LLW notes

Volume 26, Number 6 November/December 2011

Advisory Committee on Reactor Safeguards (ACRS)

ACRS Transmits Letter to NRC re Draft CA BTP

On December 13, 2011, Advisory Committee on Reactor Safeguards (ACRS) Chairman Said Abdel-Khalik sent a letter to U.S. Nuclear Regulatory Commission Chairman Gregory Jaczko regarding the draft Branch Technical Position on Concentration and Encapsulation (CA BTP) for disposal of low-level radioactive waste.

The ACRS letter can be found on NRC's public web site site at www.nrc.gov under Agencywide Documents Access and Management System (ADAMS) at ML11343A221.

Conclusions

The ACRS letter contains the following five recommendations and conclusions:

- The draft CA BTP should be issued for public comment after consideration of comments provided by ACRS.
- The guidance provided in the draft CA BTP on alternative approaches provides flexibility to low-level radioactive waste generators and disposal licensees, and is a good first step in improving management of low-level radioactive waste.
- The guidance provided in the draft CA BTP for blending low-level radioactive waste is also a good approach for managing low-level radioactive waste. However, the staff should continue to develop appropriate guidance to ensure that constituents in blended wastes are compatible and will result in satisfactory waste forms.
- The staff's approach to protect an inadvertent intruder from exposure to disposed low-level radioactive waste uses generic, stylized bounding calculations that assume a fixed set of conditions to judge the acceptability of disposal of low-level radioactive waste. This approach does not consider site-specific physical or design features that would impact the likelihood of inadvertent intrusion.

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The Low-Level Radioactive Waste Forum, Inc. (LLW Forum) 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.

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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.

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Key to Abbreviations

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

Low-Level Radioactive Waste Forum, Inc.

Register Now for the Spring 2012 LLW Forum Meeting

Burlingame, California on April 23-24, 2012

The Low-Level Radioactive Waste Forum will host its spring 2012 meeting at the Hyatt Regency San Francisco Airport in Burlingame, California. The Southwestern Low-Level Radioactive Waste Compact Commission and the State of California are co-sponsoring the one and one-half day meeting—which will be held on Monday, April 23, and Tuesday, April 24. The Executive Committee will meet on Monday morning.

A meeting bulletin and registration form can be found on the LLW Forum's web site at www.llwforum.org.

Attendance

Officials from states, compacts, federal agencies, nuclear utilities, disposal operators, brokers/ processors, industry, and other interested parties are invited and encouraged to attend. The meeting is an excellent opportunity to stay up-to-date on the most recent and significant developments in the area of low-level radioactive waste management and disposal. It also offers an important opportunity to network with other government and industry officials and to participate in decision-making on future actions and endeavors affecting low-level radioactive waste management and disposal.

Registration

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

All persons must pre-register for the meeting and pay any associated registration fees in order to be allowed entry. Registration forms are needed in order to ensure that each participant receives a meeting packet and name badge**.**

Accordingly, interested attendees are asked to please take a moment to complete the registration form at your earliest convenience and return it to Kathy Davis of the Southwestern Compact at the address, e-mail or fax number listed at the bottom of the form.

Hotel Reservations

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 several meetings.

A block of rooms has been reserved for Sunday (April 22) and Monday (April 23) for meeting attendees at the Hyatt Regency San Francisco Airport Hotel at the special, discounted rate of $123/night (single/double rate) plus tax. A limited number of rooms are available at this rate for Saturday, April 21, as well as Tuesday and Wednesday, April 24-25.

To make a reservation, please call the Hyatt Regency San Francisco Airport Hotel directly at (888) 421-1442 and ask for a room in the SWLLRWCC EVENT block. You may also make your reservations on-line at https://resweb.passkey.com/Resweb.do?mode=welcome_ei_new&eventID=4031598. Please reserve by Monday, March 20, to receive the special, discounted rate.

Transportation

The Hyatt Regency San Francisco Airport Hotel

is located just minutes from the San Francisco International Airport on Interstate 101. Complimentary shuttle service is available through the hotel 24 hours a day. In addition, the Bay Area Rapid Transit (BART) commuter train station with direct service to downtown San Francisco will also be available by shuttle service from the hotel.

