor sites) and U.S. Department of Energy transportation activities. In comparison to the proposed FY 2014 fee rule, operating reactor annual fees are slightly reduced, and some annual fees for fuel facilities have increased due to the reclassification of one fuel facility licensee.

The NRC estimates the FY 2014 annual fees will be paid by licensees of 100 operating commercial power reactors, 4 research and test reactors, 23 spent nuclear fuel storage and decommissioning reactor facilities, 10 fuel cycle facilities, 11 uranium recovery facilities and approximately 3,000 nuclear materials licensees.

The original <u>Federal Register</u> notice for the final fee rule provides an incorrect accession number for accessing the "work papers" supporting the proposed rule in the NRC's ADAMS document database. The work papers detail the allocation of the NRC's budgeted resources for each license class and how the fees are calculated. The correct ADAMS accession number for the final fee rule work papers is ML14148A062.

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

### Industry

Nuclear Power Plants and Other NRC Licensees

# News Briefs for Nuclear Power Plants Across the Country

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

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

# Appalachian Compact/Commonwealth of Pennsylvania

Susquehanna Nuclear Power Plant On September 3, 2014, the U.S. Nuclear Regulatory Commission staff held a public meeting to provide the results of a team inspection performed recently at the Susquehanna Unit 2 nuclear power plant. The inspection was done in response to a decline in safety performance at the Salem Township (Luzerne County), Pennsylvania facility, as reflected in changes to a pair of performance indicators used by the NRC. During the meeting, there was an opportunity for members of the public to ask questions of NRC staff or offer comments. Susquehanna Unit 2, which is owned and operated by PPL, has been under additional NRC oversight by virtue of the performance indicators for unplanned scrams (shutdowns) per 7,000 hours of operation and for unplanned scrams with complications crossing the green/white threshold. (The NRC uses a colorcoded system to assess plant performance. In the case of performance indicators, green signifies acceptable performance, while indicators at the white, yellow or red levels result in increasing levels of NRC scrutiny.) The Unit 2 performance indicator for unplanned scrams turned white on September 14, 2013. The Unit 2 performance indicator for unplanned scrams with

complications turned white in the fourth quarter of 2012. This led to the plant moving to the Degraded Cornerstone Column of the NRC's Action Matrix. From July 14 through July 31, a team of NRC inspectors reviewed PPL's root cause evaluation of the issues that contributed to the performance indicator changes; any corrective actions put in place by the company; and, its assessment of whether the problems impacted safety culture reviews and other areas of plant operations. The NRC would have to be satisfied with PPL progress in all of these areas prior to returning the plant to the normal level of oversight. The inspection report documenting any findings will be issued within 45 days of the September 3 meeting.

Peach Bottom Nuclear Power Plant On August 25, 2014, NRC approved a request by Exelon Generation Co. to increase the generating capacity of Peach Bottom Atomic Power Station, Units 2 and 3, by 12.4 percent each. The NRC staff determined Exelon could safely increase the reactors' output primarily by upgrading certain plant systems and components. NRC staff also reviewed Exelon's evaluations showing the plant's design can handle 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, operations and training, testing, and technical specification changes. For added confidence in the analysis, the NRC staff also conducted independent confirmatory calculations and audits of selected areas. The power uprate authorizes Peach Bottom-which is located approximately 18 miles south of Lancaster, Pennsylvania-to increase each boiling water reactor's generating capacity by approximately 140 megawatts electric. Exelon plans to implement Unit 2's uprate during the fall 2014 refueling outage and Unit 3's uprate during the fall 2015 refueling outage. The NRC published a notice about the power uprate application in the Federal Register on April 9, 2013. The agency's

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evaluation of the Peach Bottom uprate will be available through the NRC's ADAMS electronic document database by entering Accession Number ML14133A046.

# Atlantic Compact/States of New Jersey and South Carolina

PSEG Nuclear Power Plant The NRC and the Army Corps of Engineers, Philadelphia District, are seeking public comment on a preliminary conclusion that environmental impacts would not prevent issuing an Early Site Permit (ESP) for the PSEG site in Salem County, New Jersey. The site is adjacent to the existing Salem and Hope Creek nuclear power plants, about 15 miles southeast of Wilmington, Delaware. The NRC staff's preliminary environmental recommendation is that a permit could be issued. The staff's conclusion is based on its independent review of a report submitted by PSEG, taking into account consultations with federal, state, tribal and local agencies and consideration of comments received during the public scoping process in November 2010. The staff's preliminary conclusions include a finding that there are no environmentally preferable or obviously superior sites. The staff must also complete a separate review of safety issues before an agency decision on the permit. The preliminary conclusion is contained in NUREG-2168, "Draft Environmental Impact Statement (EIS) for an Early Site Permit at the PSEG ESP Site." The EIS will be available on Regulations.gov under Docket ID NRC-2014-0149. The public can comment on the draft EIS until November 6-including at two public meetings on October 1 in Carneys Point, New Jersey. The NRC will issue a separate notice for the meetings in the near future. Comments can be submitted, using Docket ID NRC-2014-0149, through Regulations.gov or by mailing them to Cindy Bladey, Office of Administration, Mail Stop: 3WFN-06-A44M, U.S. Nuclear Regulatory Commission, Washington, DC 20555-0001. The ESP process allows an applicant to address siterelated issues, such as environmental impacts, for possible future construction and operation of a

nuclear power plant at the site. PSEG Power and PSEG Nuclear submitted the ESP application on May 25, 2010. If approved, the permit would give PSEG up to 20 years to decide whether to request a license from the NRC to build and operate a reactor at the site. More information on the PSEG application is available on the NRC website, and a "Reader's Guide" to the draft EIS is available on the NRC's electronic document database, ADAMS, under accession number ML14217A479. The ESP application includes activities that require Army Corps of Engineers authorization under Section 404 of the Clean Water Act and Section 10 of the Rivers and Harbor Act of 1899. Those activities are described in the draft EIS. PSEG is completing a permit application to the Corps to authorize those activities, and the Corps will publish a separate public notice detailing the work proposed for Corps review and authorization.

Oconee Nuclear Power Plant On July 31, 2014, NRC staff held a regulatory conference with officials of Duke Energy to discuss an apparent violation of NRC requirements involving a crack in a weld on the Unit 1 high pressure injection system at the Oconee Nuclear Station. The Oconee plant is operated by Duke Energy near Seneca, South Carolina—approximately 30 miles west of Greenville. During the meeting, NRC and Duke Energy officials discussed the safety significance of the apparent violation related to an undetected crack in a weld that led to reactor coolant system pressure boundary leakage and a forced shutdown of Unit 1. The weld was located in the high pressure injection system. That system would provide water to help cool the reactor core during an accident if pressure in the system remained high. There was no immediate safety concern because the crack was repaired, but the NRC determined that the method used by the plant to check for cracks did not provide acceptable coverage as required and did not identify the crack before it began leaking. The regulatory conference was open to the public and NRC officials were available to answer questions after the meeting. The apparent violation has

preliminarily been classified as "greater than green." No decisions on the final safety significance or any additional NRC actions were made at the regulatory conference. Those decisions will be made by NRC officials at a later time. A letter from the NRC to Oconee plant management in late June 2014 provides additional information on the issue and the apparent violation.

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

Wolf Creek Nuclear Power Plant On July 2, 2014, NRC announced that the agency has determined that an inspection finding at the Wolf Creek nuclear plant issued in connection with a 2013 emergency preparedness exercise is of low to moderate safety significance. The plantwhich is located near Burlington, Kansas-is operated by Wolf Creek Nuclear Operating Corporation. This white finding is associated with a violation of an NRC requirement. NRC inspectors observed and evaluated a regularly scheduled emergency preparedness exercise at the site on November 5, 2013. During the exercise, the NRC found that the licensee had not addressed a previously identified error involving software used to assess offsite radiation dose during a plant emergency. Dose assessment is a key component of a plant operator's emergency response, and it is important that it be accurate. The NRC report details the inspection findings. NRC held a regulatory conference with Wolf Creek officials on April 30, and after considering information provided by the licensee determined that a white finding was appropriate to characterize the risk significance of the event. The NRC will determine the appropriate level of agency oversight and notify company officials of the decision in a separate letter.

