LLW notes

Volume 24, Number 2 March/April 2009

U.S. Nuclear Regulatory Commission

NRC Hosts LLRW Briefing

At the request of the Commissioners, the U.S. Nuclear Regulatory Commission (NRC) hosted a briefing on low-level radioactive waste management and disposal and related issues on April 17, 2009.

The briefing—which was announced in 74 *Federal Register* 12,401 (March 24, 2009)—included presentations by a variety of speakers and was open to the general public for observation. A representative from the Low-Level Radioactive Waste Forum participated in the briefing, at the invitation of NRC Commissioners.

An archived webcast of the briefing can be found at www.nrc.gov.

Structure and Logistics

The briefing was held in the Commissioners' Conference Room on the first floor of the NRC's headquarters building at One White Flint North in Rockville, Maryland.

The briefing was divided into two parts. In the morning, from 9:30 a.m. to 11:30 a.m., NRC staff provided presentations on a broad range of low-level radioactive waste issues. In addition, representatives from the U.S. Department of Energy's (DOE) Office of Environmental Management and the National Nuclear Safety Administration (NNSA) gave presentations. The afternoon session went from 1:30 p.m. to 3:30 p.m. and included a state regulators panel and a waste generators panel.

A Commission question and answer session followed each panel.

Sessions and Panels

Morning Session The morning session was divided into two panels, with NRC staff on the first and other federal representatives on the second.

The NRC panel included the following:

- Bill Borchardt: Executive Director for

(Continued on page 30)

In This Issue

COPYRIGHT POLICY

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

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

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

This Copyright Policy is designed to provide a framework that balances the benefits of a broad sharing of information with the need to maintain control of published material.

1. LLW Forum, Inc., publications will include a statement that the material is copyrighted and may not be used without advance permission in writing from the LLW Forum.

2. When LLW Forum material is used with permission it must carry an attribution that says that the quoted material is from an LLW Forum publication referenced by name and date or issue number.

3. Persons may briefly summarize information reported in LLW Forum publications with general attribution (e.g., the LLW Forum reports that . . .) for distribution to other members of their organization or the public.

4. Persons may use brief quotations (e.g., 50 words or less) from LLW Forum publications with complete attribution (e.g., *LLW Forum Notes*, May/June 2002, p. 3) for distribution to other members of their organization or the public.

5. Members and subscribers may with written approval from the LLW Forum's officers reproduce LLW Forum materials one time per year with complete attribution without incurring a fee.

6. If persons wish to reproduce LLW Forum materials, a fee will be assessed commensurate with the volume of material being reproduced and the number of recipients. The fee will be negotiated between the LLW Forum's Executive Director and the member and approved by the LLW Forum's officers.

LLW Notes
Volume 24, Number 2 March/April 2009
Editor and Writer: Todd D. Lovinger
Layout and Design: Rita Houskie, Central Interstate Low-Level Radioactive Waste Compact

LLW Notes is published several times a year and is distributed to the Board of Directors of the Low-Level Radioactive Waste Forum, Inc. - an independent, non-profit corporation. Anyone - including compacts, states, federal agencies, private associations, companies, and others - may support and participate in the LLW Forum, Inc. by purchasing memberships and/or by contributing grants or gifts. For information on becoming a member or supporter, please go to our web site at www.llwforum.org or contact Todd D. Lovinger - the LLW Forum, Inc.'s Executive Director - at (202) 265-7990.

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

LLW
FORUM, INC

Low-Level Radioactive Waste Forum, Inc.
1619 12th Street N.W.
Washington, DC 20009
(202) 265-7990
FAX (202) 265-7995
E-MAIL llwforuminc@aol.com

Table of Contents

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.

Register Now: Fall 2009 LLW Forum Meeting
Park City, Utah

The Low-Level Radioactive Waste Forum is pleased to announce that registration for the fall 2009 meeting is now open. The meeting—which is being hosted by the State of Utah—will be held at the Marriott Hotel in Park City, Utah on September 21-22, 2009. (The Executive Committee will meet on Monday morning.) There will also be an optional site tour of the Energy*Solutions*' Clive facility on Tuesday afternoon for interested parties. (Persons planning to attend the site tour are encouraged to take note and plan accordingly when making their travel arrangements, as the tour will not conclude until late afternoon or early evening.)

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.

Persons who plan to attend the meeting are encouraged to make their hotel reservations and send in their registration forms as soon as possible as we have exceeded our block for the last few meetings. Once the block is full, the hotel may charge a higher rate. (The phone number for the Marriott Hotel is 435/649-2900. The web address is www.parkcitymarriott.com. Please ask for a room in the Low-Level Waste Forum block.)

To access the meeting bulletin and registration form, please go to www.llwforum.org and scroll down to the first bold paragraph on the Home Page. The documents may also be found on the About Page under the header "Meetings."

For additional information, please contact Todd D. Lovinger, the LLW Forum's Executive Director, at (202) 265-7990 or at LLWForumInc@aol.com.

Low-Level Radioactive Waste Forum Meetings
2009 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 2009 Meeting

The State of Utah will host the fall 2009 LLW Forum meeting at the Marriott Hotel in Park City, Utah. The meeting will be held from Monday, September 21 through Tuesday, September 22, 2009. A link to the hotel web site can be found at http://www.parkcitymarriott.com. The meeting will include an optional site tour of interested participants at the Clive, Utah low-level radioactive waste disposal facility.

2010 Meetings

The State of Texas and Waste Control Specialists will co-host the spring 2010 meeting in Austin, Texas. The meeting will be held at the Omni Austin Hotel, which is located in the heart of downtown. The meeting will include an optional visit for interested parties to the WCS facility in Andrews County, Texas—which is located near Midland, Texas.

The State of New York has agreed to host the fall 2010 meeting in Saratoga Springs, New York from September 27-28, 2010. The meeting will be held at the Gideon Putman Resort & Spa. (For additional information about the hotel, please go to http://www.historichotels.org/hotel/Gideon_Putnam_Resort_Spa.) The hotel is currently undergoing a major renovation to be completed in spring 2010. The Gideon Putnam is located in the center of Saratoga Spa State Park about 1 mile outside downtown Saratoga Springs. Within walking distance on park grounds are two golf courses, the National Museum of Dance, the Saratoga Automobile Museum, the historic Roosevelt Mineral Baths and 10 natural mineral springs.

2011 Meetings and Beyond

The LLW Forum is currently seeking volunteers to host the 2011 meetings and those thereafter. Although it may seem far off, substantial lead-time is needed to locate appropriate facilities.

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

Spring 2009 LLW Forum Meeting
Columbia, South Carolina

The Low-Level Radioactive Waste Forum met in Columbia, South Carolina at the Hilton Hotel on March 23-24, 2009. The Atlantic Interstate Low-Level Radioactive Waste Compact Commission and the State of South Carolina co-sponsored the meeting. In addition, an optional tour of the Barnwell, South Carolina low-level radioactive waste disposal facility was held for interested parties on Tuesday afternoon immediately following the meeting.

Executive Committee Meeting

The Board of Directors of the LLW Forum met in Executive Session on Monday morning, March 23, 2009. During the course of the meeting, the Board received the 2008 financial report and 2009 projections from the Treasurer and the Executive Director. The Board also received a report on the status of memberships, subscriptions and other organizational issues.

Next, the Board discussed and approved a proposal to increase the term of the officer positions from one year to two years in order to maintain consistency and build upon the existing body of knowledge. By approval of the board, the current slate of officers will continue for the coming year—including Leonard Slosky of the Rocky Mountain Compact to serve as Chair-Elect, Larry Goldstein of the State of Washington to serve as Past-Chair, Ted Buckner of the Southeast Compact to serve as Treasurer and Marcia Marr to serve as Chair. Four other members were elected to serve on the Executive Committee including Susan Jablonski of Texas, Alyse Peterson of the State of New York, Mike Garner of the Northwest Compact and Max Batavia of the Atlantic Compact.

The Board also discussed an invitation from NRC for the LLW Forum to participate in the upcoming Commissioners Briefing on low-level waste on April 17. Todd Lovinger, the LLW Forum's Executive Director, participated in the briefing on behalf of the LLW Forum. (See related story, this issue.)

The LLW Forum has also received an invitation to put together a panel for the Exchange Monitor's upcoming low-level waste meeting in Las Vegas in September 2009. Following discussion, the board agreed to work with our members over the next few months to coordinate that panel.

Finally, the Board discussed the 2009 –10 meetings and began seeking volunteers for the 2011 –12 meetings. (See related story, this issue.)

Spring 2009 LLW Forum Meeting

Topics and issued covered at the Columbia meeting included, among others, the following:

- reports on new developments in states and compacts;
- licensing activities update for the Waste Control

Specialists proposed LLRW facility in Andrews County, Texas;
- transition issues and potential impacts of the new administration in Washington, DC;
- recently issued NRC Commission paper on concentration averaging;
- meeting federal regulatory requirements regarding ionizing radiation;
- disposition challenges for the CRCPD orphan source and SCATR programs;
- perspectives from Atlantic Compact regional utility generators;
- uranium enrichment and associated residual management considerations;
- EPA's revised standards for the planned Yucca Mountain high-level waste repository;
- NRC Commission briefing re low-level radioactive waste;
- the future of waste management—an interactive discussion: where do we go from here and how can we work together to develop a national solution;
- waste management responsibilities of DOE: progress and challenges;
- liability issues and concerns: transactions between generators, brokers, and processors;
- lack of disposal for radioactive sealed sources and national security;
- recently issued NRC regulatory issue summary regarding interim low-level waste storage;
- recent and future activities at Energy*Solutions*' Clive facility;
- NRC's proposed rule on decommissioning planning to amend Commission regulations to prevent legacy sites; and,
- Barnwell transition issues and current decommissioning activities at the site.

For additional information about the meeting, please refer to the agenda or contact Todd D. Lovinger, the LLW Forum's Executive Director, at (202) 265-7990 or at LLWForumInc@aol.com.

LLW Forum Participates in WM '09 Symposia

The Low-Level Radioactive Waste Forum participated in the Waste Management '09 Symposia that was recently held in Phoenix, Arizona from February 28 through March 4. As in past years, the LLW Forum organized and sponsored a panel of hot topics regarding low-level radioactive waste disposal and management.

This year, our panelists included

- Dan Schultheisz of the U.S. Environmental Protection Agency;
- Lisa Edwards of the Electric Power Research Institute—a sister agency to the Nuclear Energy Institute;
- Susan Jablonski of the State of Texas;
- Bill House of EnergySolutions' Barnwell facility; and,
- Larry McNamara of Perma-Fix Environmental Services.

Topics covered during the panel presentations included

- licensing of new disposal capacity in Texas;
- plans for modifying existing disposal operations in Barnwell, South Carolina;
- efforts to minimize generation and provide for long-term storage of Class B and C waste;
- recent advancements in processing and treatment of LLRW; and,
- disposal of NORM and TENORM at hazardous waste facilities.

The LLW Forum plans to put together a panel for the Waste Management '10 Symposia—which is also planned for Phoenix, Arizona for early March 2010.

Northwest Compact

American Ecology Receives Transportation Safety Award: Announces Record Operating Income and Disposal Volumes

On April 1, 2009, American Ecology Corporation announced that it is a recipient of the Union Pacific Railroad's 13th annual Pinnacle Award for chemical transportation safety. Earlier, on February 11, 2009, the company reported operating results for the quarter and year ended December 31, 2008—including record operating income and disposal volume for the fourth consecutive year.

Safety Award

The Pinnacle Award recognizes companies for chemical transportation safety—including effective safety plans and zero non-accident releases from regulated hazardous materials shipments.

"American Ecology and the Union Pacific Railroad employees share a continuing commitment to safety and are truly partners in this impressive achievement," stated Stephen Romano, American Ecology's Chairman and Chief Executive Officer. "Safety is a core value at American Ecology and we are committed to the highest level of safety and compliance programs throughout our organization."

Financial Results

According to American Ecology's 2008 financial report, revenue for the year was a record $175.8 million—an increase of 6% over 2007 revenues. Disposal volumes for 2008 climbed to a record of 1,192,000 tons—a 7% increase over 2007.

"We closed out 2008 with solid performance, allowing us to deliver a fourth consecutive year of record operating income," commented Romano. "Our diverse range of hazardous and radioactive waste disposal services worked in our favor, with quarter over quarter revenue growth in our waste broker, refinery, government clean-up and other industry service categories more than offsetting declines in industry clean-up, steel mill and rate-regulated business."

American Ecology Corporation, through its subsidiaries, provides radioactive, PCB, hazardous, and non-hazardous waste services to commercial and government customers throughout the United States including steel mills, medical and academic institutions, petro-chemical facilities and the nuclear power industry. The company—which is headquartered in Boise, Idaho—is the oldest radioactive and hazardous waste services company in the United States.

Northwest Compact/State of Idaho

Areva's Uranium Enrichment Application Accepted by NRC

On March 24, 2009, the U.S. Nuclear Regulatory Commission announced that the agency has accepted for formal review an application by Areva Enrichment Services LLC for a license to construct and operate a centrifuge uranium enrichment plant in Bonneville County, Idaho. The application—which has been assigned docket number 70-7015—has been made available for public review on the agency's web site.

Areva submitted the application on December 30, 2008. NRC staff completed an initial acceptance review and determined that the application is sufficiently complete for the agency to begin its formal environmental and safety reviews. Acceptance of the application neither precludes future requests for additional information, nor indicates whether the Commission will issue a license.

NRC anticipates that the formal reviews and adjudicatory hearings will take approximately 30

months. A notice of opportunity to request a hearing before the NRC's Atomic Safety and Licensing Board, and a separate notice of intent to prepare an environmental impact statement, will be published in the *Federal Register* shortly.

General Electric-Hitachi Global Laser Enrichment LLC, Louisiana Energy Services/National Enrichment Facility, and the US Enrichment Corporation have all also either submitted applications, or announced intentions to do so, to construct and operate uranium enrichment facilities. (See related story, this issue.)

NRC recently issued a decision regarding the classification of large quantities of depleted uranium, which is the subject of ongoing correspondence between the agency and members of the U.S. House of Representatives. (See related stories, this issue.)