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 Lovinger, the LLW Forum's Executive Director, at (202) 265-7990 or at LLWForumInc@aol.com.

Low-Level Radioactive Waste Forum Meetings

2012 and Beyond

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

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

2012 Meetings

The Southwestern Low-Level Radioactive Waste Compact Commission and State of California will co-host the spring 2012 meeting of the LLW Forum. (See related story, this issue.) The meeting will be held at the Hyatt Regency San Francisco Airport Facility in Burlingame, California on April 24-25, 2012. The hotel—which is rated AAA Four Diamond Award Winning Service & Accommodations—has 24 hr complimentary shuttle service to and from the airport, as well as shuttle service from the hotel to the Bay Area Rapid Transit (BART) station.

The Central Midwest Interstate Low-Level Radioactive Waste Commission and the State of Illinois have agreed to co-host the LLW Forum's fall 2012 meeting. This will be the third time that the Commission and Illinois have co-hosted a meeting of the LLW Forum since we began operations as an independent, non-profit organization in 2000. The meeting will be held at the Embassy Suites Lakefront Hotel in downtown Chicago on October 11-12, 2012.

Search for Volunteer Hosts for 2013 Meetings

The LLW Forum is currently seeking volunteers to host both the spring and fall 2013 meetings and those thereafter. Although it may seem far off, substantial lead-time is needed to locate appropriate facilities.

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

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

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

Disused Source Working Group Holds Second Meeting

Members of the LLW Forum's Disused Source Working Group held their second meeting on December 1-2, 2011 in Austin, Texas.

The group was formed in response to a request from the National Nuclear Security Administration (NNSA) to study the issue of management and disposition of disused sources.

The group will study both front and back end issues over an 18 to 24 month period and will issue a report to the full LLW Forum and NNSA at the conclusion of the process.

Membership

Eight members of the LLW Forum have been appointed to the working group, including

- Max Batavia of the Atlantic Compact;
- Mike Garner of the Northwest Compact/State of Washington;
- Kathryn Haynes of the Southeast Compact;
- Susan Jablonski of the State of Texas;
- Rusty Lundberg of the State of Utah;
- Alyse Peterson of the State of New York;
- Leonard Slosky of the Rocky Mountain Board; and,
- Stan York of the Midwest Compact.

Todd Lovinger, the LLW Forum's Executive Director, will serve as the Project Director. Gary Robertson, a retired official from the State of Washington, has been retained as a Technical Expertise Consultant.

Agenda

The following items, among others, were discussed as part of the December meeting agenda:

- introduction and announcements (Leonard Slosky, LLW Forum Chair)
- manufacturer/distributor radioactive materials license application requirements (Gary Robertson, Working Group Consultant)
  - brief summary of IAEA document titled, "Identification of Radioactive Sources and Devices"
  - explanation and description of three categories of radioactive materials licenses
  - licensing requirements by category
  - licensing requirements for manufacturers and distributors
- universe of sources that NNSA sees as a problem (Abigail Cuthbertson, NNSA/DOE)
  - identification of sources that are most likely to be characterized as disused and process for making said determination
  - existing and anticipated universe of sources requiring disposition
  - current and future disposition challenges
  - considerations re use of federal facility versus commercial disposal options
- perspectives of a manufacturer/distributor (Kate Roughan, QSA Global)
  - current manufacturing practices including front-end considerations of final disposition options; implications of requiring the return of sources once their useful life is over; and, pros and cons of leasing of devices
  - overview of recent IAEA technical meeting on the management of disused sources and international actions being considered
- perspectives of a recycler/manufacturer (John Miller, International Isotopes)
  - overview of options for transfer of recycling re-purposed, re-irradiated, and re-encapsulated devices
  - benefits, drawbacks, disincentives and challenges including financial implications and availability/cost of approved shipping containers