# Central Midwest Compact/States of Illinois and Kentucky

**Honeywell Metropolis Works Facility** On July 24, 2014, NRC announced that the agency has advised officials at Honeywell Metropolis Works

that they have satisfied the terms of a 2012 Confirmatory Order issued to the uranium conversion plant requiring modifications to protect the facility against major earthquakes and tornadoes. During an inspection in May 2012, the NRC determined that process equipment at Honeywell lacked adequate seismic restraints, supports and bracing to ensure integrity during such events. Honeywell agreed to make the modifications, which were outlined in the Confirmatory Order, issued in October 2012. The NRC confirmed during inspections that the completed modifications complied with agency requirements and authorized the facility to resume operations in July 2013. The NRC reviewed Honeywell's revised Integrated Safety Analysis last month and determined it was adequate, clearing the way for the lifting of the Confirmatory Order this week. "Honeywell's corrective actions have satisfied the terms of the Confirmatory Order, which we have closed," said Victor McCree, the NRC's Region II administrator. "The company has taken the necessary actions to protect the community and the environment, which was our original goal."

The plant—which is located in Metropolis, Illinois—converts milled uranium into uranium hexafluoride gas, which is then enriched at other facilities to make fuel for commercial nuclear power reactors.

Paducah Gaseous Diffusion Plant On August 28, 2014, NRC staff held a public meeting to discuss its process for terminating the certificate authorizing uranium enrichment operations at USEC Inc.'s Gaseous Diffusion Plant in Paducah. Kentucky. The public was invited to attend the meeting and encouraged to provide comments and ask questions during the meeting. The Paducah Gaseous Diffusion Plant was built by the U.S. government in the 1950s to enrich uranium for military purposes. In the 1960s, it began enriching uranium for commercial nuclear reactors. Uranium enrichment no longer occurs at the facility, prompting USEC to request the termination of its certificate of compliance, which in essence is its license to possess and process uranium.

#### Southeast Compact/State of Tennessee

Nuclear Fuel Services On July 10, 2014, NRC launched a special inspection at the Nuclear Fuel Services fuel fabrication facility to assess the circumstances surrounding the alleged improper disabling of safety devices in violation of NRC regulations. The plant-which is located in Erwin, Tennessee-fabricates fuel for the U.S. Navy's nuclear fleet. On June 17, an employee was observed by an NFS supervisor to be improperly operating two valves that are identified as key safety devices. The valves were propped open, which rendered them unable to perform their intended safety function. They are intended to be manually operated to prevent a hazardous chemical solution from spilling on the floor and causing a chemical exposure. No radioactive materials were involved in the incident. The event was reported to the NRC by NFS. No spill occurred, so there were no actual safety consequences. NFS immediately shut down the process and initiated an investigation. The special inspection, to be performed by the NRC's Senior Resident Inspector, will review the facts surrounding the incident, as well as the NFS response and the company's corrective actions to prevent recurrence. "The special inspection will analyze all the details of this incident," said Victor McCree, the NRC's Region II Administrator. "There was no threat to the public or plant workers as a result of this incident, but there was potential for worker exposure to hazardous chemicals." NRC subsequently issued a report documenting the inspection findings.

#### State of Michigan

**Palisades Nuclear Plant** On July 21, 2014, NRC issued a Confirmatory Order related to the Palisades nuclear plant, which has agreed to a series of corrective actions for failure to follow procedures to verify a Security Supervisor's qualifications to perform specific security duties. The plant is located in Covert, Michigan—approximately five miles south of South Haven. The Order stems from a settlement that was

reached under the NRC's Alternative Dispute Resolution process, requested by plant-owner Entergy to address the December 2012 incident. The violation occurred when a Security Manager assigned a Security Supervisor to perform security duties without verifying the Supervisor's qualifications. The Supervisor also failed to ensure he was qualified to perform his assigned security duties. The NRC evaluated the security significance of the matter and determined it was of very low significance. The NRC's ADR process includes mediation facilitated by a neutral third party, with no decision-making authority, who assists the NRC and a licensee in reaching an agreement when there are differences regarding an enforcement action. A mediation session between the NRC staff and Entergy was held on May 15 and a settlement was reached. A confirmatory order, issued on July 22, outlines the corrective actions and steps Entergy has agreed to take to address the violation. Those steps include actions such as ensuring proper verification of training credentials for staff and management across the Entergy fleet; taking a wide range of actions to strengthen safety culture; making presentations on this event to the reactor community; creating specific requirements for selection and development of security managers; and, conducting an effectiveness review of the corrective actions. "Using the ADR process allowed us to achieve not only compliance with NRC requirements, but a wide range of corrective actions that go beyond those the agency may get through the traditional enforcement process," said NRC Region III Administrator Cynthia Pederson. "The company will be reporting to the NRC as it implements the corrective actions and is required to provide us with a letter discussing the basis for concluding that the company has fully met the conditions of the order." A copy of the Confirmatory Order will be available on the NRC's website at www.nrc.gov.

**TRIGA Research Reactor** On June 26, 2014, NRC renewed the operating license of the Dow Chemical Co. TRIGA research and test reactor located in Midland, Michigan for an additional 20

years. The reactor was originally licensed in 1967. Dow applied to renew the license in April 2009. The NRC published an environmental assessment with a finding of no significant impact on July 20, 2012. The renewed license was issued on June 18. On August 7, 2012, the Commission directed the staff not to make final licensing decisions for commercial power reactors and spent fuel storage sites until the agency completes its waste confidence rulemaking in response to a U.S. Court of Appeals ruling. (See related story, this issue.) The staff determined licensing of research and test reactors does not depend on the waste confidence finding or the related temporary storage rule, so relicensing of research and test reactors can continue. The renewed license (ML12137A151) and the NRC staff's Safety Evaluation Report on the license renewal (ML12137A181) are available on the NRC website at www.nrc.gov.

#### **State of Rhode Island**

Geisser Engineering Corporation On July 31, 2014, NRC imposed an \$8,400 civil penalty against a Riverside, Rhode Island company for failing to receive the appropriate approvals from the NRC before performing work on numerous occasions at both a federal facility in Rhode Island and in Connecticut. The NRC on March 20 proposed a fine of \$11,200 for Geisser Engineering Corp. (GEC) but has now reduced that total. Rhode Island is an "Agreement State," which means that under an agreement with the NRC, it oversees the use of nuclear materials within its borders that otherwise would be regulated by the NRC. However, such activities performed at federal facilities within Agreement States, as well as at any sites in Non-Agreement States, are under the jurisdiction of the NRC and therefore must be approved by the agency. The approval process is known as "reciprocity." The NRC determined that GEC willfully failed to adhere to that reciprocity requirement and used portable nuclear gauges in areas of federal jurisdiction. Specifically, between October 21, 2009 and June 23, 2011, the company performed

work at the Newport Naval Station in Rhode Island in an area of exclusive federal jurisdiction, and in Connecticut (a non-Agreement State) without filing for reciprocity with the NRC prior to conducting the activities. In total, GEC failed to file for reciprocity on 22 occasions. In correspondence dated April 15, 2014, GEC requested relief from the proposed NRC civil penalty stating the proposed enforcement action, along with a penalty issued by Massachusetts for a violation involving the company's failure to file for reciprocity prior to performing work in the state, would create a financial hardship.