The Areva application, minus certain classified and sensitive portions (i.e., proprietary information), is available on the NRC web site at http://www.nrc.gov/materials/fuel-cycle-fac/arevanc.html.

Southeast Compact

2009 Hodes Award Presented to Susan Jablonski

During the Waste Management '09 Symposia in Phoenix, Arizona, the Southeast Compact Commission for Low-Level Radioactive Waste Management awarded the 2009 Richard S. Hodes, M.D. Honor Lecture Award to Susan Jablonski of the Texas Commission on Environmental Quality (TCEQ). The award recognizes an individual, company, or organization that contributed in a significant way to improving the technology, policy, or practices of low-level radioactive waste management in the United States.

Jablonski, who currently serves as the Director of TCEQ's Radioactive Materials Division, manages Texas' regulatory programs for the disposal of commercial radioactive material, source material (uranium) recovery, and commercial radioactive waste storage and processing. She has extensive experience working with environmental and radiological monitoring, radiochemistry, environmental engineering, waste characterization, and the management and disposal of radioactive material. She previously served as the Director of Health Physics of the Texas Low-Level Radioactive Waste Disposal Authority until transferring to the TCEQ as a technical expert on radioactive waste management disposal matters.

Award Background

Dr. Richard S. Hodes was a distinguished statesman and a lifetime scholar. He was one of the negotiators of the Southeast Compact law, in itself an innovative approach to public policy in waste management. He then served as the chair of the Southeast Compact Commission for Low-Level Radioactive Waste Management from its inception in 1983 until his death in 2002. Throughout his career, Dr. Hodes developed and supported innovation in medicine, law, public policy, and technology.

The Richard S. Hodes, M.D. Honor Lecture Award was established in 2003 to honor the memory of Dr. Hodes and his achievements in the field of low-level radioactive waste management. It is awarded to an individual, company, or organization that contributed in a significant way to improving the technology, policy, or practices of low-level radioactive waste management in the United States.

Past Recipients

In 2004, the Southeast Compact Commission chose W.H. "Bud" Arrowsmith as the winner of the first Richard S. Hodes, M.D. Honor Lecture Award. The Texas A & M University Student Chapter of Advocates for Responsible Disposal in Texas (ARDT) was also chosen in 2004 for special recognition as an Honorable Mention for its innovation in educational activities related to low-level radioactive waste management. William

Dornsife of Waste Control Specialists, LLC was chosen as the second Richard S. Hodes, M.D. Honor Lecture Award recipient in 2005 and the California Radioactive Materials Management Forum (CalRad Forum) received the award in 2006. In 2007, Perma-Fix Environmental Services Chief Operating Officer Larry McNamara was chosen to receive the award and Michael Ryan of the U.S. Nuclear Regulatory Commission's Advisory Committee on Nuclear Waste and Materials (ACNW&M) won the award in 2008.

2010 Award Nominations

The Southeast Compact Commission is currently accepting nominations for the 2010 Hodes Award.

For additional information, please contact Ted Buckner of the Southeast Compact Commission at (919) 821-0500 or tedb@secompact.org or visit the Southeast Compact Commission's website at http://www.secompact.org/.

Southeast Compact/State of Tennessee

Perma-Fix Commences Acceptance of Radioactive PCBs

On March 11, 2009, Perma-Fix Environmental Services, Inc. announced that it had fulfilled the necessary regulatory requirements to begin operation of its treatment unit for the destruction of radioactive Polychlorinated Biphenyls (PCBs) and that it has commenced acceptance of these wastes at its Diversified Scientific Services, Inc. (DSSI) facility located in the State of Tennessee.

"I am pleased to announce that we have completed the necessary regulatory requirements to receive and process PCBs in a radioactive matrix at our DSSI facility," said Louis Centofanti, Chairman and Chief Executive Officer. "Through this effort, we have carved out an important niche as the only commercial operator in the United States authorized to destroy radioactive PCBs, which also provides commercial generators with the first licensed and approved option for radioactive PCBs."

Centofanti also noted that the company's new capabilities and permit provide the U.S. Department of Energy with a fully licensed, commercially permitted, and low-risk option for the TSCA incinerator that is scheduled to close later this year.

Perma-Fix is a national environmental services company that provides unique mixed and industrial waste management services. The company has increased its focus on its nuclear services segment, which provides radioactive and mixed waste treatment services to hospitals, research laboratories and institutions, numerous federal agencies (including DOE and the U.S. Department of Defense) and nuclear utilities. The industrial segment provides hazardous and non-hazardous waste treatment services for a diverse group of customers including Fortune 500 companies; numerous federal, state and local government agencies; and, thousands of smaller clients.

Impact Services to Acquire GeoMelt

In late February 2009, Impact Services, Inc. announced that it had reached an agreement in principal to acquire all assets relating to the GeoMelt business of AMEC plc. Impact Services is a waste processing facility located at the East Tennessee Technology Park. The GeoMelt technologies are a collection of vitrification processes that are used to safely treat and stabilize a wide variety of materials including organics, heavy metals and radioactive contaminants. The transaction is conditional on the customary conditions precedent.

The press release states as follows:

> The GeoMelt technologies transform hazardous chemical and radioactive wastes

into an ultra-stable vitreous and crystalline material similar to volcanic obsidian that is typically 10 times stronger than concrete. Unaffected by wet/dry or feeze/thaw cling, the product is unsurpassed in leach resistance and it is expected to maintain its physical and chemical integrity over many tens of thousands of years. Corrosion tests have demonstrated that the GeoMelt product is more durable than granite or marble.

Impact Services asserts that the GeoMelt product line is uniquely capable of solving some of the most significant problems with complex waste issues that are facing the industry—including the treatment of PCB, RCRA and asbestos materials. Impact Services believes that the acquisition of GeoMelt will allow the company to offer existing customers additional solutions while expanding the company's customer base. In addition, they feel it will open up new global markets and opportunities.

Impact Services is a small business enterprise that operates a radioactive waste processing facility in Oak Ridge, Tennessee. The company—which also owns and operates Fluid Tech in Las Vegas, Nevada—provides radioactive waste management services to both federal and commercial clients. Impact Services performs a variety of decontamination activities, waste stream inspection and characterization services, volume reduction, thermal processing, waste sorting and segregation, waste profiling, and stabilization and solidification of liquids.

Southeast Compact/Commonwealth of Virginia

Virginia Becomes Agreement State

On March 24, 2009, it was announced that the Commonwealth of Virginia has completed an agreement with the U.S. Nuclear Regulatory Commission to assume part of the agency's regulatory authority over certain nuclear materials in the commonwealth. As such, Virginia becomes the 36th state to sign such an agreement with the NRC.

Under the agreement, NRC will transfer to Virginia the responsibility for licensing, rulemaking, inspection and enforcement activities for:

(1) radioactive materials produced as byproducts from the production or utilization of special nuclear material (SNM—enriched uranium or plutonium);
(2) naturally occurring or accelerator-produced byproduct material (NARM);
(3) source material (uranium and thorium); and,
(4) SNM in quantities not sufficient to support a nuclear chain reaction.

NRC will transfer 386 licenses to the commonwealth's jurisdiction. In addition, the commonwealth retains regulatory authority for approximately 216 NARM licenses. Virginia and the NRC dually regulate approximately 180 of these NARM licenses.

By law, NRC retains jurisdiction over commercial nuclear power plants and federal agencies using certain nuclear material in the state. In addition, NRC retains authority for the review, evaluation and approval of sealed radioactive materials and devices containing certain nuclear materials within the state.

Prior to entering into such an agreement, NRC reviewed Virginia's radiation control program to ensure that it is adequate to protect public health and safety, and is compatible with the agency's own program for regulating the radioactive materials covered under the agreement.

An announcement of the proposed agreement was published four times in the *Federal Register* in November and December of 2008, inviting comments from the public. (See *LLW Notes*, November/December 2008, p. 7.) In addition, copies of the proposed agreement, the Governor's request, and supporting documents—as well as the draft assessment—were available through NRC's

Agency-wide Documents Access and Management System (ADAMS). NRC received and reviewed one comment in favor of the proposed agreement.

To date, thirty-five other states have signed such agreements with the NRC including: Alabama, Arizona, Arkansas, California, Colorado, Florida, Georgia, Illinois, Iowa, Kansas, Kentucky, Louisiana, Maine, Maryland, Massachusetts, Minnesota, Mississippi, Nebraska, Nevada, New Hampshire, New Mexico, New York, North Carolina, North Dakota, Ohio, Oklahoma, Oregon, Pennsylvania, Rhode Island, South Carolina, Tennessee, Texas, Utah, Washington and Wisconsin.

For additional information on the NRC's Agreement State program, please go to http://nrc-stp.ornl.gov/.

Texas Compact

Texas LLRW Compact Commission Holds Second and Third Meetings

The Texas Low-Level Radioactive Waste Compact Commission ("the Commission") held its second meeting on Thursday and Friday, February 26-27, 2009. The meeting—which was held in Room E2.012 of the Capitol Extension in Austin, Texas—began at 10 a.m. on Thursday and at 9 a.m. on Friday.

The Commission then met again on Thursday, April 2, 2009. The meeting—which was held in Room 101 of the Third Court of Appeals in Austin, Texas—began at noon. The court is located in the Price Daniel Sr. Building at 209 West 14th Street.

Although the meetings were open to the general public, the meeting announcements noted that the Commission reserved the right to meet in closed session as authorized by the Texas Open Meetings Act.

February 2009 Meeting

The Commission began the meeting with roll call and the introduction of guests, after which they selected operating rules for the meeting.

The Commission then moved on to various workshop topics including statutory items, operational considerations, and program planning issues as follows:

- Statutory: The Commission discussed and received legal counsel on various statutory issues including party state representation; function and operation of the commission as a "legal entity *separate and distinct* from the party states …" (emphasis added) which must comply with the laws of the host state; Vermont legal requirements regarding fiscal operations; jurisdiction of the Texas Commission on Environmental Quality (TCEQ) and the Commission over the compact facility; authority of TCEQ and the Commission regarding waste disposal in Texas and in places other than Texas of waste generated in other than compact member areas; authority of the TCEQ and the Commission to establish reasonable disposal fees; and, an interagency contract between TCEQ and the Commission.

- Operational: The Commission discussed those actions necessary to successfully stand-up a legally separate and distinct interstate compact commission including procedural (duties, rules and bylaws, public accessibility and comment) and logistical (office location, contact information, mail, internet, records, processing expense vouchers, contracting, support) items.

- Program Planning: Items listed on the workshop agenda under program planning included funding; budget (FY 2009 – 2011 and the pro-rata share of each party state); and, rulemaking (the total volume of waste—including that from decommissioning—that the host state will dispose of in the compact facility in the years 1995 through 2045, bylaws and rules necessary to carry out the terms of the compact, and public comment policy).

After the conclusion of the workshop items, the Commission returned to the consideration of items on the regular agenda including:

- approval of minutes and transcript from the February 13 meeting;
- discussion and possible action on the question of "a legal entity, separate and distinct from the party states;"
- discussion and development for plan to address any potential conflicts between the Commission and TCEQ functions;
- discussion and take action on any and all steps necessary to commence operations as identified during the workshop;
- approval and adoption of budgets for FY 2009 through 2011;
- approval to take actions necessary to contract/hire staff to carry out Commission duties and functions;
- approval of a schedule for rulemaking for bylaws and operating rules;
- approval of a schedule for rulemaking for public comment policy;
- selection of next meeting dates and location and identification of agenda items; and,
- an opportunity for public comment.

April 2009 Meeting

The Commission began the meeting with roll call and the introduction of guests, as well as approval of the minutes or transcript from the last meeting on February 26-27, 2009.

The Commission then heard various presentations and discussed selected topics including:

- Compact Commission history;
- practical interpretation of the meaning of the phrase, "[t]he commission is a legal entity *separate and distinct* from the party states …" (emphasis added) and how that meaning impacts compliance with the requirement for the Commission to comply with the laws of the host state;
- funding and budgetary issues, including such items as the authority of the Compact Commission and the Texas Commission on Environmental Quality (TCEQ) to establish reasonable fees for the disposal facility and the pro-rata share of each party state;
- actions necessary to contract and/or hire staff, as well as to purchase equipment, to carry out Commission duties and functions;
- plans to establish by rule the total volume of low-level waste that the host state will dispose through 2045, including decommissioning waste—including briefings on (1) the original study and any updates regarding waste expected to be generated in Texas and Vermont, (2) the updated estimate presented in the facility operator's permit application, and (3) recommendation on the adjustment factor that the Commission may use with the results of the original and updated study in order to propose a rule for comment;
- status of rulemaking for bylaws and operating rules;
- status of rulemaking for public comment policy; and,
- agenda items for the next meeting, as well as the selection of a meeting date and location.

Compact Commission

On November 25, 2008, Texas Governor Rick Perry (R) announced appointments to the Commission. (See *LLW Notes*, November/December 2008, p. 9.) The Commission, which was created pursuant to Senate Bill 1206 in the 73rd

Legislature, was established to provide for the management and disposal of low level radioactive waste while maintaining the priority of the health, safety and welfare of the citizens of Texas.

Michael Ford of Amarillo was named as Chairman and John White of Plano was named as Vice Chairman. Both terms are set to expire on November 25, 2014. In addition to Ford and White, Governor Perry appointed four other members to the Texas Commission including Richard Dolgener, Bob Gregory, Kenneth Peddicord, and Robert Wilson.

The Commission held its first meeting on February 13, 2009. (See *LLW Notes*, January/February 2009, pp. 8-9.) At that meeting, the Commission considered the adoption of an Interagency Cooperation Contract with the TCEQ; received without discussion suggestions from individual board members and the public for potential items for future meeting agendas; and, set the date for the second Commission meeting.

License Application Status

On January 14, 2009, TCEQ Commissioners denied hearing requests and approved an order on Waste Control Specialists LLC (WCS) Radioactive Material License application, No. R04100. (See *LLW Notes*, January/February 2009, pp. 1, 9-11.) The license will be issued after condemnation proceedings are completed and the applicant has acquired the mineral rights on the underlying land at which the site will be located. The Commissioners approved the licensing order by a vote of 2 to 0.