- perspectives of a broker/waste processor (Richard Grondin, Perma-Fix Environmental Services)
    - considerations of when a device or source should be declared a waste
    - overview of brokerage and processing options, including analysis of storage time requirements
- potential implications of NRC's draft branch technical position on concentration averaging and encapsulation (CA BTP)
    - relevant sections of draft CA BTP and their potential impact on the disposition of disused sources
    - potential considerations, actions, and recommendations
- update on the WCS site and discussions of the Texas Compact Commission re waste import (Susan Jablonski, Texas Commission on Environmental Quality)
    - completion of construction and opening of site for in-region commercial waste disposal
    - consideration of and action toward acceptance of petitions for disposal of out-of-compact waste, including forms and rules
    - whether there should be some priority given to particular types of waste or generators of waste, including sealed sources
- organizational reporting, debriefing and review, path forward (Working Group Members)
- next meeting date, location and topics (Working Group Members)

Meetings of the Disused Source Working Group will be limited to working group members and invited guests.

LLW Forum Welcomes MHF Services as New Member

The Low-Level Radioactive Waste Forum is pleased to welcome MHF Services as a new Non-Federal Associate Member of the organization.

MHF Services

MHF Services is an integrated packaging, transportation and logistics provider offering solutions for generators and shippers of radioactive, hazardous, and non-hazardous waste, materials, and byproducts. The company provides transportation via rail, truck, and marine. They also provide cost-effective packaging and high capacity equipment options. MHF Services maintains a national network of transload facilities designed to provide seamless transload services as well as technical services.

MHF Services' designated representatives to the LLW Forum will be as follows:

Lisa Sabol
Director of Marketing and Services
(724) 772-9800 ext. 5562
lisa_sabol@mhfservices.com

Scott Dempsey
Vice President of Sales and Marketing
(865) 220-0506
scott_dempsey@mhfservices.com

Additional information about MHF Services can be found on the company's web site at http://www.mhfservices.com/.

LLW Forum, Inc.

The LLW Forum is a non-profit organization of industry stakeholders seeking to assist states and compacts in fulfilling their obligations pursuant to the Low-Level Radioactive Waste Policy Act of 1980 and its 1985 amendments. The main

function of the organization is information exchange and liaison services. We hold two meetings per year, put out six newsletters per year, send out electronic News Flashes on issues of significance or timeliness, and distribute an annual *Contact List of Persons Working in the Field of LLRW Management and Disposal,* as well as annual *Summary Report of LLRW Management and Disposal Activities in the States and Compacts.* We also undertake various projects, such as the ongoing National Directory of Brokers and Processors, and working groups, such as the recently-formed Disused Source Working Group. And, of course, we provide liaison functions between the various stakeholders.

The LLW Forum counts amongst our members and subscribers all ten operating low-level radioactive waste compacts and their designated host states, five federal agencies (U.S. Department of Energy, U.S. Nuclear Regulatory Commission, U.S. Environmental Protection Agency, Army, and Corps of Engineers), all operating commercial low-level radioactive waste disposal facility operators, brokers and processors, utilities, associations (such as the Nuclear Energy Institute), and other interested stakeholders.

The next LLW Forum meeting is being sponsored by the Southwestern Compact Commission and the State of California and will be held at the Hyatt Regency San Francisco Airport on April 23 -24, 2012. The meeting bulletin and registration form can be found on our web site at www.llwforum.org.

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

Appalachian Compact/State of Delaware

Special Inspection at Brunswick Following Shut Down

On November 18, 2011, the U.S. Nuclear Regulatory Commission announced that the agency would launch a special investigation at Progress Energy's Brunswick nuclear power plant to assess the circumstances surrounding an earlier event that required operators to shut down the Unit 2 reactor. The plant is located in Southport, North Carolina—approximately 20 miles south of Wilmington.

Unit 2 was restarting after a maintenance outage when operators identified unacceptable reactor coolant system leakage. The unit, which had reached 7 percent power, was manually scrammed, or shut down. Plant officials declared an Unusual Event, the lowest of four NRC emergency classifications.

The leak rate slowed as the pressure was decreased and the Unusual Event was terminated after approximately five hours. During preliminary leak investigation activities, plant employees determined that the reactor pressure vessel head had not been fully tensioned.