### Courts continued

#### (Continued from page 1)

License 097 that was first issued by DHEC in 1971. The facility accepts all classes of low-level radioactive waste—including very high activity waste forms and large components like reactor vessels—from the Atlantic Compact states of Connecticut, New Jersey and South Carolina. Currently, the Barnwell disposal site is approximately 95% decommissioned (closed) for further waste burial.

Part VII of South Carolina Regulation 61-63 entitled "Licensing Requirements for Land Disposal of Radioactive Wastes"—establishes specific technical requirements and performance objectives "upon which [DHEC] issues licenses for the land disposal of wastes." Pursuant thereto, before DHEC may renew Chem-Nuclear's license to operate the facility, it must determine Chem-Nuclear designed, constructed, and operates the facility in compliance with the requirements and objectives of Part VII of Regulation 61-63.

In 2000, Chem-Nuclear submitted an application to renew its license. After holding a public hearing and accepting comments, DHEC issued a renewal license to Chem-Nuclear in 2004.

### **Procedural History**

The Sierra Club challenged DHEC's decision to renew the license on the basis that the disposal methods at the facility do not meet certain requirements and objectives contained in Part VII of the regulation.

In 2005, the ALC issued an order affirming DHEC's decision to renew the license. In particular, the ALC found that Chem-Nuclear complied with Subsections 7.10.1 through 7.10.4 and Section 7.18 of Regulation 61-63, which relate to whether Chem-Nuclear is protecting the public from radioactive releases. However, the ALC ordered Chem-Nuclear to conduct further studies to address concerns "related to the potential for groundwater contamination on and near the [facility]." In particular, the 2005 order stated these studies must "concern[] methods to

In 2010, the Court of Appeals of the State of South Carolina affirmed the findings related to Section 7.18 and Subsections 7.10.1 through 7.10.4. However, the appellate court remanded the case to the ALC to apply its factual findings from the 2005 order to determine whether Chem-Nuclear complied with subsections 7.11.1 through 7.11.12, 7.23.6, and 7.10.5 through 7.10.10 of Regulation 61-63. These subsections contain specific additional compliance requirements regarding how Chem-Nuclear must accomplish particular results—including the design and construction of the disposal site, disposal units, and engineered barriers.

On remand, the ALC issued an order affirming DHEC's conclusion that Chem-Nuclear complied with these subsections. The Sierra Club appealed the ALC's order.

### Waste Disposal and Tritium Detection

Chem-Nuclear disposes of waste at the facility using "enhanced shallow land burial with engineered barriers" that is intended to improve the facility's ability to meet the regulatory performance objectives." The primary engineered barriers used by Chem-Nuclear are disposal trenches, disposal vaults, and enhanced caps. Each trench has a drainage system "to facilitate monitoring of water accumulation entering the trench." Chem-Nuclear also implements a "surface water management plan" to manage rainfall after it collects in trenches, which consists of pumping water into either adjacent trenches or a lined pond. "It should be noted," states a company representative, "that the water is not allowed to contact waste."

Waste disposed at Barnwell contains tritium—a radioactive isotope of hydrogen that is found in "trace amounts in groundwater throughout the world." Although tritium is naturally occurring, it

### Courts continued

is also a byproduct of the manufacture of nuclear power, and found in radioactive waste generated by nuclear power plants. Chem-Nuclear initially discovered the presence of tritium in its disposal trenches in 1974, which resulted from early containment methods that were acceptable at the time but have since been improved. For instance, in 1995, DHEC substantially revised Part VII of Regulation 61-63 to require engineered barriers for all waste classes disposed of at the facility. In addition, DHEC imposes a regulatory limit on the amount of radioactive material that Chem-Nuclear may release to the general environment using a compliance point-defined as the "first point where a hypothetical member of the public might receive a dose of radiation." The compliance point at which DHEC measures Chem-Nuclear's release of tritium into the general environment is located at Mary's Branch Creek, where the groundwater from beneath the facility flows into an above-ground stream. Chem-Nuclear regularly samples the water from Mary's Branch Creek to determine whether there has been a release of tritium above the regulatory limit set by DHEC. Since 2001, tritium concentrations at the compliance point have been declining, and all measurements taken at Mary's Branch Creek have been well below the regulatory limit (i.e., less than one third of limit) for exposure under Section 7.18.

The ALC found that Chem-Nuclear has taken steps to protect the public from exposure to radiation at the compliance point. The general public is restricted from accessing the waters of Mary's Branch Creek at the compliance point; Chem-Nuclear erected a fence around the compliance point; and, Chem-Nuclear has a restrictive covenant and easement on three parcels of property surrounding the compliance point. This property serves as a buffer zone by prohibiting the use of groundwater under the property, as well as surface water on the property, without written consent from DHEC. Changes in design and operations at the facility further reduced the potential for radioactive exposure to the general environment.

As required by DHEC, Chem-Nuclear created a predictive model-the Environmental Radiological Performance Verification (ERPV)to predict the future performance of the site for up to two thousand years. This model relies on data collected through a system of groundwater monitoring wells and thirty years of data derived from over two hundred sampling points. DHEC commissioned and funded a panel of experts (known as the Blue Ribbon Panel) to review the ERPV and determine whether Chem-Nuclear's predictions were accurate. After finding the ERPV predictions to be reliable, the Blue Ribbon Panel concluded the facility "pose[d] minimal risk to either the environment or members of the public, both today and into the long-term future." DHEC relied on the conclusions of both the ERPV and the Blue Ribbon Panel in deciding to renew the facility's license.

#### **Review of Regulatory Compliance**

Part VII of Regulation 61-63 includes three general categories of regulations: procedural requirements, performance objectives, and specific technical requirements for near-surface disposal of radioactive waste. The appeal, however, only addresses the ALC's determination that Chem-Nuclear complied with regulations imposing technical requirements and performance objectives. Generally, regulations containing technical requirements require Chem-Nuclear to take specific action to comply with the regulation, while regulations containing performance objectives require Chem-Nuclear to achieve certain results sought under the regulation. The appellate court acknowledges, however, that there is some overlap between the action-based and result-based requirements of these two categories of regulations.

In determining whether DHEC properly renewed the license, the agency argued that the ALC must consider compliance with the result-based requirements "set forth in section 7.10 . . . rather than apply criteria set forth in sections 7.11 and 7.23.6." The appellate court, however, rejected

### Courts continued

that argument in its 2010 ruling. Instead, the appellate court found that the technical requirements of subsections 7.11.11 and 7.23.6 require Chem-Nuclear to take action to design and construct the disposal site, disposal units, and engineered barriers to meet the specifications in those subsections. The appellate court determined, therefore, that DHEC and Chem-Nuclear may not demonstrate compliance with those subsections simply by showing Chem-Nuclear met the performance objectives of other subsections.

Applying the above principles during its recent review, the appellate court found that Chem-Nuclear complied with the following portions of Part VII of Regulation 61-63:

- Subsection 7.10.6 requirements that Chem-Nuclear protect the public, the environment, and inadvertent intruders from radioactive exposure by ensuring "long-term stability of the disposed waste and the disposal site;"
- Subsection 7.10.8 requirements that Chem-Nuclear provide reasonable assurances that the waste will be stable after the facility is closed;
- Subsection 7.11.11.6 requirements that Chem-Nuclear design and construct its disposal units and engineered barriers in a way that provides "reasonable assurance that the waste will be isolated for at least the institutional control period;"
- Subsection 7.11.11.7 requirements that Chem-Nuclear design and construct its disposal units and engineered barriers in a way that "prevent[s] contact between the waste and the surrounding earth, except for earthen materials which may be used for backfilling within the disposal units;" and,
- Subsection 7.23.6 requirements that Chem-Nuclear design the disposal site in a way that "minimize[s] to the extent practicable the contact of water with waste

during storage, the contact of standing water with waste during disposal, and the contact of percolating or standing water with wastes after disposal."