The license allows WCS to operate two separate facilities for the disposal of Class A, B and C low-level radioactive waste—one being for the Texas Low-Level Radioactive Waste Disposal Compact, which is comprised of the States of Texas and Vermont, and the other being for federal waste as defined under the Low-Level Radioactive Waste Policy Act of 1980 and its 1985 amendments.

The WCS facility is currently authorized for the processing, storage and disposal of a broad range of hazardous, toxic, and certain types of radioactive waste. WCS is a subsidiary of Valhi, Inc.

For additional information on WCS license application, please go to the TCEQ web page at http://www.tceq.state.tx.us/permitting/radmat/licensing/wcs_license_app.html or contact the Radioactive Materials Division at (512) 239-6466.

Texas Compact/State of Texas

Bill Introduced in Texas re Out-of-Compact Waste

On March 11, 2009, state representative Lon Burnam (90th District) introduced a bill before the 81st Texas legislature "relating to the disposal of low-level radioactive waste from a state that is not an initial party state to the Texas Low-Level Radioactive Waste Disposal Compact."

Burnam is a member of the Environmental Regulation and Public Safety committees of the Texas legislature.

The Legislation

The bill (HB 3423), as introduced, would prohibit the facility operator—Waste Control Specialists LLC (WCS)—from accepting for disposal any low-level radioactive waste generated in another state unless the waste is

- from a state that was an initial party state to the compact or from a state that is either added to the compact as a party state in accordance with the terms of the compact or is expressly authorized by statute to send such waste to the compact disposal facility;
- federal facility waste that may be disposed pursuant to the license issued to WCS; or,
- generated from manufactured sources or devices originating in the State of Texas.

To date, HB 3423 has no co-sponsors and no action is scheduled on the bill.

For a copy of the complete text and status of HB 3423, please go to http://www.legis.state.tx.us/BillLookup/History.aspx?LegSess=81R&Bill=HB3423.

License Application Status

On January 14, 2009, TCEQ Commissioners denied hearing requests and approved an order on Waste Control Specialists LLC (WCS) Radioactive Material License application, No. R04100. (See *LLW Notes*, January/February 2009, pp. 1, 9-11.) The license will be issued after condemnation proceedings are completed and the applicant has acquired the mineral rights on the underlying land at which the site will be located. The Commissioners approved the licensing order by a vote of 2 to 0.

The license allows WCS to operate two separate facilities for the disposal of Class A, B and C low-level radioactive waste—one being for the Texas Low-Level Radioactive Waste Disposal Compact, which is comprised of the States of Texas and Vermont, and the other being for federal waste as defined under the Low-Level Radioactive Waste Policy Act of 1980 and its 1985 amendments.

The WCS facility is currently authorized for the processing, storage and disposal of a broad range of hazardous, toxic, and certain types of radioactive waste. WCS is a subsidiary of Valhi, Inc.

For additional information on WCS license application, please go to the TCEQ web page at http://www.tceq.state.tx.us/permitting/radmat/licensing/wcs_license_app.html or contact the Radioactive Materials Division at (512) 239-6466.

Compact Commission

On November 25, 2008, Texas Governor Rick Perry (R) announced appointments to the Commission. (See *LLW Notes*, November/December 2008, p. 9.) The Commission, which was created pursuant to Senate Bill 1206 in the 73rd Legislature, was established to provide for the management and disposal of low level radioactive waste while maintaining the priority of the health, safety and welfare of the citizens of Texas.

Michael Ford of Amarillo was named as Chairman and John White of Plano was named as Vice Chairman. Both terms are set to expire on November 25, 2014. In addition to Ford and White, Governor Perry appointed four other members to the Texas Commission including Richard Dolgener, Bob Gregory, Kenneth Peddicord, and Robert Wilson.

The Commission held its first meeting on February 13, 2009. (See *LLW Notes*, January/February 2009, pp. 8-9.) At that meeting, the Commission considered the adoption of an Interagency Cooperation Contract with the TCEQ; received without discussion suggestions from individual board members and the public for potential items for future meeting agendas; and, set the date for the second Commission meeting.

A second meeting was held on Friday, February 26-27, 2009. (See related story, this issue.) At that meeting, the Commission discussed various workshop topics—including statutory items, operational considerations, and program planning—as well as budgetary, logistical and other items.

Texas Compact to Discuss Initial Volumetric Waste Rule

On April 14, 2009, the Texas Low-Level Radioactive Waste Disposal Compact Commission will hold a stakeholders' meeting to solicit input on the Commission's initial volumetric waste rule.

The Volumetric Waste Rule

The language of the Texas Compact, which states in part as follows, requires enactment of the rule:

"The Commission shall establish by rule the total volume of low-level radioactive waste that the host state will dispose of in the compact facility in the years 1995-2045, including decommissioning waste."

The rule will have consequential effects, such as upon the compact requirement that limits the volume of waste from non-party states to 20% or less of the volume established for disposal when averaged over the fifty-year disposal period.

In establishing the rule, the Commission plans to base its determination on studies of waste disposal volumes that were prepared by the State of Texas in 1994 and in 2000. However, the Commission is seeking information from generators and other interested stakeholders regarding current projected waste disposal volumes for the site during the disposal period in order to assist it in determining if and how such previous studies may need to be adjusted.

The Commission is further charged with maintaining a list of all generators in the party states. Although the Commission has not yet begun this work, it would appreciate any information that could be used as the beginning of such a list.

Meeting Logistics

The meeting began at 10 am on April 14, 2009. It was be held in Room 201S of Building E of the Texas Commission on Environmental Quality—which is located at 12100 Park 35 Circle in Austin, Texas.

Any person interested in doing so can also submit information by mail to the following address:

711 West 7th Street
Austin, TX 78701.

Information may also be submitted via e-mail to the following Commissioners:

Robert Wilson (bwilson@jacksonsjoberg.com)
Richard Dolgener (rdolgener@co.andrews.tx.us)
Uldis Vanags (Uldis.Vanags@state.vt.us)

Compact Commission

On November 25, 2008, Texas Governor Rick Perry (R) announced appointments to the Commission. (See *LLW Notes*, November/December 2008, p. 9.) The Commission, which was created pursuant to Senate Bill 1206 in the 73rd Legislature, was established to provide for the management and disposal of low level radioactive waste while maintaining the priority of the health, safety and welfare of the citizens of Texas.

Michael Ford of Amarillo was named as Chairman and John White of Plano was named as Vice Chairman. Both terms are set to expire on November 25, 2014. In addition to Ford and White, Governor Perry appointed four other members to the Texas Commission including Richard Dolgener, Bob Gregory, Kenneth Peddicord, and Robert Wilson.

The Commission held its first meeting on February 13, 2009. (See *LLW Notes*, January/February 2009, pp. 8-9.) The Commission held its second meeting

on Thursday and Friday, February 26-27, 2009. The Commission then met again on Thursday, April 2, 2009

License Application Status

On January 14, 2009, TCEQ Commissioners denied hearing requests and approved an order on Waste Control Specialists LLC (WCS) Radioactive Material License application, No. R04100. (See *LLW Notes*, January/February 2009, pp. 1, 9-11.) The license will be issued after condemnation proceedings are completed and the applicant has acquired the mineral rights on the underlying land at which the site will be located. The Commissioners approved the licensing order by a vote of 2 to 0.

The license allows WCS to operate two separate facilities for the disposal of Class A, B and C low-level radioactive waste—one being for the Texas Low-Level Radioactive Waste Disposal Compact, which is comprised of the States of Texas and Vermont, and the other being for federal waste as defined under the Low-Level Radioactive Waste Policy Act of 1980 and its 1985 amendments.

The WCS facility is currently authorized for the processing, storage and disposal of a broad range of hazardous, toxic, and certain types of radioactive waste. WCS is a subsidiary of Valhi, Inc.

For additional information on WCS license application, please go to the TCEQ web page at http://www.tceq.state.tx.us/permitting/radmat/licensing/wcs_license_app.html or contact the Radioactive Materials Division at (512) 239-6466.

TCEQ Approves and Publishes Phase 2 Rulemaking

The Phase 2 rules for implementation of SB 1604 and HB 3838, 80th Legislative Session, have been published in the *Texas Register*. The rules became effective on March 12, 2009.

Commissioners from the Texas Commission on Environmental Quality (TCEQ) approved adoption of the rules, with certain revisions, on February 11, 2009. The adopted rules were then filed with the Secretary of State (*Texas Register*) on February 20.

The final rules may be found on pages 56 through 158 at http://www.sos.state.tx.us/texreg/pdf/currview/0306adop.pdf.

A complete list of the revisions requested by the TCEQ Commissioners can be found at http://www.tceq.state.tx.us/permitting/radmat/sb1604group.html.

Implementation History

Throughout 2008, TCEQ hosted five stakeholder meetings and a hearing in order to provide information to the public and solicit comments on rule changes to implement the remaining provisions of SB 1604 and HB 3838. A meeting on proposed phase I rule changes was held on February 15, 2008. (See *LLW Notes*, January/February 2008, pp. 12-13.) A meeting on proposed phase II rule changes was held on April 25, 2008. (See *LLW Notes*, May/June 2008, pp. 18-19.)

The rules were approved for proposal at the August 20, 2008 Commissioner's Agenda and were published in the *Texas Register* on September 5, 2008. Public hearings were held on August 15 and September 16 of 2008. Minutes from the hearings can be found on the TCEQ's web site.

On October 1, 2008, TCEQ hosted a roundtable discussion for stakeholders on the rulemaking for Phase 2 of Implementation of SB 1604 and HB 3838 in order to allow further discussion on the draft new Subchapter N in Chapter 336 which will establish fees for low-level radioactive waste disposal. The draft new Subchapter N includes commission powers, factors considered for maximum disposal rates, initial determination of rates and fees, revisions to maximum disposal rates, extraordinary volume adjustments, hearings on maximum disposal rate disputes, revenue statements, and contracted disposal rates. (See *LLW Notes*, September/October 2008, pp. 9-10.)

The public comment period ended on October 6, 2008. Thereafter, TCEQ's Executive Director began preparing responses to comments and making changes to the rule as appropriate.

A stakeholder meeting was held on Wednesday, February 4, 2009. During that meeting, TCEQ staff accepted input on the following items:

- financial assurance for in-situ mining;
- providing financial assurance for aquifer restoration as part of the application process;
- independent third-party expert;
- clarification of statistical hypothesis test;
- period of stability sampling following mining;
- notice provided to mineral owners for Class III wells;
- use of term "most expensive" for cost estimates related to in-situ uranium mining;
- establishment of fees to support the Texas Compact Commission;
- amendments for receipt of additional low-level radioactive waste;
- surcharges on curies as a measure of relative hazard into the disposal site;
- definition of invested capital; and,
- rate case expenses.

TCEQ Commissioners approved adoption of the rulemaking, with certain revisions, during a meeting on February 11, 2009.

Background

SB 1604 SB 1604 concerns the transfer of certain regulatory responsibilities for radioactive waste management licensing from the Texas Department of State Health Services (DSHS) to the TCEQ. (See *LLW Notes*, May/June 2007, pp. 9-10.) Prior to its enactment, TCEQ had jurisdiction to regulate and license the disposal of radioactive substances except for by-product material. SB 1604, however, provides that TCEQ will also have jurisdiction to regulate and license: the processing or storage of low-level radioactive waste or naturally occurring radioactive material (NORM) waste received from other persons, except oil and gas NORM; the recovery or processing of source material; the processing of by-product material; and, sites for the disposal of radioactive waste, by-product material or NORM waste.

In addition, SB 1604 provides that TCEQ by rule may exempt a source of radiation or a kind of use or user that is under its jurisdiction from the statutory licensing or registration requirements if it determines that the exemption will not constitute a significant risk to the public health and safety and the environment.

HB 3838 HB 3838 relates to the regulation of injection wells used for in situ uranium mining by the TCEQ. The legislation expands the TCEQ's jurisdiction to include wells used in the development of information that TCEQ requires for area permit applications. It clarifies that TCEQ has exclusive jurisdiction over wells used to provide geologic, hydrologic and water quality information in support of the development of mining permit applications. The bill requires that these wells be

registered with TCEQ unless they are later included in a production area permit, at which point the wells become subject to applicable area permit provisions, including notice and hearing requirements.

HB 3838 further requires that a person developing an application for an area permit for in situ uranium mining within a groundwater conservation district shall provide certain, specified information to the district. And, it clarifies TCEQ authority for right of entry inspection and investigation to include production and monitoring wells as defined and any business or operating records required to be maintained for such wells.

Finally, HB 3838 expands the TCEQ's discretion to require financial assurance to ensure proper closure of wells regulated under Water Code Chapter 27 by making such assurance mandatory for any person issued a permit for any well used for in situ uranium mining.

Documentation for the rulemaking on SB 1604 and HB 3838—including the preamble, rule language for each chapter, and the executive summary—can be found at http://www.tceq.state.tx.us/rules/pendprop.html. You may also contact the Radioactive Materials Division at radmat@tceq.state.tx.us or at (512) 239-6466.

State of North Carolina

Report Accepted re Proposed GLE Uranium Enrichment Plant

On March 23, 2009, the U.S. Nuclear Regulatory Commission announced that staff has accepted for formal review an environmental report submitted by General Electric-Hitachi Global Laser Enrichment LLC (GLE). The report was submitted as part of an application for a license to construct and operate a laser uranium enrichment plant near Wilmington, NC.

GLE submitted the environmental report on January 30, 2009. NRC staff has determined that the report is sufficiently complete to begin a formal technical review.

The report is one part of an application for a 40-year license to construct and operate a laser-based uranium enrichment facility at the existing General Electric/Global Nuclear Fuels-Americas site near Wilmington. The proposed facility would enrich uranium up to an assay level of 8 percent U-235, the isotope crucial for nuclear fission. The enriched uranium would be used in the production of fuel for commercial nuclear power reactors.

GLE has indicated that it intends to file the rest of its application by the end of June. Areva Idaho, Louisiana Energy Services/National Enrichment Facility, and the US Enrichment Corporation have all also either submitted applications, or announced intentions to do so, to construct and operate uranium enrichment facilities. (See related story, this issue.)

NRC recently issued a decision regarding the classification of large quantities of depleted uranium, which is the subject on ongoing correspondence between the agency and members of the U.S. House of Representatives. (See related stories, this issue.)

EnergySolutions v. Northwest Interstate Compact on Low-Level Radioactive Waste Management

Oral Arguments Heard in Suit Challenging NW Compact's Authority

Court Rules Clive Not a "Regional Disposal Facility," But Takes Issue of Compact's Authority Under Advisement

On February 26, 2009, the U.S. District Court for the District of Utah, Central Division, heard oral arguments on motions for summary judgment filed by parties to a lawsuit that seeks, among other things, a declaratory judgment "to clarify the authority of the Northwest Compact to govern Energy*Solutions*' privately owned, commercial, low-level radioactive disposal site in Clive, Utah." (See *LLW Notes*, May/June 2008, pp. 25-28.)

Prior to hearing oral arguments from each of the parties—including Energy*Solutions*, the Northwest Interstate Compact on Low-Level Radioactive Waste Management, the Rocky Mountain Low-Level Radioactive Waste Board, and the State of Utah—the court ruled from the bench that the Clive low-level radioactive waste disposal facility is not a "regional disposal facility" as defined under federal law. The court took under advisement, however, the issue of whether or not the Northwest Compact can nonetheless exercise jurisdiction over the facility.

Energy*Solutions*—operator of the Clive facility in Utah—initiated the lawsuit on May 5, 2008. Although the action was initially filed against the Northwest Compact and its Executive Director, Michael Garner, solely in his official capacity, the court subsequently granted unopposed motions by the State of Utah and the Rocky Mountain Compact to intervene in the action as defendants. (See *LLW Notes*, September/October 2008, pp. 12-14.)

Local Utah media have recently run articles alleging that, over the past several weeks, Energy*Solutions* "has worked quietly with state lawmakers on a proposal to have the state split Energy*Solutions'* profits from the disposal of foreign waste, profits that could mean as much as $1 billion over a decade." Press reports contend that the state's share would be $100 million or more annually and that *EnergySolutions* argues that this money could help offset a significant budget shortfall estimated at $450 million. In addition, related press reports claim that Energy*Solutions* has contributed "more than $500,000 in state political contributions since 2006, contributing money to more than 80 percent of sitting lawmakers."

Background

The action arises out of a proposal from Energy*Solutions* to import up to 20,000 tons of potentially radioactively contaminated material from Italy and to export for return to generators in Italy any of the imported waste that can not be recycled or does not meet the Clive facility's waste acceptance criteria for disposal. (See *LLW Notes*, November/December 2007, pp. 6-9.) Under the proposal, the contaminated material would be processed at Energy*Solutions*' Bear Creek facility for recycling and beneficial reuse with any resultant waste being disposed at the Clive facility. Energy*Solutions* estimates that approximately 1,600 tons of the imported material would be disposed as Class A LLRW at the Clive facility.

The Northwest Compact heard from both proponents and critics of Energy*Solutions*' proposal during a meeting on May 8, 2008. Following a closed-door session, they voted unanimously that the compact's Third Amended Resolution and Order—which authorizes access for LLRW to the Clive facility subject to the provisions of the company's license from the State of Utah—does not address foreign LLRW and that an arrangement would need to be adopted prior to such waste being provided access to the region for disposal at the Clive Facility. (See *LLW Notes*, May/June 2008, pp. 1, 7-9.)

Three days prior to the meeting, on May 5, 2008, Energy*Solutions* filed a lawsuit challenging the Northwest Compact's authority over the Clive facility. (See *LLW Notes*, May/June 2008, pp. 25-28.) Among other things, Energy*Solutions* argues that (1) the Clive facility is not a "regional disposal facility" as defined by the LLRWPA and the Northwest Compact therefore lacks authority to restrict the flow of LLRW to the facility; (2) NRC's authority and responsibility for the regulation of the export and import of byproducts and nuclear materials preempt any attempt by the Northwest Compact to restrict or prevent the importation of foreign waste to the Clive facility; and, (3) any effort by the Northwest Compact to restrict or prohibit the Clive facility from receiving foreign LLRW would amount to unauthorized discrimination against foreign commerce and would be prohibited by the dormant Commerce Clause of the U.S. Constitution.

The Northwest Compact challenges Energy*Solutions*' positions and contends that (1) the Northwest Compact itself provides the legal basis to restrict disposal at the Clive facility; (2) the Northwest Compact Committee derives its exclusionary authority from the Compact itself, not from the Low-Level Radioactive Waste Policy Amendments Act of 1985; (3) the Northwest Compact Committee is authorized under Articles IV and V of the Compact to limit the access for out-of-region waste to the Clive facility; and, (4) the Clive facility qualifies as a "regional disposal facility" under the 1985 act. (See *LLW Notes*, November/December 2008, pp. 13-18.)

EnergySolutions Response to the Ruling

In a press release issued immediately after the conclusion of the oral arguments, Steve Creamer, CEO and Chairman of Energy*Solutions*, said, "We feel that our position regarding this matter is on sound legal ground … We appreciate the thoughtfulness of the Judge and we look forward to his ruling after he has considered all of the information presented."

Energy*Solutions*' press release further states as follows:

> Energy*Solutions* remains committed to sharing 50 percent of the net revenue from the disposal of material generated outside of North America with the people in the State of Utah. This funding will be used in areas such as: public and higher education, supporting local charities and community based organizations and furthering economic development in the state.

NRC Review and Consideration

On October 6, 2008, the U.S. Nuclear Regulatory Commission issued an order holding in abeyance until further notice review of Energy*Solutions*' import and export license applications related to the proposal to import waste from Italy. (See *LLW Notes*, September/October 2008, pp. 18-20.) The order acknowledges the legal dispute and states, in part, as follows: "The NRC will defer action on the pending import license application until the dispute over the authority of the Northwest Compact is resolved or Energy*Solutions* outlines an alternative plan for disposal of the imported LLW."

The order also holds in abeyance pending hearing requests on the license applications that were previously filed by the Utah Attorney General's Office on behalf of Governor Jon Huntsman, Jr., as well as separate hearing requests filed by the Nuclear Information and Resource Service (NIRS) and a variety of organizations. (See *LLW Notes*, May/June 2008, pp. 9-12.)

Proposed Congressional Legislation

Legislation has been reintroduced in the 111th Congress that proposes to strip the U.S. Nuclear Regulatory Commission of its jurisdiction to authorize the importation of low-level radioactive waste. (See *LLW Notes*, January/February 2009, p. 17.) The bills, as introduced, would prohibit the importation of nuclear waste unless the material originated in the United States. The President

(Continued on page 42)

U.S. House of Representatives

Congressional Members and NRC Correspond re LLW Issues

On March 10, 2009, U.S. Congressmen Edward Markey (D-MA), Bart Gordon (D-TN), and Jim Matheson (D-UT) sent a letter to NRC Chairman Dale Klein "concerning the ongoing dispute between the Northwest Interstate Compact on Low-Level Radioactive Waste Management and Energy*Solutions*, Inc., related to Energy*Solutions*' attempts to import foreign low-level radioactive waste for disposal in Utah despite the objections of the Northwest Interstate Compact, which regulates the disposal facility." In the letter, the Congressmen state their belief that "this case has far-reaching implications for this country's waste disposal policies."

Shortly thereafter, on March 19, 2009, Markey and Matheson sent another letter to Klein expressing "great concern regarding the Commission's recent action to classify depleted uranium as Class A waste." In the letter, the Congressmen state that "[t]his decision has been taken in apparent disregard for the fact that depleted uranium poses a risk to health and safety that is greater than other Class A wastes, and, as disturbingly, may undermine long-held policies related to the disposal of radioactive materials."

Markey is Chairman of the House Energy and Commerce Committee's Subcommittee on Energy and the Environment. Gordon is Chair of the House Committee on Science and Technology. Matheson is a member of both committees.

Both letters request that Klein submit formal responses to a series of questions, as well as supporting documentation.

Klein responded to both letters via separate correspondence sent on April 9, 2009.

Foreign-Generated Waste Inquiry and Response

Congressional Letter The March 10 letter notes that, pursuant to federal law, interstate low-level radioactive waste compacts are the "competent authorities to regulate the disposal of low-level radioactive waste at sites located in compact states." The letter goes on to state as follows:

"We are deeply concerned by the possible national policy implications of a ruling in favor of Energy*Solutions* in this case. If the Northwest Compact were to be found to not have proper authority to regulate the Clive facility, a dangerous regulatory vacuum could be created not only in the Northwest Compact states but across the country. We have worked hard over decades to create and maintain a robust national system of nuclear regulation and oversight, between the Congress, the Commission, the agreement states, and the Compacts. Competent authority to differentiate between foreign-generated and domestic waste must exist within this system."

The letter goes on to request that, in "light of the serious national policy implications of this case," Klein provide answers to specified questions (see below). The letter states that any questions regarding the Congressmen's inquiries should be directed to Will Huntington of Markey's staff, Mark Libell of Gordon's staff, or Neeta Bidwai of Matheson's staff.

NRC Response In his response, Klein acknowledges the Congressmen's concerns regarding litigation that was initiated by Energy*Solutions* against the Northwest Compact. The litigation relates to an application pending before the NRC for the importation of low-level radioactive waste from Italy—some of which would be disposed at the company's facility in Clive, Utah. In the letter, Klein states, "I can assure you that the Commission is cognizant of the concerns that you have expressed about importation of foreign waste."

For a list of the specific questions raised by the Congressmen, as well as the responses provided by the NRC, please see the related story in this issue.

Depleted Uranium Inquiry and Response

Congessional Letter The March 19 letter reviews the history of the Atomic Energy Act of 1954 and the Low-Level Radioactive Waste Policy Act of 1980 and its 1985 amendments, noting that the current radioactive waste classification was created in acknowledgement that different materials pose different risks and therefore require different disposal methodologies. In specific regard to depleted uranium, the letter states as follows:

"While the Commission did not categorize depleted uranium into a specific waste class in the early 1980s during its rulemaking process, it considered doing so. In fact, the Draft Environmental Impact Statement (DEIS) for 10 CFR 61 established that only depleted uranium below the concentration of 0.05 uCi/cm3 could be considered Class A. This was removed from the final rule because there was no depleted uranium waste stream in existence, leaving any potential stream of the material in a regulatory limbo. The depleted uranium waste stream which will flow from commercial uranium enrichment facilities is expected to be 0.5 uCi/cm3, that is ten times greater than what the Commission believed was safe when the DEIS was written."

The letter goes on to express the Congressmen's belief that requirements for the disposal of depleted uranium are more similar to those for Class C waste, rather than that of Class A. In this regard, the letter points out that "the Commission's technical analysis shows that the safe dispos[al] of depleted uranium will require increased waste disposal depth and radon barriers."

The letter characterizes the Commission's recent determination regarding the classification of depleted uranium as "arbitrary and capricious" and argues that, as such, it will "undermine public confidence in the waste classification system, may increase risks to public health and safety, and raises the possibility that additional, uncharacterized and possibly even more dangerous materials could be similarly treated in the future."

In addition to responses to listed questions, the letter requests that Klein provide "copies of all records (including but not limited to written and electronic communications, phone calls logs or notes, meeting notes or minutes, memoranda, and analyses) relating to the Commission's decision to allow depleted uranium or other materials not currently classified as Class A to be considered as Class A waste, including internal Commission records, all records involving Energy*Solutions,* Inc., and records involving the Department of Energy."

"The Commission's action to classify depleted uranium as Class A even though it poses more severe risks to health and safety, and requires much greater effort for disposal, seems to be unsupportable and inconsistent with the intent of the law," state the Congressmen in conclusion. "The Subcommittee intends to carefully review the basis for this action."

NRC Response In his response, Klein states that NRC recently engaged in careful and lengthy deliberations on the technical, regulatory and statutory aspects of the disposal of large quantities of depleted uranium. Following such deliberations, the Commission concluded that a site specific analysis should be required prior to the disposal of large quantities of depleted uranium in order to ensure continued protection of public health and safety and the environment.

Klein notes, however, that the classification of depleted uranium as Class A low-level radioactive waste has existed since 1981 and that the waste classification system contained in 10 CFR Part 61 was statutorily recognized in the Low-Level Radioactive Waste Policy Amendments Act of 1985. The technical analysis performed by staff, according to Klein, was neither intended nor constructed to support a change to the waste classification structure. "In summary," writes Klein, "the Commission believes that, in the absence of comprehensive technical and legal analyses, changing the waste classification of [depleted uranium] would be premature, could have significant and unforeseeable consequences, and would not provide for more protection of public health and safety and the environment."

In terms of future actions, Klein writes that NRC plans to proceed with rulemaking to specify the requirement for a site-specific analysis and the technical requirements therefore. In addition, the agency plans to conduct a public workshop on the issue. As a longer-term action, NRC plans to budget for a comprehensive revision to risk-inform the 10 CFR Part 61 waste classification framework. Klein writes, "NRC will also consider the need to propose, if any, changes to the Low-Level Radioactive Waste Policy Amendments Act of 1985 as part of this comprehensive revision."

In conclusion, Klein's letter states that copies of all records relating to this issue will be provided under separate cover.

For a list of the specific questions raised by the Congressmen, as well as the responses provided by the NRC, please see the related story in this issue.

Congressional Press Release On April 13, Markey and Matheson put out a press release regarding NRC's response to their inquiries on depleted uranium.

The press release quotes Markey as follows:

I am deeply concerned that the NRC's recent action regarding depleted uranium created far more questions than it answered. While the NRC has said it will perform a "comprehensive revision" to its waste classification framework at some point in the future, it has ignored that need for purposes of depleted uranium. It is like deciding to give a "C" student an "A" before the final exam has even been submitted - except in this case, "C" means dangerously radioactive. When the NRC's normal process is subverted, it creates confusion and doubt, and reduces the trust that the American people have in their nuclear regulator.

The press release quotes Matheson as follows:

Class A waste was meant to be the lowest classification - one that poses the least threat to health and safety. Any decision regarding depleted uranium disposal that raises concerns in that regard is not acceptable to me. I look forward to receiving and reviewing the records requested from NRC in my March 19th letter in hopes of getting a clearer picture of how the Commission is moving forward.