The appellate court, however, found that Chem-Nuclear failed to comply with the following portions of Part VII of Regulation 61-63:

- Section 7.11.11.1 requirements that Chem-Nuclear design and construct its disposal units and engineered barriers "to minimize the migration of water onto the disposal units;"
- Section 7.11.11.2 requirements that Chem-Nuclear design and construct its disposal units and engineered barriers "to minimize the migration of waste or waste[-] contaminated water out of the disposal units," although the appellate court did find that the record demonstrates that Chem-Nuclear has taken measures to *reduce* the migration of waste-contaminated water out of the disposal units;
- Subsection 7.11.11.4 requirements that Chem-Nuclear design and construct its disposal units and engineered barriers in a way that allows for "temporary collection and retention of water and other liquids for a time sufficient to allow for the detection and removal or other remedial measures without the contamination of groundwater or the surrounding soil;" and,
- Subsection 7.10.7 requirements that Chem-Nuclear "provides reasonable assurance that the applicable technical requirements of [Part VII] will be met," with the court stating that "the fact that DHEC did not require Chem-Nuclear to take *any* action or make *any* changes to its disposal practices casts doubt upon DHEC's decision to renew the license."

# White House & Congress

#### Remedy

In terms of a remedy, the appellate court stated as follows:

As to four separate subsections of regulation 61-63, DHEC failed to enforce the law of South Carolina. As to each, the ALC erred in finding Chem-Nuclear in compliance. Under the law, Chem-Nuclear's license to operate the facility is invalid. However, the appellant informed the court at oral argument it does not seek revocation of the license; it asks simply that DHEC enforce its regulations, and that Chem-Nuclear comply. In light of this request, we order DHEC and Chem-Nuclear to submit a written plan for compliance to the ALC within ninety days of this opinion. The ALC shall promptly determine if Chem-Nuclear will come into compliance with the regulations under the plan. If the ALC determines the plan will bring Chem-Nuclear into compliance, it shall set a schedule for Chem-Nuclear to promptly implement the plan. If the ALC determines the plan will not bring Chem-Nuclear into compliance, it shall issue an order revoking Chem-Nuclear's license.

The requirement of a written plan will not be stayed except by order of this court or the supreme court. However, an order of the ALC revoking Chem-Nuclear's license will be stayed while a petition for rehearing is pending before this court, or while a petition for certiorari is pending before the supreme court.

For additional information, please contact George Kokolis of the South Carolina Energy Office at (803) 737-0664 or at gkokolis@energy.sc.gov; Susan Jenkins of the South Carolina DHEC at (803) 898-0377 or at jenkinse@dhec.sc.gov; or Michael Benjamin of EnergySolutions/Chem-Nuclear at (803) 541-5014 or at mjbenjamin@energysolutions.com.

### White House

# President Obama Nominates Two New NRC Commissioners

On July 23 2014, President Barack Obama nominated two energy experts to fill open slots for Commissioners at the U.S. Nuclear Regulatory Commission (NRC).

Obama nominated Jeffrey Martin Baran, who is currently serving as an Energy Aide to retiring Representative Henry Waxman (D-CA) for the remainder of the term of Commissioner William Magwood that expires on June 30, 2015. Waxman is the ranking member on the House Energy and Commerce Committee.

The president also nominated Stephen Burns, who formerly served as General Counsel to the NRC, to fill a five-year term that will expire on June 30, 2019. Burns is nominated for the slot previously held by NRC Commissioner George Apostolakis.

NRC Commissioner William Magwood stepped down from his position at the Commission on August 21 to assume a new position as Director-General of the Organization for the Paris-based Economic Cooperation and Development's (OECD) Nuclear Energy Agency. *(See related story, this issue.)* 

NRC Commissioner George Apostolakis left the Commission on June 30, after the White House did not re-nominate him.

### U.S. Senate Appropriations Committee

# Language re Source Security Included in Draft Appropriations Bill

On July 24, 2014, the U.S. Senate Appropriations Committee released a proposed Fiscal Year (FY) 2015 Energy and Water Appropriations bill that indicate concerns about the U.S. Nuclear Regulatory Commission's (NRC's) regulations governing the security of radiological sources.

The proposed bill includes language that is aimed at forcing more stringent controls. Among other things, it specifically directs the NRC to establish mandatory security standards for Category 1 and 2 radiological materials and increase the frequency of inspections, seeking new regulations within five years.

The report accompanying the proposed bill states as follows:

The Committee is very concerned about the security of radiological materials at U.S. medical and industrial facilities. A National Academies report found that there are more than 5,000 devices containing high-activity radiation sources in the country, including 700 with [C]ategory-1 sources, at over 2,000 facilities. Taken out of their shielding containers, [C]ategory-1 sources can kill anyone who is exposed to them at close range for a few minutes to an hour. The National Nuclear Security Administration found that these devices are vulnerable to theft and could be used by terrorists to build dirty bombs. The Committee believes the NRC's security regulations have not been sufficient to reduce the threat of nuclear terrorism.

The proposed bill language was the subject of discussion at the Organization of Agreement States (OAS) annual meeting that was held in Chicago, Illinois from August 25-28, 2014.

### U.S. Congress

# NRC Publishes Annual Report to Congress on Nuclear Security Inspections

On July 3, 2014, the U.S. Nuclear Regulatory Commission announced that the agency has made available to the public an unclassified version of its annual report to Congress detailing 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 (combat simulation) exercises, for commercial nuclear power reactors and Category I fuel cycle facilities for calendar year 2013.

"This report describes the NRC's efforts to oversee the protection of the nation's civilian nuclear power infrastructure," NRC Chairman Allison Macfarlane said. "The NRC is committed to ensuring that licensees maintain a robust and rigorous security posture to protect the facilities we regulate and the materials managed within them."

In 2013, the NRC added two new inspections to its security inspection program. The NRC began inspections of licensees' cyber security plans and licensees' preparations to respond to a potential aircraft threat. Overall, the NRC conducted 289 security inspections, including 23 force-on-force inspections, during 2013. The security program

### Federal Agencies and Committees

Atomic Safety and Licensing Board (ASLB)

# Comment/Hearing Opportunities re Ross Uranium Recovery Facility

On September 30, 2014, a U.S. Nuclear Regulatory Commission (NRC) Atomic Safety and Licensing Board (ASLB) will hold a hearing concerning challenges by two environmental groups to Strata Energy's Ross uranium recovery facility in Crook County, Wyoming. The ASLB is the independent body within the NRC that conducts adjudicatory hearings and renders decisions on legal challenges to licensing actions. The NRC issued Strata a license for the facility in April 2014.

The hearing will be held in in Gillette, Wyoming to address three contentions filed by the Natural Resources Defense Council (NRDC) and the Powder River Basin Resource Council on the environmental impact statement prepared by NRC staff. Members of the public and media are welcome to observe the evidentiary hearing, but participation will be limited to the parties and their lawyers and witnesses.

The ASLB may also take comments from interested members of the public, known as limited appearance statements, on September 28 in Sundance. These statements are not testimony or evidence, but they nonetheless may aid the ASLB and/or the parties in considering the issues in the hearing. In making a determination about whether there is sufficient interest to conduct this session, the ASLB will assess the number of written requests to make an oral statement.

Documents related to the Ross application are available on the NRC website. Documents regarding this ASLB proceeding are available on the NRC's Electronic Hearing Docket by clicking on the folder entitled "Strata\_Energy\_40-9091-MLA" on the left side of the page. More information about the role of the ASLB in the licensing process is available on the NRC website.

For additional information, please contact Maureen Conley at (301) 415-8200.

# Comments Accepted and Hearing Held re Dewey-Burdock Uranium Recovery Facility

On August 19, 2014, a U.S. Nuclear Regulatory Commission (NRC) Atomic Safety and Licensing Board (ASLB) held a hearing concerning challenges by the Oglala Sioux Tribe and others to Powertech's Dewey-Burdock uranium recovery facility in Custer and Fall River counties in South Dakota. The ASLB is the independent body within the NRC that conducts adjudicatory hearings and renders decisions on legal challenges to licensing actions. The NRC issued Powertech a license for the facility in April 2014.

The hearing was held in Rapid City, South Dakota to address seven contentions on the license and the environmental impact statement prepared by NRC staff. Members of the public and media were allowed to observe the evidentiary hearing, but participation was limited to the parties and their lawyers and witnesses.

On August 18, the ASLB also took comments from interested members of the public, known as limited appearance statements, in Hot Springs, South Dakota. These statements are not testimony or evidence, but they nonetheless may aid the ASLB and/or the parties in considering the issues in the hearing.

(Continued on page 15)

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

# NNSA/GTRI Receives Certificate of Compliance for 435B Type B Container

LANS Conducting Market Research re Type B Cask Vendors

In July 2014, the Off-Site Source Recovery Project (OSRP) of the National Nuclear Security Administration/Global Threat Reduction Initiative (NNSA/GTRI) received a Certificate of Compliance (CoC) from the U.S. Nuclear Regulatory Commission (NRC) for its Type B Container, the 435B, which will be used to over pack shielded devices containing radioactive sealed sources (such as blood irradiators).

### Issuance of Certificate of Compliance for 435B Container

OSRP's 435B container is currently certified to transport the devices listed below as payload.

Model Name/Type
Group 1 Devices
Gammator 50B, B, B34, G-50-B
Gammator M34
Gammator M38
Gammacell 1000 (GC-1000)
- Models A through D
- Elite A through D, Type I and Type II
Gammacell 3000 (GC-3000) <sup>2</sup>
- Elan A through C, Type I and Type II
Group 3 Devices
Gammacell-40 (GC-40 Exactor)

OSRP plans to continually revise the CoC to include additional content for transport.

#### **Issuance of Request for Information to Identify Type B Vendors**

Los Alamos National Security (LANS) has begun conducting market research to help find vendors capable of providing Type B transportation casks. According to a Request for Information (RFI) published on July 28, 2014, LANS is now looking to "identify vendors with qualifications and experience necessary to fabricate this package to OSRP's design specifications and as required by the Nuclear Regulatory Commission (NRC)."

The RFI does not constitute a request for proposal or solicitation, but rather a request for expressions of interest only. Interested entities meeting the qualifications and experience should submit their written Expression of Interest including:

- name of company;
- contact information (address, telephone, facsimile, email);
- description of vendor's NQA-1 Quality Assurance Program;
- description of vendor's 10CFR71, Subpart H Quality Assurance Program;
- three examples of previous manufacturing projects which demonstrate vendor's capability to fabricate Type B shipping containers; and,
- listing of any NRC Notices of Violation received within the last five years and written summaries of how those were resolved.

It is anticipated that the RFI will be followed up with a Request for Proposal (RFP) after qualified vendors have been identified. The deadline for interested companies to respond to the RFI is August 15, 2014.

#### DSWG Recommendation and Presentation at Upcoming LLW Forum Meeting

The limited availability and high cost of Type B shipping containers is a factor that was identified by the Low-Level Radioactive Waste Forum's (LLW Forum's) Disused Sources Working Group (DSWG) that impedes the prompt disposal of disused sources. In this regard, the DSWG recommended as follows: "The DOE should contract for a market study for Type B containers to determine their market demand. The purpose of the study would be to determine if there is sufficient profit potential for the private sector to produce additional containers."

Temeka Taplin will give a presentation on behalf of NNSA/GTRI about the Type 435B Container at the upcoming LLW Forum meeting that is scheduled to be held in Denver, Colorado on October 30-31, 2014.

A copy of the DSWG report, as well as the LLW Forum meeting bulletin and registration form, may be downloaded from the home page of the LLW Forum's web site at www.llwforum.org.

#### Background

LANS' OSRP in the International Threat Reduction Group, Nuclear Engineering and Nonproliferation Division is directed by NNSA/GTRI to recover and manage disused radioactive sealed sources. Part of this scope requires the use of Type B transportation packages for shipment of Type B quantities of material, including kilocuries of beta/gamma emitting sealed sources.

Interested stakeholders may obtain an electronic copy of the RFI at https://www.fbo.gov/index? s=opportunity&mode=form&id=ad1580037b58e 66869b7422ea41b57fd&tab=core& cview=0.

For additional information, please contact Martin Stunkel, Contract Administrator at Los Alamos National Laboratory, at martys@lanl.gov.

### U.S. Nuclear Regulatory Commission

# Comments Sought re Potential Changes to Radiation Protection Regulations

120 Day Comment Period Open until November 24, 2014

On July 25, 2014, the U.S. Nuclear Regulatory Commission (NRC) issued an Advance Notice of Proposed Rulemaking (ANPR) to obtain input from stakeholders on the development of a draft regulatory basis that would support potential changes to the NRC's current radiation protection regulations.

### Background

NRC's radiation protection regulations traditionally have aligned closely with those used internationally, which are issued by the International Commission on Radiological Protection (ICRP). The ICRP has made changes since the NRC's last update in 1991.

According to the ANPR, which was published at 79 *Federal Register* 43,284 (July 25, 2014), NRC is seeking to achieve greater alignment between the agency's radiation protection regulations and the 2007 ICRP recommendations as contained in ICRP Publication 103 (2007).

### **Policy and Technical Issues**

NRC staff has identified the following six policy and technical issues to be addressed as it begins to develop the technical basis for proposing changes:

- consider updating 10 CFR Part 20 to align with ICRP Publication 103 methodology and terminology;
- explore in greater detail the impact of a reduction in the dose limit for the lens of the eye to 5 rem;

- consider whether to change the dose limit for the embryo/fetus to 100 mrem;
- review individual protection including the addition of specific ALARA (as low as is reasonably achievable) planning and implementation requirements to the 10 CFR Part 20 regulations;
- address outstanding issues regarding the NRC's metrication policy including units of radiation exposure and dose; and,
- study the potential increased use of the NRC's Radiation Exposure Information and Reporting System (REIRS) database as a national occupational exposure database for both the NRC and Agreement States.

The ANPR includes specific questions on which the agency is seeking stakeholder feedback with respect to a possible revision of the NRC's radiation protection requirements.

### **Submitting Comments**

Comments, which will be accepted for 120 days, are due by November 24, 2014. Comments may be submitted via

- the federal rulemaking website;
- email to Rulemaking.Comments@nrc.gov;
- facsimile at (301) 415-1101; or,
- mail to Secretary, U.S. Nuclear Regulatory Commission, Washington, DC 20555-0001, ATTN: Rulemakings and Adjudications Staff.

### **Public Meetings and Related Activities**

In addition, the NRC plans to hold a series of public meetings to promote full understanding of the contemplated action and facilitate public comment. Notices of those meetings and any material related to the proposed rulemaking will be posted on the federal rulemaking website under Docket ID NRC-2009-0279.

In a separate and related activity, the NRC staff will be preparing an ANPR concerning the NRC's design objectives governing dose assessments for radioactive effluents from light-water-cooled

nuclear power reactors, which should be published for public comment during the public comment period for this ANPR.

Interested stakeholders may download the July 25 <u>Federal Register</u> notice online at http:// www.gpo.gov/fdsys/pkg/FR-2014-07-25/pdf/2014-17252.pdf.

For additional information, please contact Cardelia Maupin of the NRC's Office of Federal and State Materials and Environmental Management Programs at (301) 415–2312 or at Cardelia.Maupin@nrc.gov.