The press release states that Markey and Matheson "are expecting thousands of pages of documents from the NRC … next week" which they believe "may shed more light on the process by which the NRC made its decisions regarding depleted uranium."

Background

For background information on Energy*Solutions'* proposal to import up to 20,000 tons of potentially radioactively contaminated material from Italy and to export for return to generators in Italy any of the imported waste that can not be recycled or does not meet the Clive facility's waste acceptance criteria for disposal—as well as the status of the associated lawsuit pending before the U.S. District Court for the District of Utah, Central Division—please see related story under the "Courts" section of this issue of the newsletter.

For background information on NRC's review of the classification of large quantities of depleted uranium—as well as the recently issued Staff Requirements Memorandum (SRM) directing NRC staff to draft amendments to regulations regarding low-level radioactive waste to accommodate the disposal of large quantities of depleted uranium—please see related story under the "Federal Agencies" section of this issue of the newsletter.

Congressional—NRC Correspondence re Foreign-Generated Waste Questions and Answers

By letter dated March 10, 2009, U.S. Congressmen Edward Markey (D-MA), Bart Gordon (D-TN), and Jim Matheson (D-UT) submitted questions to the U.S. Nuclear Regulatory Commission regarding foreign-generated waste. NRC Chairman Dale Klein provided responses via correspondence dated April 9, 2009. (For additional information, see related story in this issue.)

The specific questions asked by the Congressmen, and responses provided by NRC, are as follows:

Question One:

Is it the view of the Commission that the Compact has authority over the Clive facility and may determine which wastes can be disposed of there? Please explain the authorities and responsibilities over the Clive facility of the Northwest Compact, the state of Utah, and the Commission?

Answer:

Whether the Compact has authority over the Clive facility under the Low-Level Radioactive Waste Policy Amendments Act of 1985 and the Low-Level Radioactive Waste Policy Act of 1980 (LLRW Acts) is the precise issue before the federal district court in Utah. As a health and safety regulator acting under the Atomic Energy Act of 1954 (AEA), the NRC has no particular expertise on issues relating to the scope of the Compact's legal authority over the Clive facility under the LLRW Acts. The Commission therefore has formulated no position on the legal issue, which is now pending before the federal court in Utah and is squarely within the court's province.

Utah is responsible for regulating the Clive facility as an Agreement State pursuant to Section 274 of the AEA. Under AEA § 274, Utah's health and safety regulations must be compatible with NRC's regulations. In light of Utah's status as an Agreement State, the NRC does not directly regulate the Clive facility.

Question Two:

Does the Commission have any statutory authority to differentiate between foreign-generated and domestic low-level waste? If so, what, and what is the Commission doing to assert its authority in this case?

Answer:

The AEA authorizes the import of radioactive material if domestic health and safety and common defense and security licensing criteria are satisfied, regardless of whether imported material is of foreign or domestic origin. The NRC's statutory role in evaluating a low-level radioactive waste import application is a regulatory one, limited to ensuring that the proposed import can be accomplished safely and securely in accordance with all applicable laws, and that the material will be accepted by an authorized recipient. NRC regulations provide that the NRC will issue a license to import low-level waste if it determines that issuance of the license would not be inimical to the common defense and security or constitute an unreasonable risk to the public health and safety and that "an appropriate facility has agreed to accept the waste for management or disposal." See 10 C.F.R. §§ 110.43 and 110.45(b).

Question Three:

If the court decides in favor of EnergySolutions that the Northwest Compact does not have authority to regulate the Clive facility, could the NRC prevent the importation of foreign commercial nuclear waste to the Clive facility?

Answer:

EnergySolutions' import application is the subject of hearing requests currently pending before the NRC. In light of the adjudicatory posture of the import application, the Commission cannot now prejudge its decision on the application in the event that EnergySolutions ultimately prevails in the courts. The Commission's decision on the import application will depend on whether the domestic health

and safety and common defense and security licensing criteria are satisfied, and that the material will be accepted by an authorized recipient.

Question Four:

If the court decides in favor of EnergySolutions, what would prevent any corporation from importing foreign low-level waste for disposal in the United States, in a Compact state or otherwise?

Answer:

As noted in our response to question 3, the Commission would evaluate each application to determine whether our import licensing criteria have been satisfied.

Congressional—NRC Correspondence re Depleted Uranium Questions and Answers

By letters dated March 10, 2009 and March 19, 2009, U.S. Congressmen Edward Markey (D-MA), Bart Gordon (D-TN), and Jim Matheson (D-UT) submitted questions to the U.S. Nuclear Regulatory Commission regarding depleted uranium. NRC Chairman Dale Klein provided responses via correspondence dated April 9, 2009. (For additional information, see related story in this issue.)

The specific questions asked by the Congressmen, and responses provided by NRC, are as follows:

Question One:

The Draft Environmental Impact Statement (DEIS) for 10 CFR Part 61 proposed that only depleted uranium below the concentration of 0.05 uCi/cm3 could be considered Class A. Why should depleted uranium at ten times this concentration be treated as Class A waste?

Answer:

The risk from DU is site-dependent and can vary widely depending on specific disposal conditions. The concentration limit developed in the DEIS for 10 CFR Part 61 was based conservatively on potential disposal at a "reference" humid, eastern low-level waste disposal site. Therefore, the methodology used in the DEIS created a uranium concentration limit that could be overly restrictive for sites not represented by the "reference" disposal site. In the Final Environmental Impact Statement (FEIS) which supported the concentration limits utilized in 10 CFR Part 61, there were no concentration limits established for DU. Consequently, there was no regulatory determination regarding the validity of the values for DU in the DEIS. While this does not have a big impact on most radionuclides, it has a very large impact for radionuclides such as uranium, because the dominant exposure pathways are water-related or from inhalation of radon. Water-related pathways are strongly impacted by site-specific conditions (infiltration rates, distribution coefficients, solubility limits, and groundwater flow rates), and the risk from radon is also very site-specific due to the transport characteristics of radon in the subsurface. NRC staff analysis concluded that near surface disposal of large quantities of DU may be appropriate at certain sites.

Question Two:

What disposal procedures have been required for depleted uranium? Are these different in any way from the disposal procedures commonly required for Class A waste? Are these procedures similar in any way to the disposal procedures commonly required for Class C waste?

Answer:

Prior to reaching our recent decision, NRC communicated with State regulators that oversee existing or proposed low-level waste disposal facilities (i.e., the States of South Carolina, Texas, Utah and Washington) on their approaches to the disposal of depleted uranium. In general, State regulators agreed with the need to handle large quantities of DU as a unique waste stream, regardless of its

current classification, and agreed that additional analysis should be conducted prior to its disposal. The Utah Division of Radiation Control indicated that EnergySolutions has completed site-specific performance modeling for disposal of natural uranium at its Clive, Utah site and compared the risk from natural uranium to the risk associated with DU. Similarly, the Texas Commission on Environmental Quality (TCEQ) requires its licensees and applicants to perform additional analysis prior to disposal of large quantities of DU. According to the TCEQ Response to Public Comments on a license application for a low-level waste disposal facility, the TCEQ Executive Director recommends a prohibition on the receipt and disposal of large quantities of DU at the proposed disposal facility, in excess of 10 nanocuries per gram (10 nCi/g), absent an application for amendment to the draft license that provides more specific information and performance analysis related to DU. The State of Washington Department of Health has completed a performance assessment for the US Ecology low-level waste disposal facility related to site closure that does not currently include large quantities of DU; however, this analysis could be modified to include the impacts from DU disposal. The State of South Carolina indicated that the only specific requirement related to the disposal of DU at the Barnwell low-level waste disposal facility is that it be rendered non-pyrophoric. Although each of the affected states has a state approved methodology for disposal of waste, including DU, there is no uniform analysis methodology across the various states. The Commission's recent decision to proceed with rulemaking to require a site-specific analysis prior to disposal of large quantities of DU will allow more alignment across the disposal sites by specifying the technical parameters (e.g., an intruder analysis) that must be evaluated in a site-specific assessment. In coordination with the final rule, the NRC will also publish regulatory guidance on implementation of the analytical methodology to help ensure more uniformity in the implementation of the rule requirements.

The procedures noted above are different than disposal procedures commonly required for Class A waste because they rely on site-specific analysis to ensure the safe disposal of large quantities of DU. These procedures may or may not result in disposing of DU at a specific site at greater depths than normally allowed for Class A waste, but there is no established minimum depth for the disposal of DU at all sites. These procedures, however, are not similar to the disposal requirements for Class C waste as set forth in 10 CFR 61.52(a)(2), and generally described as a minimum disposal depth of 5 meters or protection against inadvertent intrusion for a minimum of 500 years.

Question Three:

Could uranium tailings be considered Class A under the actions taken by the Commission?

Answer:

No uranium mill tailings are "byproduct material" as specified in Section 11e.(2) of the Atomic Energy Act and are specifically regulated under the Uranium Mill Tailings Radiation Control Act of 1978 (UMTRCA). Uranium mill tailings are not low-level waste and, therefore, would not be considered Class A waste under the actions taken by the Commission.

Question Four:

Could any other materials be classified as Class A under the action taken by the Commission?

Answer:

The Commission action did not change the existing definition of Class A waste as applied to DU or any other material. Under the referenced action, the NRC plans to 1) proceed with rulemaking to specify a requirement for a site-specific analysis for the disposal of large quantities of DU or other unique waste streams (as currently envisioned, unique waste streams could include those that may result from spent fuel reprocessing, or other types of waste streams that could emerge in the future from new kinds of facilities that generate significantly different concentrations and quantities of waste not previously considered in the Part 61 FEIS) and to specify the technical requirements for such an analysis, and 2) to develop a guidance document that outlines the parameters and assumptions to be used in conducting such site-specific analysis. These actions will not impact waste classifications currently applied to materials. However, the NRC also plans to perform a comprehensive revision to risk-inform the 10 CFR Part 61 waste classification framework. After this revision is performed, there may be some potential that other materials could be classified as Class A. At this point, it would be speculative for the NRC to express an opinion on the results of this comprehensive revision to the waste classification framework.

Question Five:

It is my understanding that EnergySolutions also seeks to dispose of depleted uranium at the Clive facility. I further understand that the Utah state license under which EnergySolutions operates specifies that the facility shall not be allowed to dispose of any radioactive waste greater than Class A, as defined in 10 CFR 61.55. Does depleted uranium pose health or safety risks different in any way from wastes commonly classified as Class A? Over time, would depleted uranium pose health or safety risks different in any way from wastes commonly classified as Class A?

Answer:

As discussed by the staff in "Response to Commission Order CLI-05-20 Regarding Depleted Uranium" (attached), dated October 7, 2008, depleted uranium (DU) is a unique waste stream with potential health and safety risks that are very site-specific. The dominant exposure pathways are water-related or from radon. Water-related pathways are strongly impacted by site-specific conditions (infiltration rates, distribution coefficients, solubility limits, and groundwater flow rates). Similarly, the risk from radon is very site-specific due to the highly-nonlinear transport characteristics of radon in the subsurface (primarily as a function of moisture content). Most other radionuclides do not experience such a strong dependence on site conditions. During development of the attached document, the NRC staff performed a technical analysis to evaluate the impacts of near-surface disposal of large quantities of DU and to determine if amendments to NRC regulations are necessary to ensure that large quantities of DU are disposed of in a manner that meets the NRC's performance objectives. The technical analysis concluded that near-surface disposal may be appropriate for large quantities of DU under certain conditions and that small quantities (approximately 1 – 10 metric tons) of DU could be disposed of at the shallow depths. Over time, radioactive decay of DU results in increasing hazard time until after 1 million years, as a result of increasing concentrations (and higher mobility) of decay products. However, the technical analysis evaluated disposal of DU at these long performance periods and determined that the degree of impacts from DU disposal are strongly site-specific and that these impacts can be managed to meet the NRC's performance objectives.

To address concerns associated with disposal of DU, the Commission directed the staff to proceed with rulemaking in 10 CFR Part 61 to specify a requirement for a site-specific analysis for the disposal of large quantities of DU and the technical requirements for such an analysis. The Commission determined that, for waste streams consisting of significant amounts of DU, there may be a need to place additional restrictions on the disposal of the DU at a specific site or deny such disposal based on unique site characteristics, and that those restrictions should be determined by a site-specific analysis. The Commission believes it is more appropriate to use updated, risk-informed analytical techniques accounting for the site-specific behavior of uranium to determine the risks from large quantities of DU rather than rely solely on a waste classification system developed several decades ago that was based conservatively on potential disposal at a "reference" humid, eastern low-level waste disposal site; did not consider large quantities of DU; and did not consider the in-growth of radon, all of which are best evaluated on a site-specific basis.

The Commission recognized in the recent direction to staff that in the longer term, the waste classification for DU should be explicitly addressed; however, it should be addressed using updated assumptions and referencing the latest methodologies from the International Committee on Radiation Protection, thereby ensuring that future actions revising waste classifications would be risk-informed. The Commission recognizes the complexity of this issue and has directed the staff to promptly conduct a public workshop inviting all stakeholders, including Federal agencies, States, and licensees. The workshop will discuss the issues associated with the disposal of DU, the potential issues to be considered in rulemaking, and technical parameters of concern in the analysis so that informed decisions can be made in the interim period until the rulemaking is final. The Commission recognizes the timely nature of this issue given the U.S. Department of Energy's plans for DU disposal, as well as the commercial uranium enrichment facilities recently licensed or submitting license applications, and is first and foremost committed to ensuring DU will be disposed of in a manner that protects public health and safety. Safe disposal (rather than storage) of all low-level waste, including DU, is the preferred option because it is a permanent solution.

U.S. Department of Energy

Triay Nominated for EM Assistant Secretary

On March 13, 2009, President Barack Obama announced his intention to nominate Dr. Ines Triay to be the Assistant Secretary for Environmental Management at the U.S. Department of Energy.

Triay has worked with DOE's environmental programs for 24 years, specializing in cleaning up legacy waste from the Cold War. In 2005, she became the Chief Operating Officer for Environmental Management. She was named to the top career position there in October of 2007. In this capacity, she has served as the acting Assistant Secretary for Environmental Management since November of 2008. Prior to working for DOE, Triay spent 14 years at the Los Alamos National Laboratory in New Mexico.