# Proposed Revisions re Medical Uses of Radioactive Material

120 Day Comment Period Open until November 18, 2014

On July 21, 2014, the U.S. Nuclear Regulatory Commission announced that the agency is seeking public comment on proposed revisions to its rules related to medical uses of radioactive materials. While implementing the current regulations, NRC staff, stakeholders, and NRC's Advisory Committee on the Medical Uses of Isotopes identified the need for the proposed revisions, which were published in the July 21 issue of the *Federal Register* for 120 days of public comment.

The NRC proposes to amend 10 CFR Part 35 and make some conforming changes to Parts 30 and 32. Among other things, the proposed changes would:

- amend the definition of medical events associated with permanent implant brachytherapy;
- update training and experience requirements for authorized users, medical physicists, radiation safety officers, and nuclear pharmacists;
- address a petition the NRC received seeking to recognize the qualifications of board

certified physicists and radiation safety officers not specifically named on a license;

- change requirements for measuring molybdenum contamination and reporting generator tests that exceed allowed contamination levels;
- allow associate radiation safety officers to be named on a medical license; and,
- make several minor clarifications.

Public comments on the proposed revisions will be accepted through November 18, 2014. Comments may be submitted via

- the Federal e-Rulemaking portal by searching for Docket ID NRC-2008-0175;
- mail to Secretary, US Nuclear Regulatory Commission, Washington D.C. 20555-0001, ATTN: Rulemakings and Adjudications Staff; or,
- facsimile to (301) 415-1101.

For additional information, please contact Maureen Conley of the NRC at (301) 451-8200.

# NRC Extends Comment Period re Updating LLW Strategic Assessment

Comments Are Now Due by September 15, 2014

On July 9, 2014, the U.S. Nuclear Regulatory Commission published a *Federal Register* notice (79 *Federal Register* 38,796) extending the comment period on an update to the agency's 2007 Strategic Assessment of the low-level radioactive waste program from stakeholders and other interested members of the public.

Comments are now due by September 15, 2014.

A copy of the <u>Federal Register</u> notice may be found at http://www.gpo.gov/fdsys/pkg/FR-2014-07-09/pdf/2014-16049.pdf.

### Strategic Assessment Overview

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

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

### **Specific Requests for Comments**

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

### Regarding the Current National Low-Level Radioactive Waste Disposal Landscape

- 1. What changes are anticipated in the low-level radioactive waste area with regard to safety, security, and the protection of the environment?
- 2. As a result of those changes, what activities should remain on the list of proposed activities developed during the 2007 Strategic Assessment, and are these activities appropriately prioritized in order to ensure

safe and secure low-level radioactive waste disposal, improve the effectiveness of NRC's regulations, and assure regulatory stability and predictability while allowing flexibility in disposal options? What new activities should be added?

### Regarding the Current Low-Level Radioactive Waste Disposal Regulatory System

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

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- d. on-site disposal of low-level radioactive waste; and,
- e. other (name).
- 5. What unintended consequences might result from the potential changes identified in response to questions 3 and 4?

### **Potential Alternative Futures**

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

### "Optimistic" Scenario Assumptions

All aspects for management of waste from the back end of the fuel cycle are continuously available, including uninterrupted commercial disposal capacity for all Class A, B, and C lowlevel radioactive waste and from all waste generators. Some limited competition results in disposal costs that are considered reasonable for most waste generators. Though most waste that arise from 11e.(3) and 11e.(4) of the Atomic Energy Act of 1954, as amended, byproduct material is disposed at the Richland, Washington disposal facility, some are disposed elsewhere. Greater-than-class-C low-level radioactive waste disposal is available at a U.S. Department of Energy (DOE) facility licensed by the NRC. There is a regulatory framework and process in place for low-activity waste that enables safe disposal in an efficient manner. A variety of low activity waste disposal options keeps the average cost of disposal low for this type of waste. There is little need for extended storage of low-level radioactive waste or for new innovations regarding treatment of low-level radioactive waste, including volume reduction or use of nonradioactive surrogates. There are no significant events involving safety, security, or protection of the environment, and therefore little or no negative press. Implementation of the 10

CFR Part 61 limited rulemaking has occurred with the appropriate compatibility designation.

### "Realistic" Scenario Assumptions

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

### "Pessimistic" Scenario Assumptions

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

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

#### Interagency Communication and Cooperation

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

### **Submitting Comments**

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

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

<u>Mail</u>: Cindy Bladey, Office of Administration, Mail Stop: 3WFN-06-44M, U.S. Nuclear Regulatory Commission, Washington, DC 20555-0001. Please include Docket ID NRC-2014-0080 in the subject line of your comment submission.

NRC is accepting comments until September 15, 2014. Comments received after this date will be considered if it is practical to do so, but the Commission is able to ensure consideration only for comments received before this date.

### Background

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

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

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

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

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

In addition, the staff in the 2007 Strategic Assessment not only considered the low-level radioactive waste system as it currently exists, but also considered how the low-level radioactive waste regulatory program might change with time. The staff developed three scenarios, or "alternative futures," categorized as optimistic, realistic, and pessimistic. These scenarios are described in Appendix B of SECY-07-0180. The "optimistic future" scenario was one in which the staff envisioned a continuous expansion of safe, secure and moderately priced disposal capacity for the entire spectrum of low-level radioactive waste. The "realistic future" scenario was characterized by a significant curtailment of disposal capacity and continued cost escalation for much of the spectrum of low-level radioactive waste, while the "pessimistic future" scenario presumed a virtual elimination of disposal capacity for low-level radioactive waste in the not too distant future. Accordingly, when the staff analyzed the proposed activities to determine their priority, their responsiveness to each of the future scenarios was one of the factors considered.

The NRC staff has completed two of its high priority activities identified in the 2007 Strategic Assessment; i.e., updating guidance for low-level radioactive waste storage, and evaluating the disposal of depleted uranium and the measures needed to ensure its safe disposal. Regarding the activity related to the disposal of depleted uranium, the NRC staff analyzed the impacts of near-surface disposal of large quantities of depleted uranium to determine if §61.55(a) of Title 10 of the Code of Federal Regulations (10 CFR), needed to be changed to assure that large quantities of depleted uranium are disposed of in a manner that meets the performance objectives of 10 CFR Part 61. While the NRC staff concluded that large quantities of depleted uranium can be disposed of in a nearsurface disposal facility under certain conditions and still meet the performance objectives of 10 CFR Part 61, the NRC staff proposed changing the existing regulations to incorporate those conditions. The NRC staff is proceeding with a rulemaking to amend 10 CFR Part 61 to specify a requirement for a site-specific analysis for the disposal of large quantities of depleted uranium. A proposed rule is expected to be published in 2015. The NRC staff continues to work on three additional activities; i.e., finalizing a procedure for the review of low-activity waste disposal in Resource Conservation and Recovery Act facilities not licensed by the NRC, revising 10 CFR Part 61, and revising the 1995 Concentration

Averaging and Encapsulation Branch Technical Position.

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

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

On March 7, 2014, the NRC held a workshop to gather information on the update to the NRC's 2007 Strategic Assessment of the low-level radioactive waste regulatory program in Phoenix, Arizona. The NRC also conducted two Webinars on June 17 and July 8. The NRC staff intends to utilize the information gathered from the workshop and Webinars, as well as the comments received in response to the May 15 *Federal*  *Register* notice, to update its Strategic Assessment of the agency's low-level radioactive waste regulatory program.

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

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

For additional information, please contact Melanie C. Wong of the NRC's Office of Federal and State Materials and Environmental Management Programs (FSME) at (301) 415-2432 or at Melanie.Wong@nrc.gov or Mathews George of FSME at (301) 415-7065 or at Mathews.George@nrc.gov.

# Proposed Language re Consolidated Action Mitigation Rule

On August 26, 2014, U.S. Nuclear Regulatory Commission staff met with members of the public and industry representatives to discuss potential rule language that would enhance U.S. nuclear power plants' ability to respond to a reactor accident. The rulemaking is part of the NRC's

efforts to implement the lessons learned from the Fukushima nuclear accident in March 2011.

The meeting was held at NRC headquarters in Rockville, Maryland. During the meeting, the staff discussed their efforts in crafting the rule, as well as how the agency examines how accident mitigation imposes new requirements on existing plants. In addition, industry representatives discussed the mitigation strategy guidance they've created to this point. The public was provided an opportunity to comment and ask questions at several points throughout the meeting.

The proposed rule would create permanent regulations for future reactors, based on the concepts of an Order the NRC issued to all U.S. plants in March 2012. Under the Order, plants must obtain resources and create integrated plans and procedures to restore and maintain key safety functions if an external event, such as an earthquake or a flood, impacts the installed power distribution and safety systems.

The preliminary proposed rule language will be available on Regulations.gov under Docket IDs NRC-2011-0299 and NRC-2012-0031; as well as on ADAMS, the NRC's electronic document database, under accession number ML14218A253.

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

# Potential Regulatory Changes for Research and Test Reactors

On August 7, 2014, the U.S. Nuclear Regulatory Commission held a public meeting in Portland, Oregon to discuss potential changes to regulations for research and test reactors (RTRs). The meeting was held concurrently with the 2014 annual conference of the National Organization of Test, Research, and Training Reactors. It provided a forum for the public to ask questions and provide informal comments about proposed changes aimed at enhancing the effectiveness and efficiency of RTR regulations.

For additional information, please contact Duane Hardesty at (301) 415-3724 or at Duane.Hardesty@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 28, 2014, NRC announced that staff has issued its final safety evaluation report (SER) for the proposed renewal of the operating license for the Callaway nuclear power plant in Fulton, Missouri. The report concluded that there are no technical issues to preclude license renewal for an additional 20 years of operation. Callaway is a pressurized water reactor located approximately 25 miles northeast of Jefferson City. Union Electric Co. submitted an application in December 2011 to renew the license for an additional 20 years-through October 18, 2044. The SER documents the results of the NRC staff's review of the license renewal application and site audit of Callaway's aging-management programs to address the safety of plant operations during the period of extended operation. Overall, the results show that Union Electric has identified actions to manage the effects of aging in the appropriate systems, structures and components of the plant, and that their functions will be

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maintained during the period of extended operation. Issuing the final SER is a significant milestone in the license renewal review process. This process proceeds along two tracks—one for review of safety issues and another for environmental issues. The staff published a draft supplemental environmental impact statement (SEIS) for public comment in February 2014. The final SEIS is expected to be published in November 2014. The SER and the license renewal application have been provided to the Advisory Committee on Reactor Safeguards (ACRS)—an independent body of experts that advises the Commission on reactor safety matters. The ACRS is scheduled to discuss the SER during a meeting on October 2, 2014 and then submit its recommendation on license renewal to the Commission. Documents related to Callaway's license renewal application, including the SER, as well as information about the license renewal process, are located on the NRC's website at www.nrc.gov.

On August 12, 2014, NRC announced that the ٠ agency is seeking public comment on a draft study detailing the environmental impacts of renewing the operating licenses of the Sequovah Nuclear Plant, Units 1 and 2. The draft environmental impact statement for the plants-which are located in Soddy-Daisy, Tennessee-contains the NRC staff's preliminary conclusion that the impacts would not preclude renewing the plant's licenses for an additional 20 years. NRC staff will hold two public meetings in Soddy-Daisy on September 17 to present the draft study's findings and hear comments from the public. The Sequoyah plant has two pressurized water reactors. The current operating licenses are due to expire on September 17, 2020 for Unit 1 and on September 15, 2021 for Unit 2. The operator, Tennessee Valley Authority, submitted its renewal application on January 15, 2013. The NRC's review of the application consists of a technical safety

review and an environmental review. The draft supplemental environmental impact statement is Supplement 53 to NUREG-1437, Generic Environmental Impact Statement for License Renewal of Nuclear Plants It is now available on the NRC's electronic document database, ADAMS, under accession number ML14211A454. In a related Federal Register notice, the NRC provided detailed instructions on how to submit written comments on the draft supplemental environmental impact statement. Comments will be accepted through September 29. The Sequoyah Nuclear Plant license renewal application and general information about reactor license renewal are available on the NRC website at www.nrc.gov.

On July 24, 2014, NRC staff held two public meetings in Monroe, Michigan to describe the license renewal process and provide the public with the opportunity to comment on the environmental issues the NRC should consider in its license renewal review for the Fermi Nuclear Power Plant. The Fermi Unit 2 boiling-water reactor is located in Newport, Michigan—approximately 25 miles northeast of Toledo, Ohio. The current operating license expires March 20, 2025. The plant's owner, the DTE Electric Company, submitted the application for 20 additional years of operation April 24, 2014. The meetings were held at the Monroe County Community College. An informal open house was held an hour prior to the start of each meeting to provide interested members of the public with an opportunity to talk informally with agency staff. However, formal comments were only accepted during the transcribed meetings following the NRC's presentations. The license renewal application is available on the NRC website at www.nrc.gov.

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.

# NRC Approves Final Rule on Spent Fuel Storage

Ends Suspension of Final Licensing Actions for Nuclear Plants and Renewals

On August 26, the U.S. Nuclear Regulatory Commission approved a final rule on the environmental effects of continued storage of spent nuclear fuel and announced that the agency will lift its suspension of final licensing actions on nuclear power plant licenses and renewals once the rule becomes effective.

The Commission's action approved the final rule and Generic Environmental Impact Statement (GEIS), renamed from "waste confidence" to "continued storage of spent nuclear fuel." The name was changed in response to near-unanimous public comment to more accurately reflect the nature and content of the rule.

The Commission expects the final rule and GEIS to be published in September.

### **Overview and Analysis**

The continued storage rule adopts the findings of the GEIS regarding the environmental impacts of storing spent fuel at any reactor site after the reactor's licensed period of operations. As a result, those generic impacts do not need to be reanalyzed in the environmental reviews for individual licenses. The GEIS analyzes the environmental impact of storing spent fuel beyond the licensed operating life of reactors over three timeframes: for 60 years (short-term), 100 years after the short-term scenario (long-term) and indefinitely.

The GEIS analyzes impacts across a number of resource areas throughout each timeframe. Areas examined include land use, air and water quality, and historic and cultural resources. It also contains the NRC's analysis of spent fuel pool leaks and fires.

The rule does not authorize, license or otherwise permit nuclear power plant licensees to store spent fuel for any length of time.

In a separate Order, the Commission approved lifting the suspensions and provided direction on the resolution of related contentions in 21 adjudications before the Commission and the Atomic Safety and Licensing Boards. The Order authorizes the NRC staff to issue final licensing decisions as appropriate once the final rule becomes effective, 30 days after publication in the *Federal Register*.

### Background

The Commission's action signals the end of a two-year effort to satisfy a remand by the U.S. Court of Appeals for the District of Columbia Circuit. In June 2012, the court struck down the NRC's 2010 revision of its "waste confidence" rule. The court directed the agency to consider the possibility that a geologic repository for permanent disposal of spent fuel might never be built and to do further analysis of spent fuel pool leaks and fires. In August 2012, the Commission responded by suspending final licensing decisions on new reactors, reactor license renewals and spent fuel storage facility renewals. The Commission subsequently directed the staff to develop a new rule and a supporting GEIS within 24 months. (See LLW Notes, July/August 2012, pp. 34-35.)