"Saying Ines Triay is dedicated to making the cleanup program a success would be a huge understatement," said Congressman Doc Hastings (D-WA) upon hearing of her nomination. "For the expertise, energy and determination she brings to the job, Dr. Triay has my enthusiastic support. I congratulate President Obama and Dr. Triay on this excellent nomination."

Triay is the author of more than 150 presentations, reports, and peer-reviewed publications. She has received several awards including the Dixy Lee Ray Award from the American Society of Mechanical Engineers.

Triay was born in Cuba and immigrated to the United States when she was only three years old. She was raised in Puerto Rico. She earned her Ph.D. in chemistry from the University of Miami and conducted her post-doctoral studies at Los Alamos.

DOE Announces $6 Billion in Cleanup Funding

On March 31, 2009, U.S. Department of Energy Secretary Steven Chu announced that the department will be receiving $6 billion in new funding under the American Recovery and Reinvestment Act. The money will be used to accelerate environmental cleanup work and create thousands of jobs across 12 states. Newly funded projects will focus on accelerating cleanup of soil and groundwater, transportation and disposal of waste, and cleaning and demolishing former weapons complex facilities.

"These investments will put Americans to work while cleaning up contamination from the Cold War era," said Secretary Chu. "It reflects our commitment to future generations as well as to help local economies get moving again."

DOE's Office of Environmental Management will manage the new funding and associated projects. The office is responsible for the risk reduction and cleanup of the environmental legacy from the nation's nuclear weapons program. It is one of the largest, most diverse and technically complex environmental programs in the world.

For additional information on DOE's environmental management activities, please go to http://www.em.doe.gov/pages/emhome.aspx. For additional updates on DOE's efforts to implement the American Recovery and Reinvestment Act, please go to www.energy.gov/recovery.

U.S. Environmental Protection Agency

Largest-Ever EPA Budget Submitted to Congress

President Obama's administration has submitted to Congress a $3.55 trillion budget proposal for fiscal year 2010. As proposed, the budget includes $10.5 billion for the U.S. Environmental Protection Agency—an amount that, if approved, would be the largest-ever budget in EPA's 39-year history.

The proposed budget for EPA represents a $3 billion increase over the agency's FY 2009 level. This includes $3.9 billion for the Clean Water State Revolving Fund (SRF), $475 million for a new Great Lakes Initiative, and a $19 million increase for the agency's greenhouse gas (GHG) emissions inventory program and related climate-change initiatives.

Obama's budget also proposes to reinstate the Superfund excise tax, which had served as a major source of funding for EPA's Superfund activities before the tax expired in the mid-1990s.

Advisory Committee on Medical Uses of Isotopes (ACMUI)

ACMUI Invites Nominations for Radiation Oncologist

On March 2, 2009, the U.S. Nuclear Regulatory Commission's Advisory Committee on Medical Uses of Isotopes (ACMUI) announced that it is seeking nominations for the position of radiation oncologist. Nominees must be U.S. citizens and be able to devote approximately 160 hours per year to Committee business and have current radiotherapy experience using Gamma Knife. The selected nominee will undergo a thorough security background check. Committee members currently serve a four-year term and may be considered for reappointment to an additional term.

The ACMUI advises the NRC on policy and technical issues related to the regulation of medical uses of certain radioactive materials. Portions of ACMUI meetings may be open to the public.

To access the transcript and written comments from the ACMUI web site, please go to http://www.nrc.gov/about-nrc/regulatory/advisory/acmui.html. For additional information on the open position, please contact Ashley Tull of the NRC at Ashley.Tull@nrc.gov or at (240) 888-7129.

Advisory Committee on Reactor Safeguards (ACRS)

ACRS Holds March and April 2009 Meetings

The U.S. Nuclear Regulatory Commission's Advisory Committee on Reactor Safeguards (ACRS) met on March 5-7, 2009, and then again on April 2-4, 2009, at the agency's headquarters in Rockville, Maryland. The ACRS advises the Commission, independently from NRC staff, on safety issues related to the licensing and operation of nuclear power plants and in areas of health physics and radiation protection.

The March meeting agenda included, among other things, discussion of cyber security programs for nuclear facilities, requirements for protection against pressurized thermal shock events in reactors, fatigue management for nuclear power plant personnel, and an approach for determining the technical adequacy of probabilistic risk assessment results for risk informed activities.

Topics on the April meeting agenda included, among other things, license renewal applications and associated final safety evaluation reports for the

Vogtle nuclear plant and the National Institute of Standards and Technology test reactor, interim staff guidance on digital instrumentation and controls in nuclear power plants, and risk metrics for the new light-water reactors.

Complete agendas for ACRS meetings can be found on the NRC's web site at http://www.nrc.gov/reading-rm/doc-collections/acrs/agenda/2008/. For additional information on ACRS meetings, please contact Antonio Dias at (301) 415-6805.

(Continued from page 1)

Operations

- Larry Camper: Director of the Division of Waste Management and Environmental Protection, Office of Federal & State Materials & Environmental Management Programs (FSME)
- Jim Kennedy: Senior Project Manager, LLW Branch, FSME (topic: plan forward for safe storage and disposal of low-level waste—short and long term solutions)
- Steve Garry: Senior Health Physicist, Reactor Inspection Branch, NRR (topic: interim onsite storage for reactors)
- John Buckley: Senior Project Manager, Reactor Decommissioning Branch, FSME (topic: reactor decommissioning)
- Dan Collins: Deputy Director, Division of Nuclear Materials Safety, Region I (topic: regional perspectives on low-level waste and sealed sources)
- Mike Ryan: Chair, Radiation Protection and Nuclear Materials Subcommittee, Advisory Committee on Reactor Safeguards (topic: risk informing 10 CFR Part 61—are there regulatory steps NRC should take to support safe storage and disposal, short-term and long-term?)

The federal representatives panel included the following:

- Frank Marcinowski: Deputy Assistant Secretary for Regulatory Compliance, Department of Environmental Management, DOE (topic: national program for DOE's low-level waste, including Greater-than-Class C (GTCC) waste)
- Abigail Cuthbertson: Project Manager, Offsite Source Recovery Program, Office of Global Threat Reduction, NNSA/DOE (topic: sealed source recovery program)

Afternoon Session The afternoon session was divided into three panels, beginning with state regulators which were then followed by generators and then other stakeholders.

The state regulators panel included the following:

- Mike Dunn: Organization of Agreement States (OAS), Manager, Radioactive Materials Licensing Group, Texas Department of State Health Services (topic: the state perspective on LLW management issues)
- Debbie Gilley: Past Chair of the Conference of Radiation Control Program Directors (CRCPD), Florida Bureau of Radiation Control (topic: disposal capacity and the impact on sealed sources)
- Susan Jablonski: Director, Texas Commission on Environmental Quality (TCEQ), Radioactive Materials Division (topic: the state regulatory perspective on disposal)
- Todd Lovinger: Executive Director of the Low-Level Radioactive Waste Forum (topic: LLW disposal—the compact and state perspective)

The generators panel included the following:

- Mike Blevins: Chief Operating Officer of Luminant and Chair of the Nuclear Energy Institute's (NEI) Executive Working Group on Radiation Safety, LLW and Environmental Protection (topic: perspectives of LLW generators, short- and long-term recommendations for low-level radioactive waste management and disposal; down blending)
- Mike Zittle: Campus Radiation Safety Officers, Representative and Assistant Radiation Safety Officer, Oregon State University (topic:

disposal access for sealed sources)
- Council on Radionuclides and Radiopharmaceuticals (topic: LLW and security)
- Dianne D'Arrigo: Nuclear Information and Resource Service (NIRS), Director of the Radioactive Waste Project (topic: views of national LLW program)

For additional information, please contact Patricia Swain of the NRC at (301) 415-5405.

NRC Commissioners' LLRW Briefing: Testimony from the LLW Forum

The following are excerpts of testimony provided by the Low-Level Radioactive Waste Forum at the U.S. Nuclear Regulatory Commission's low-level radioactive waste briefing on April 17, 2009. (See related story, this issue.) Todd Lovinger—Executive Director of the Low-Level Radioactive Waste Forum—provided the testimony.

Persons interested in the complete testimony are directed to the archived web cast at www.nrc.gov.

The LLW Forum

The LLW Forum arose as technical assistance to the states and compacts under the LLRWPA and its 1985 amendments. In 2000, we incorporated as a non-profit entity and expanded our membership to include all interested stakeholders. Today, we count amongst our membership all nine operating LLRW disposal compacts, 11 host and unaffiliated states, 5 federal agencies, and 5 disposal operators … as well as various brokers and processors, nuclear utilities, user groups and associations, and other interested stakeholders. The main purpose of the organization is to facilitate state and compact implementation of the LLRWPAA of 1985 and to promote the objectives of LLRW regional compacts.

General Observations

Although the compact system may not have produced as many new LLW disposal facilities as anticipated in 1985, it is important for everyone to recognize that it is the compact system that allows the existing disposal facilities to remain operating and has allowed Texas and Waste Control Specialists to reach the threshold of constructing a new disposal facility.

The compact system was developed in the late 1970's when the three sited states of South Carolina, Washington, and Nevada said that they would no longer shoulder the burden of disposing of all on the Nation's LLW.

While many aspects of LLW have changed since then, one has remained constant – states are unwilling to host LLW disposal facilities unless they have the ability, through compacts, to control the waste received at the disposal sites.

Thus, the greatest threats to the LLW disposal system are those that jeopardize the ability of states and compacts to control the wastes received by the disposal facilities.

Accordingly, as the NRC and others take actions to "solve" particular waste disposal problems, the cumulative impact on the potential for new disposal facilities should be carefully considered. Only when the "demand" for LLW disposal is sufficient will new facilities be developed.

Common Comments

State and compact officials caution that any change that requires the Barnwell or Richland sites to take non-regional waste (including foreign-generated waste) would most likely result in the complete closure of both of these facilities.

These officials have also expressed concern over activities that may circumvent the ban on non-regional waste at the Barnwell and Richland facilities by obscuring the identification of the original generator of the waste such as:

- recent policy changes in Tennessee and practices by waste processors that attribute waste only to the waste processing facility and not to the original generator; and,

- possible attempts to transport radioactive material into the sited compact regions and re-manifest it as compact waste.

Atlantic Compact and South Carolina

Officials from the Atlantic Compact and South Carolina have stated as follows:

- South Carolina joined the Atlantic Compact to conserve the remaining space at the Barnwell disposal site so that disposal capacity would be available when the State's nuclear plants decommission.

- A plan has been developed to ensure the economic viability of the Barnwell site through mid-century.

- It is very unlikely that South Carolina would expand access to the Barnwell site – even for specific waste types such as sealed sources.

- Atlantic Compact generators view regional disposal at Barnwell only as the current preferred option, and will continue to monitor the development of other options across the United States.

- Barnwell site characteristics have proven less than ideal, with relatively fast groundwater travel times that have resulted in high tritium levels some distance from the waste disposal cells.

State of Utah

Officials from the State of Utah have stated as follows:

- Foreign waste receipt continues to be an issue of concern for Governor Huntsman. He remains opposed to all efforts by Energy*Solutions* to receive foreign waste. During the 2009 General Legislative Session, the Governor opposed a proposal by Energy*Solutions* to provide "hundreds of millions" of dollars to the State of Utah in exchange for Utah's approval to accept foreign waste. This proposal did not advance to a formal piece of legislation during the 2009 General Session.

- The Clive facility is only authorized to take Class A waste as a matter of state statute and policy. The following issues that might allow Class B and C waste to be reclassified are of utmost concern to the State of Utah: concentration averaging; blending of waste that could allow waste classification to change from Class B or C to Class A; and, changes to the current waste classification system such as redefining Class A, B, and C wastes.

Northwest Compact

Officials from the Northwest Compact and the State of Washington have stated as follows:

- In addition to the concern about down-blending waste, the Northwest Compact is very concerned with the potential for waste blending being implemented in a manor that obscures the original generator.

- Will waste processors be allowed to collect spent resins from utilities across the nation and then, following processing, attribute the blended waste to the waste processor? The NRC's foreign waste import license applications could be improved. Import license applications need to clearly provide complete information identifying all disposition pathways for the imported waste, including whether any waste will be attributed to the waste processor. NRC should then determine if the states and compacts of the proposed disposition facilities have agreed to accept the waste.

- Under Import License IW017, waste was imported from Canada and processed in

Tennessee. A portion of waste, after being processed, was subsequently manifested as Tennessee waste and disposed of at the Clive facility in violation of the Northwest Compact's requirements. In addition, the NRC did not consult with the State of Utah or the Northwest Compact prior to granting the waste import license, as NRC may have been unaware of the all of the disposition pathways.

Other

There are two additional emerging issues on which the states and compacts are just beginning to be engaged:

- wastes resulting from the release of a radiological dispersal device; and,
- disposal of sealed sources that present a national security risk.

Further dialogue is needed between the federal agencies and states and compacts on these important issues.

NRC Commissioners' LLRW Briefing: Follow-Up Letter from the LLW Forum

On April 23, 2009, the Low-Level Radioactive Waste Forum sent the below letter to U.S. Nuclear Regulatory Commission Chair Dale Klein.

The letter is intended to follow-up on two issues that were raised at the Commissioner's low-level radioactive waste briefing on April 17, 2009—including the exercise of compact authority and waste attribution. (See related story, this issue.)

Dear Chairman Klein:

On behalf of the Low-Level Radioactive Waste Forum, Inc. (LLW Forum), I would like to take this opportunity to thank you and the Commissioners for inviting us to participate in the agency's low-level radioactive waste briefing on April 17, 2009. We found the meeting to be both interesting and informative and appreciated the opportunity to share our views on this important issue directly with the Commissioners.

There were two items that arose during the briefing, however, on which I wanted to follow-up and provide both you and the Commissioners with some additional information and explanation—the exercise of compact authority and waste attribution.

<u>Exercise of Compact Authority</u>

The first issue concerns Commissioner's Lyon's question as to whether or not generators that are located in a region that hosts a compact facility are compelled to use that facility exclusively and prevented from using out-of-compact facilities or alternative options. Although the speaker answered in the affirmative, this is not completely correct.

In the first place, while it is true that the compact of origin has the legal authority to require regional generators to use a disposal facility in its region, the decision whether or not to do so is discretionary on the part of the governing compact. As an example, the Atlantic Compact does not require its

generators to use the Barnwell facility exclusively and, as a result, most Atlantic Compact generators choose to send their Class A waste to the Clive facility in Utah.

Moreover, although the Northwest Compact does require regional generators to dispose of their (non-mixed) low-level radioactive waste at the Richland facility, there is important rationale for doing so. First, this requirement is intended to ensure that the operator recovers its costs allowing the Richland facility to remain economically viable. Second, this requirement allows disposal fees to be maintained at the lowest possible cost for regional generators. Without such a restriction, regional generators may choose to ship their LLW elsewhere for a short-term savings. If this were to occur, disposal fees for regional generators continuing to use the Richland facility would have to be increased, or the facility would close, as there would be insufficient revenue to support operation of the facility.

The question raises an important issue that has been highlighted by the LLW Forum repeatedly over the years—namely, that unintended consequences need to be taken into account when considering alternatives. As we all know, waste disposal facilities are expensive to site, license, and operate. As a result, if lower cost options are sought for certain waste streams—such as low-activity waste—the lost revenue will need to be made up in other ways, likely through higher disposal costs charged for other waste streams.

Indeed, the Atlantic Compact's policy is instructional here. Although the compact does not require regional generators to send waste to the Barnwell facility and allows waste to be exported out-of-region to the Clive facility, both the Atlantic Compact and the State of South Carolina have made clear that regional generators will have to make up any shortfall in operating costs of the Barnwell facility due to reduced waste streams in order for the facility to remain open and operational. The unfortunate alternative, which I believe we all want to avoid, would be the complete closure of the facility to all waste.

In addition, at this time, all of the compacts allow generators access to all treatment facilities across the nation. However, some compacts require waste export permits prior to exporting waste for treatment or disposal outside the compact of origin.

Waste Attribution

The other issue upon which we wanted to provide additional commentary relates to the question as to why the Northwest Compact is concerned with the State of Tennessee allowing its processors to manifest waste from out-of-state generators as their own when sending the waste on for disposal.

First, the issue highlights the need to maintain a paper trail of the original waste generator—a federal requirement that is imposed for various important reasons. Indeed, federal manifesting regulations were put into place in order to track the original generator should questions arise regarding the type or class of waste, liability, or other issues of concern.

Second, the need to properly designate the generator of the waste is vital to maintaining agreements and good relations with the host community—an issue that Commissioner Jaczko has highlighted in many of his presentations. Indeed, often the host community for a facility is limited in its willingness to accept only certain waste streams from certain generators. Subverting that process would likely create a sense of mistrust and could impact the long-term viability of these facilities. As an example, we note that Utah residents are supportive of Clive accepting Class A waste, but not of the disposal of Class B and C waste at the facility. Although the state regulatory agency has determined that the waste could be disposed safely at the facility, it is important to respect the limits of the local community in order to maintain local community support for the facility.

Lastly, if waste processors are allowed to attribute treated waste to themselves, there is a concern that processors within sited compacts could take in waste from other compacts that do not have access to the compact disposal facility and then attempt to dispose of waste as if it was waste from that compact.

Conclusion

On behalf of the LLW Forum, we once again express our appreciation for the opportunity to participate in the briefing and to provide this additional input on the referenced issues. Although we recognize that there are important issues that still need to be worked upon and certain limited waste streams for which we still need to develop disposal capacity, we note that the great majority of low-level radioactive waste in the United States has disposal access and that, most importantly, all of it is being managed safely with regard to public health and the environment.

As the State of Texas is in the final stages of siting a new regional compact facility under the Low-Level Radioactive Waste Policy Act, we believe that this is an exciting and crucial time in the process and it is important that all interested stakeholders have all of the facts and allow the process to play out to what we anticipate will be a successful conclusion. In this regard, it is important to consider potential unintended consequences when dealing with this complex issue. Indeed, most (if not all) of the alternative options that have been suggested could unintentionally result in the closure of existing facilities, which would severely stifle low-level radioactive waste management in this country.

The LLW Forum would like to formally request that you share this letter with all of the NRC Commissioners and include it in the written record for the briefing in order to clarify these important issues.

Again, thank you for the opportunity to participate in the briefing and to provide additional input on these limited issues.

Sincerely,

Todd D. Lovinger, Esq.
Executive Director
LLW Forum, Inc.

NRC Commissioners' LLRW Briefing: Follow-Up Letter from the State of South Carolina

On April 22, 2009, the State of South Carolina's Budget and Control Board sent the below letter to U.S. Nuclear Regulatory Commission Chair Dale Klein.

The letter is intended to follow-up on the issue of waste attribution as raised by the Commissioner's during the low-level radioactive waste briefing on April 17, 2009. (See related story, this issue.)

Dear Chairman Klein:

Thank you and the Commission for webcasting the April 17 briefing on low-level radioactive waste. The meeting was informative and interesting.

We want to respond more fully to a question you posed to the panel regarding the concern of facility host states for the proper attribution of waste generators in containers received from waste processing facilities. Since at least 1982, South Carolina has required all waste generators to obtain a transport permit from the State for waste shipped to the Barnwell site, whether or not they use a broker for delivery of the waste, and whether or not the waste is treated or processed en route to disposal. (Please see May 1, 1986, memo, attached.)

Regardless of any policies to the contrary in Tennessee or elsewhere, South Carolina will continue to require documentation that certifies the identity of the generator of all waste received, as a condition of access to the Barnwell site.

This policy was an important part of the State's regulatory reforms that were adopted contemporaneously with the adoption of 10 CFR 61. The primary purpose of the policy is to provide financial assurance. Documentation identifying generators is necessary to establish liability and responsibility for the material should it ever become necessary to seek compensation in the event of an accident or environmental contamination. A secondary purpose, at least since 2000, is to ensure financial responsibility in the event that the waste

broker or processor goes out of business or fails to pay for services provided.

Attribution of waste to the original generator has been one of the pillars of regulatory policy on low-level radioactive waste. When SEG, Inc., first proposed a supercompactor in the State of Tennessee, representatives of the company visited South Carolina to ensure the State that they were supportive of the policy and would identify all generators whose waste contributed to the commingled packages. For purposes of federal surcharge rebates in the early 1990s, the Department of Energy required that waste shipped through brokers and processors provide a breakdown of volumes in all commingled packages.

We continue to believe that documentation accurately attributing waste to the original generators is an important regulatory policy and know of no constructive purpose that would be served in omitting such information on shipping manifests. We believe that the NRC can take a lead role in ensuring consistency in its implementation of this policy among the states.

Sincerely,

William Newberry, Manager
Radioactive Waste Disposal Program

Richard A. Haynes, P.E., Director
Division of Waste Management
Bureau of Land and Waste Management
S.C. Dept. of Health and Environmental Control

NRC Staff to Initiate Rulemaking re Depleted Uranium Disposal

On March 18, 2009, the U.S. Nuclear Regulatory Commission issued a Staff Requirements Memorandum (SRM) directing agency staff to draft amendments to regulations regarding low-level radioactive waste to accommodate the disposal of large quantities of depleted uranium.

Depleted uranium is the byproduct, or tails, of the uranium enrichment process—a key point in the production of fuel for nuclear power reactors.

To date, two entities—Louisiana Energy Services (LES) and the U.S. Enrichment Corporation (USEC)—have received licenses from NRC authorizing them to construct and operate uranium enrichment facilities. Two other entities—GE-Hitachi and Areva Idaho—plan to submit license applications this fiscal year.

The Commission's Action

In issuing the SRM, the Commission "accepted the staff's recommendation that the agency continue to consider depleted uranium as Class A low-level waste, but amend regulations in 10 CFR Part 61 to require a site-specific analysis for the disposal of large quantities of depleted uranium and the technical requirements for such an analysis." In addition, the Commission directed staff "to develop a guidance document for public comment that outlines the parameters and assumptions to be used in conducting the site-specific analyses."

The SRM stresses that the Commission does not intend for the rulemaking to change the current classification of depleted uranium as Class A waste. In this regard, the SRM states that, "Eventual changes to waste classification designations in the regulations must be analyzed in light of the total amount of depleted uranium being disposed of at any given site."

The Commission has also directed staff to conduct a public workshop to include all potentially affected stakeholders. Items to be discussed during the workshop include issues associated with the disposal of depleted uranium, potential issues to be considered in rulemaking, and technical parameters of concern in the analysis so that informed decisions can be made in the interim period until the regulatory changes are final.

The SRM will be available shortly on the agency's ADAM's system at http://www.nrc.gov/reading-rm/adams.html using accession number ML 090770988.

The Staff's Proposal

The NRC staff proposal (SECY 08-147), which is dated October 7, 2008, responds to Commission direction provided in Order CLI-05-20 (In the Matter of Louisiana Energy Services [LES], October 19, 2005.) In that Order, the Commission directed staff, "outside of the LES adjudication, to consider whether the quantities of depleted uranium at issue in the waste stream from uranium enrichment facilities warrant amending section 61.55(a)(6) or the section 61.55(a) waste classification tables."

In response to the Commission's order, staff completed a technical analysis of the impacts of near-surface disposal of large quantities of depleted uranium, such as those anticipated to be generated at uranium enrichment facilities. The technical analysis evaluated whether amendments should be made to section 61.55(a) in order to assure that large quantities of depleted uranium are disposed of in a manner that meets the performance objectives in Subpart C of 10 CFR Part 61. Staff concluded that although near-surface disposal of large quantities of depleted uranium may be appropriate in some circumstances, it may not be appropriate under all site conditions. Due to the unique characteristics of depleted uranium, staff concluded that existing regulations should be amended in order to ensure the safe disposal of large quantities of this particular waste.

Staff then considered and evaluated four options to facilitate the safe disposal of depleted uranium. The options, as well as a summary of the perceived benefits and drawbacks for each, are presented in the staff paper. The paper contains the staff's recommendation to conduct "a limited rulemaking to revise Part 61 to specify the need for a disposal facility licensee or applicant to conduct a site-specific analysis that addresses the unique characteristics of the waste and the additional considerations required for its disposal prior to disposal of large quantities of [depleted uranium] and other unique waste streams such as reprocessing waste." Staff further recommends that (1) the technical requirements associated with the disposal of large quantities of depleted uranium be developed through the rulemaking process and that (2) specific parameters and assumptions for conducting site-specific analysis be incorporated into a guidance document subject to public comment.

For additional information on the staff's proposal, please see LLW Notes, November/December 2008, pp. 1, 27-30.

Background

A review of the classification of large quantities of depleted uranium was designated as one of seven high-priority tasks by NRC staff in their October 2007 strategic assessment of the agency's low-level radioactive waste regulatory program. (See *LLW Notes*, November/December 2007, pp. 1, 20-23.) The issue arises out of the licensing of new uranium enrichment facilities—including the LES National Enrichment Facility (NEF) and the USEC American Centrifuge Plant—and the existing DOE stockpile of depleted uranium at the Paducah and Portsmouth Gaseous Diffusion Plants. Due to such activities, NRC projects that more than 1 million metric tons of depleted uranium hexafluoride will need a disposition path. Both Energy*Solutions*' existing facility in Clive, Utah and Waste Control Specialists proposed facility in Andrews County, Texas have expressed an interest in disposing of this waste. The disposal of such high concentrations and large quantities of depleted uranium were not considered in the Final Environmental Impact Statement (FEIS) supporting the development of 10 CFR Part 61,

however, because there were no commercial facilities generating large amounts of depleted uranium waste at the time.

Under the current regulatory structure, any facility licensed to accept Class A waste would represent a potential disposal path for depleted uranium. Accordingly, NRC communicated with state regulators that oversee existing or proposed low-level radioactive waste disposal facilities in South Carolina, Texas, Utah and Washington. (Enrichment facility licensees or other potential licensees, however, were not contacted as part of staff's analysis.) Although most of the four identified commercial disposal facilities have accepted small quantities of depleted uranium in the past, the regulators in these states generally agreed that large quantities of depleted uranium should be handled as a unique waste stream and that additional analysis should be conducted prior to its disposal. *(Additional information on individual state regulations and facility analysis can be found in SECY-08-0147.)*

NRC Issues Final Rule re Aircraft Impact Assessments

The U.S. Nuclear Regulatory Commission has issued a final rule that requires applicants for new power reactors to assess the ability of their reactor designs to avoid or mitigate the effects of a large commercial aircraft impact.

"This is a common sense approach to address an issue raised by the tragic events of Sept. 11, 2001," said NRC Chairman Dale Klein. "I am quite confident that this rule will be an important element in the regulatory framework for new reactor applications that will result in a margin of safety far beyond that required to achieve reasonable assurance of public health and safety."

Nuclear power plants are designed under very stringent requirements to assure they can safely shut down following "design-basis events" such as large fires, floods, earthquakes and hurricanes, as well as improbable equipment malfunctions including pipe breaks. These requirements include having two redundant systems to accomplish each safety function. The rule treats large commercial aircraft crashes as "beyond-design-basis events."

Under the rule, any design feature or functional capability adopted solely to comply with the rule will meet high quality standards but is exempt from NRC design-basis regulations, such as regulations for redundancy. These design features and functional capabilities must address core cooling capability, containment integrity, spent fuel cooling capability, and spent fuel pool integrity following an aircraft impact.

NRC has already taken several steps to improve security at existing nuclear power plants, including adopting a rule in March 2007 that requires both existing and new reactors to defend against a more realistic threat. The agency does not believe, however, that nuclear power plant operators should be required to prevent the impact of large commercial aircraft, as that responsibility rests with the federal government. NRC does, nonetheless, work closely with other federal agencies and the intelligence community to provide layered protection against such a threat—which efforts the agency believes would effectively preclude an aircraft attack from occurring.