A proposed rule and draft GEIS were published in September 2013, with a public comment period of 98 days. (See *LLW Notes*, September/October 2013, pp. 36-37.) The staff conducted 13 public meetings across the country during that period to present the proposed rule and draft GEIS and receive public comments. Appendix D of the final GEIS contains summaries of the comments received and the NRC responses.

More information about the rule and GEIS is available on the NRC website at www.nrc.gov. The Commissioners' individual vote records and comments on the final rule and GEIS will be posted at http://www.nrc.gov/reading-rm/doccollections/commission/cvr/2014/ (reference SECY-14-0072), and the Memorandum and Order lifting the licensing suspensions and providing direction on the resolution of related adjudicatory contentions will be posted at http://www.nrc.gov/ reading-rm/doc-collections/commission/ orders/2014/.

For additional information, please contact Dave *McIntrye of the NRC at (301) 415-8200.* 

# NRC Commissioner Magwood Steps Down

On August 31, 2014, NRC Commissioner William Magwood IV stepped down from his position at the U.S. Nuclear Regulatory Commission. The following day, Magwood assumed his new position as the Director-General of the Organization for Economic Cooperation and Development's (OECD) Nuclear Energy Agency (NEA). Magwood was initially sworn in to the Commission on April 1, 2010. His term was scheduled to run through June 2015. Magwood has had a distinguished career in the nuclear field and in public service. Most notably, he was the longest-serving head of the United States' civilian nuclear technology program, serving two Presidents and five Secretaries of Energy.

"It has been a rare honor to have been one of only 33 people to have served as an NRC Commissioner," Magwood said. "The NRC is a truly outstanding organization that stands as a powerful model for nuclear safety organizations throughout the world. The mission of the NRC has engendered a culture of independence of decision-making, dedication to purpose, and commitment to excellence to which one would hope all regulators and staffs might aspire. Though my tenure with the NRC is coming to its end, I will remain a strong advocate for these values."

As he left the agency, Magwood expressed particular thanks to his Commission colleagues and to the NRC staff, stating "I am proud to have worked alongside a cadre of exceptional public servants dedicated to protecting public health and safety through a commitment to openness and independence."

The NEA is a specialized sub-agency within the OECD comprised of 31 member countries. The NEA, with the support of its member countries, focuses on facilitating policy analyses, sharing information and experience amongst its members, developing cooperative research projects, and developing consensus positions on technical issues, including those relevant to nuclear safety regulators around the world. Its work is focused upon developing and maintaining the scientific, technical, and legal basis for ensuring that nuclear power, where it is used, is used in a safe, environmentally friendly, and economical manner.

At OECD, Commissioner Magwood succeeds Luis Echávarri, who retired in April 2014 after 17 years at the head of the NEA.

"The work of an NRC Commissioner is often humbling, generally challenging, and always rewarding," Magwood said. "I thank the Administration for the opportunity to serve and for the support I've received in moving to my next public service assignment. As my tenure draws to a close, I recall that I pledged during my confirmation to 'do the right thing even when the right thing isn't easy.' I am proud to end my term with that commitment met."

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

# William Dean Named Director of NRC Office of Nuclear Reactor Regulation

On June 30, 2014, U.S. Nuclear Regulatory Commission Chairman Allison Macfarlane announced, on behalf of the Commission, the selection of William (Bill) Dean as Director of the Office of Nuclear Reactor Regulation (NRR). In his new position, Dean will be responsible for the regulatory oversight of the nation's 100 operating commercial nuclear power reactors as well as research and test reactors. He replaces Eric Leeds, who retired the same day. Leeds served as Director of NRR since May 2008.

"Bill Dean has a long record of accomplishment during his career with the NRC, and he is ably qualified to oversee our important work protecting public health and the environment by ensuring the nation's nuclear power plants operate safely," Macfarlane said. "Eric Leeds has been an outstanding public servant. His leadership on the agency's response to Fukushima and other important issues has helped improve the safety of the U.S. reactor fleet." Dean has served as the NRC's Regional Administrator in the Region I office in King of Prussia, Pennsylvania since October 2010. He oversees regulation of commercial nuclear power plants in the Mid-Atlantic and New England states, as well as radioactive materials throughout the eastern United States. He began his NRC career in Region II as an Operator Licensing Examiner in 1985, after serving eight years as an officer in the U.S. Navy's Nuclear Power Program. He has held a number of positions of increasing responsibility within the NRC, including Assistant for Operations in the Office of the Executive Director for Operations, several management positions in NRR, and Deputy Director of the Office of Nuclear Security and Incident Response. He received the NRC's Meritorious Service Award in 2001 and a Presidential Rank Award in 2003

Daniel H. Dorman, currently NRR's Deputy Director for Engineering and Corporate Support, will serve as Acting Director until Dean assumes his new duties at NRC headquarters in Rockville, Maryland in the next few months.

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

# Maureen Wylie Named NRC Chief Financial Officer

On July 28, 2014, the U.S. Nuclear Regulatory Commission announced that Chairman Allison Macfarlane has named long-time government financial manager Maureen Wylie as the agency's Chief Financial Officer. Wylie is assuming the position previously held by James Dyer, who retired from the NRC in May with 35 years of federal service.

Before her new appointment, Wylie spent 10 years at the National Oceanic and Atmospheric

Administration (NOAA), including in the position of Chief Financial Officer from 2004 to 2012. Most recently, she served as Chief, Resource and Operations Management, the principal executive for NOAA's corporate services. During her time at NOAA, Wylie received the Presidential Distinguished Executive Rank Award in 2009 and a 2011 NOAA Administrator's Award.

"We are happy to welcome Maureen to our team," said Macfarlane. "Her deep and rich government resources and facilities management experience will serve the NRC well."

Previously, Wylie worked nearly 20 years as a civilian employee of the Army. She held the position of Chief Financial Officer for the Army National Guard from 2002 to 2004, and a number of other positions involving resource and facilities management, and base realignment and closure. Wylie began her government service in 1985 as an Army Presidential Management Intern. She has received a number of awards and honors over the course of her career.

Wylie graduated with honors from Rutgers University with a Bachelor's Degree in Political Science and from Yale University with a Master's Degree in International Relations. She is also a 1999 Distinguished Graduate of the Industrial College of the Armed Forces, National Defense University, with a Master's Degree in National Security Resource Strategy.

For additional information, please contact Maureen Conley of the NRC at (301) 415-8202.

# NRC Amends Licensing, Inspection and Annual Fee Rule for FY 2014

The U.S. Nuclear Regulatory Commission has amended its regulations to reflect the licensing, inspection and annual fees it will charge its applicants and licensees for fiscal year (FY) 2014. The final fee rule, published in the *Federal Register* on June 30, 2014, includes fees required by law to recover approximately 90 percent of the agency's budget authority. A proposed rule was published for public comment on April 14, 2014.

For FY 2014, the NRC is required to collect approximately 90 percent of its appropriation, or \$930.7 million, through fees assessed to licensees. After the reclassification of a fuel facility licensee and other billing adjustments, an estimated \$916.7 million is to be recovered through fees. Approximately 36 percent of the fees will recover the cost of specific services to applicants and licensees under 10 CFR Part 170. The remaining 64 percent will be billed as annual fees under 10 CFR Part 171. By law, the NRC is required to collect all fees by September 30, 2014. The money goes to the U.S. Treasury's general fund.

The increases reflected in the final fee rule are largely a result of increased budgetary resources provided by Congress for FY 2014 compared to FY 2013. In addition, the final fee rule includes several changes from the NRC's final fees for FY 2013. The hourly rate increases 2.7 percent, from \$272 to \$279 for FY 2014, and fees charged under 10 CFR Part 170 have been updated accordingly. Annual fees for FY 2014 increase over last year for operating reactors, research and test reactors, most fuel facilities, material users, and uranium recovery facilities, while annual fees decrease for spent fuel storage facilities (at operating, decommissioning and decommissioned

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