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 April 22, 2009, NRC staff held two public meetings in Hiawatha, Iowa, to discuss the agency's environmental review of the Duane Arnold Energy Center license renewal application. The plant's single boiling-water reactor is located in Palo, Iowa—approximately eight miles northwest of Cedar Rapids. The current operating license expires on February 21, 2014. The plant's owner, FPL Energy Duane Arnold, submitted the license renewal application on October 1, 2008.

- On April 16, 2009, NRC staff held two public meetings in Crystal River, Florida to discuss the agency's environmental review of the Crystal River Unit 3 Nuclear Generating Plant license renewal application. The Crystal River plant's single pressurized-water reactor is located approximately seven miles northwest of Crystal River. The current operating license expires on December 3, 2016. The plant's owner, Florida Power Corporation, submitted the license renewal application on December 16, 2008.

- On April 8, 2009, NRC announced that it has renewed the operating license for the Oyster Creek Nuclear Generation Station in Lacey Township (Ocean County), New Jersey, for an additional 20 years. The plant's operator, AmerGen Energy Company (a subsidiary of Exelon Nuclear Generation Company LLC), submitted the renewal application on July 22, 2005. The new license will expire on April 9, 2029.

- On March 16, 2009, NRC announced that staff has completed its final environmental impact statement (EIS) for the Susquehanna Steam Electric Station, Units 1 and 2, and concluded that there are no environmental impacts that would preclude license renewal for an additional 20 years of operation. The plant's two boiling-water reactors are located in Berwick, Pennsylvania. The current operating licenses for Units 1 and 2 expire on July 17, 2022 and March 23, 2024 respectively. PPL Susquehanna LLC plant owners and operators submitted an application for renewal of the licenses on September 13, 2006.

- On March 13, 2009, NRC announced that staff has issued a final safety evaluation report (SER) for the proposed renewal of the operating licenses for the Vogtle Electrical Generating Plant, Units 1 and 2. The report concludes that there are no safety concerns that would preclude license renewal because the applicant has effectively demonstrated the capability to manage the effects of plant aging during extended operations and it would not pose an undue risk to the health and safety of workers or the public. Vogtle Units 1 and 2 are pressurized-water reactors located about 26 miles southeast of Augusta, Georgia. Southern Nuclear Operating Company submitted the license renewal application on June 29, 2007. The current operating licenses expire on January 16, 2027 for Unit 1 and on February 9, 2029 for Unit 2.

- On March 13, 2009, NRC announced that staff has issued a final SER with Open Items for the proposed renewal of the operating license for the Three Mile Island Nuclear Station, Unit 1 (TMI-1)—which is located in Middletown, Pennsylvania. Overall, the results show that the applicant has identified actions that have been or will be taken to manage the effects of aging. Exelon Generation Group LLC submitted the application to NRC on January 8, 2008. The current operating license for TMI-1 expires on April 19, 2014.

- On March 4, 2009, the NRC's Advisory Committee on Reactor Safeguards (ACRS) held

a public meeting in Rockville, Maryland to discuss the Indian Point Nuclear Plant license renewal application for Units 2 and 3 and the associated SER with Open Items prepared by staff.

- On February 25, 2009, NRC staff held two public meetings in Brownsville and Auburn, Nebraska, to discuss the agency's safety review and environmental scoping process for the Cooper Nuclear Station license renewal application. The Cooper plant's single boiling-water reactor is located 23 miles south of Nebraska City, Nebraska. The current operating license expires on January 18, 2014. The plant's owner, the Nebraska Public Power District, submitted the application on September 30, 2008.

- On February 18, 2009, NRC staff held a meeting with management of the Prairie Island nuclear power plant to discuss the results of an inspection of the proposed aging-management approach. The plant is located in Welch, Minnesota. It's operator, Northern States Power Company, has applied for a 20-year license extension for each of the two units at the site.

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 52 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.

Combined License Application Reviews Continue

The U.S. Nuclear Regulatory Commission continues to process Combined License (COL) applications that, if issued, provide authorization to construct and, with conditions, operate a nuclear power plant at a specific site and in accordance with laws and regulations.

In this regard, the agency recently took the following actions.

- On April 23, 2009, NRC conducted a public meeting in Homestead, Florida to discuss how the agency will review an expected COL application for two new reactors at the Turkey Point site, about 25 miles south of Miami. The prospective applicant, Florida Power & Light, has told the NRC that it intends to apply later this year for a license to build and operate two AP1000 reactors at the site.

- On April 21-22, 2009, an Atomic Safety and Licensing Board (ASLB) panel heard oral argument on a request for a hearing in the Levy County COL proceeding in Bronson, Florida. The ASLB is the NRC's quasi-judicial arm that deals with licensing matters. Progress Energy Florida submitted a COL application for the site on July 28, 2008. The applicant proposes to construct and operate two nuclear reactors in Levy County—near Crystal River, Florida. A request to intervene in the proceeding was submitted jointly by the Nuclear Information and Resource Service (NIRS), the Ecology Party of Florida, and the Green Party of Florida.

- On March 28, 2009, NRC staff held a pubic meeting in Blair, South Carolina to discuss the agency's process for reviewing environmental issues related to a COL application for two new reactors proposed for the Summer site—which is located near Columbia, South Carolina. Santee Cooper and South Carolina Electric & Gas (SCE&G) submitted the application on

March 31, 2008. It seeks permission to build and operate two AP1000 reactors at the site. NRC is accepting comment until April 6 regarding environmental issues that should be considered in its review of the COL application.

- From March 16-25, 2009, the ASLB conducted a hearing concerning Early Site Permit (ESP) and COL applications for the Vogtle site near Waynesboro, Georgia. Southern Nuclear Operating Company submitted the applications. Several groups have filed contentions opposing the applications.

- On March 18, 2009, NRC announced the opportunity for public participation in a hearing on a COL application for a new reactor at the Bell Bend site near Berwick, Pennsylvania. The site is adjacent to the existing two-reactor Susquehanna Steam Electric Station. PPL Bend submitted the COL application and associated information on October 10, 2008. The applicant seeks approval to build and operate an Evolutionary Power Reactor (EPR) at the site—which is located approximately six miles northeast of Berwick.

- On February 20, NRC announced the opportunity to participate in a hearing on a COL application for two new reactors at the South Texas Project site near Bay City, Texas. NRG and South Texas Project Nuclear Operating Company submitted the COL application and associated information on September 20, 2007. The application was updated on January 31, 2008 and September 24, 2008. The applicant seeks approval to build and operate two Advanced Boiling Water Reactors (ABWR) at the site—which is located approximately 12 miles southwest of Bay City.

- On February 20, 2009, the ASLB held a pre-hearing conference concerning the application for a COL to build and operate a new reactor at the Calvert Cliffs site near Lusby, Maryland.

- On February 13, 2009, NRC announced that the agency will hold off on starting much of its review of the COL application for the Nine Mile Point site following a request from the applicants. Nine Mile Point Nuclear Project and UniStar filed the COL application to build and operate an EPR at the site near Oswego, New York.

- On February 5, 2009, NRC announced the opportunity to participate in a hearing on a COL application for two new nuclear reactors at the Comanche Peak site near Glen Rose, Texas. Luminant Generation submitted the COL application and associated information on September 19, 2008. The application was updated in November and December of 2008. Luminant seeks approval to build and operate two U.S. Advanced Pressurized Water Reactors (US-APWR) at the site—which is located about four miles north of Glen Rose.

- On February 4, 2009, NRC announced the opportunity to participate in a hearing on a COL application for a new nuclear reactor at the Callaway site near Fulton, Missouri. AmerenUE submitted the COL application and associated information on July 24, 2008. The application was subsequently updated on September 24, 2008 and November 14, 2008. AmerenUE seeks approval to build and operate an EPR at the site—which is located approximately 10 miles southeast of Fulton.

Additional information on the NRC's new reactor licensing process is available on the agency's web site at http://www.nrc.gov/reactors/new-reactor-licensing.html.

(Continued from page 20)
could grant specific exemption only if an application showed the importation would serve a national or international policy goal, such as a research purpose.

The bills—H.R. 515 and S. 232—are similar to legislation that was introduced in the 110th Congress. Although hearings were held on that legislation, it did not receive a vote in either chamber of Congress. (See *LLW Notes*, May/June 2008, pp. 20-24.)

The complete text of the bills can be found at http://thomas.loc.gov/cgi-bin/thomas by looking up bill no. H.R. 515 and S. 232.

For additional information, please contact Mark Walker of EnergySolutions, at (801) 231-9194; Michael Garner, Executive Director of the Northwest Compact, at (360) 407-7102; Bill Sinclair, Deputy Director of the Utah Department of Environmental Quality, at (801) 536-4405; or Leonard Slosky, Executive Director of the Rocky Mountain Compact, at (303) 825-1912.

U.S. Nuclear Energy Institute

NEI to Hold Clean Energy Conference in May

The Nuclear Energy Institute will hold its 2009 Nuclear Energy Assembly at the Fairmont Hotel in Washington, DC on May 18-20, 2009. The theme of this year's assembly is "Investing in a Clean Energy Future." The meeting announcement states as follows:

> During a time of economic turmoil, the nuclear energy industry is investing in a clean energy future. From uranium mining and development of new enrichment facilities to licensing and site preparation of a new fleet of advanced reactors, the nuclear industry is bringing economic development and clean electricity to future generations. Attend this year's Nuclear Energy Assembly to hear the definitive direction of the industry.

To register for the Assembly or gather more information, please contact NEI at (202) 739-8000 or go to www.nei.org.

To Obtain Federal Government Information

by telephone

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

by internet

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

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

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

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

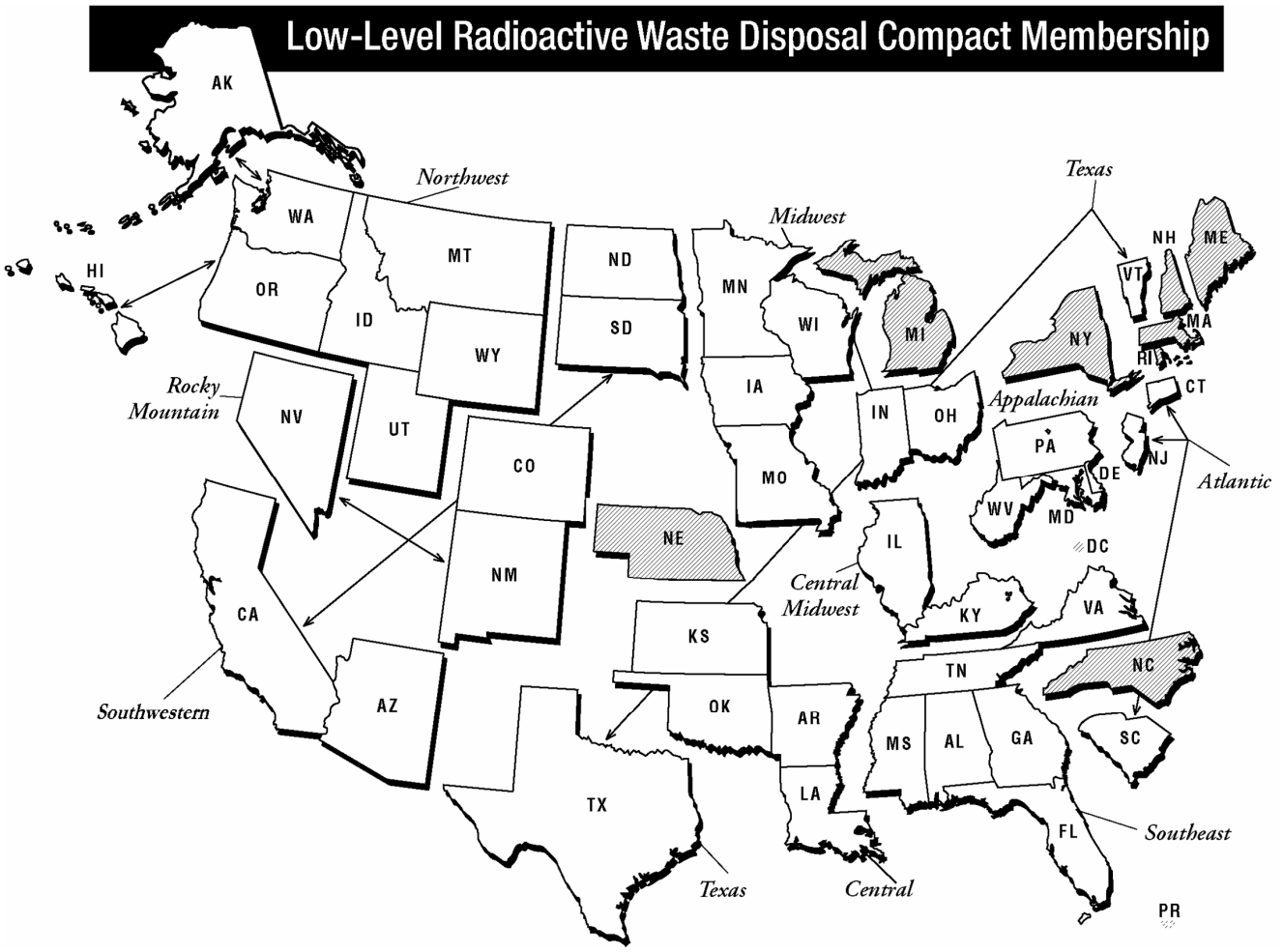
- GAO homepage (access to reports and testimony) .....**www.gao.gov**

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

Accessing LLW Forum, Inc. Documents on the Web

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

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



Appalachian Compact
Delaware
Maryland
Pennsylvania
West Virginia

Atlantic Compact
Connecticut
New Jersey
South Carolina

Central Compact
Arkansas
Kansas
Louisiana
Oklahoma

Central Midwest Compact
Illinois
Kentucky

Northwest Compact
Alaska
Hawaii
Idaho
Montana
Oregon
Utah
Washington
Wyoming

Midwest Compact
Indiana
Iowa
Minnesota
Missouri
Ohio
Wisconsin

Rocky Mountain Compact
Colorado
Nevada
New Mexico

Northwest accepts Rocky Mountain waste as agreed between compacts

Southeast Compact
Alabama
Florida
Georgia
Mississippi
Tennessee
Virginia

Southwestern Compact
Arizona
California
North Dakota
South Dakota

Texas Compact
Texas
Vermont

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