NRC's resident inspectors at Brunswick immediately assessed the incident. A Special Inspection Team from the NRC's Region II offices in Atlanta subsequently supplemented them. Among other things, the team developed a timeline, reviewed Progress' actions leading up to the event, and evaluated the company's response.

A report documenting the results of the on-site inspection should be issued within 45 days of completion of the inspection.

Appalachian Compact/Commonwealth of Pennsylvania

Limerick Unit 2 Cited for Inspection Finding

On December 8, 2011, the U.S. Nuclear Regulatory Commission announced that the Limerick Unit 2 nuclear power plant would receive additional oversight from the agency following the finalization of a white inspection finding for the facility. NRC evaluates performance at plants with a color-coded process that classifies regulatory findings as green, white, yellow, or red in order of increasing significance. A white finding is considered to be of low to moderate safety significance.

Exelon Generation Company LLC operates the Limerick facility, which is located in Pennsylvania. The inspection finding involves inadequate procedures related to the operation of two main feedwater system valves. During a start -up on April 22, 2011, the valves failed to fully close, resulting in one of the plant's safety systems being inoperable from April 23 to May 23, 2011. Specifically, the partially opened valves created a flow path that would have prevented the majority of water flow from the Reactor Core Isolation Cooling (RCIC) system from reaching the reactor during an accident and thereby helping to mitigate the event.

Because nuclear plants are equipped with multiple safety systems, the reactor still could have been cooled and the plant safely shut down despite the condition. However, the unavailability of the RCIC system would represent a reduction in the plant's safety margins.

In addition to the impacts on the RCIC system, the partially open valves also rendered a Primary Containment Isolation Valve inoperable during the same period. Such valves would be used during an accident to close off the plant's

containment building during a significant event in order to prevent the release of radioactivity to the environment. The plant's other containment isolation valves remained available to perform their function.

Once the problem was identified, they fully closed the valves and restored the operability of the RCIC system and the Primary Containment Isolation Valve.

Exelon opted not to provide the NRC with a response to the finding, but the company earlier informed the agency of corrective actions it has taken, including checks of other valves that might be similarly affected, revisions to the operating procedure for the valves, and revisions to maintenance and testing procedures. The NRC's Resident Inspectors assured that the immediate actions taken by Limerick staff to address the issues were accomplished satisfactorily.

However, at a future date, NRC will perform a supplemental inspection at Limerick Unit 2 to evaluate the company's root-cause analysis of the problems involving the valves and its corrective actions.

Atlantic Compact/State of South Carolina

Oconee Issue of Substantial Safety Significance

On December 7, 2011, the U.S. Nuclear Regulatory Commission announced its determination that electrical breakers installed in a key safety system would not have functioned during certain scenarios at the Oconee nuclear plant, representing a finding of "substantial safety significance" that will result in increased NRC inspection and oversight of the facility. Duke Energy operates the three-unit plant, which is located near Seneca, South Carolina—approximately 30 miles west of Greenville.

On June 2, 2011, Oconee plant employees identified that pressurized heater breakers essential to the operation of the plant's standby shutdown facility would not have functioned if needed. The standby shutdown facility is designed to be used for reactor cooling during certain accident scenarios, including fires and severe storms where other cooling systems might be unavailable or inoperable.

On November 16, 2011, a regulatory conference was held to discuss the issue. Duke Energy argued that the breaker problem was, at worst, of low to moderate safety significance and did not represent a current performance issue. NRC disagrees, finding the issue to be of substantial safety significance.

NRC staff will obtain additional information to determine whether the breaker problem represents a current performance issue. After reviewing the information, NRC will notify Duke of this determination and the associated regulatory response. Duke Energy has 30 days to respond to the NRC's letter detailing the findings.

The final significance letter issued to Duke Energy is available on NRC's web site at www.nrc.gov/reading-rm/adams.html using accession number ML11340A139.

Central Compact/State of Louisiana

Inspection Finding Issued re Waterford Nuclear Plant

In mid-November 2011, the U.S. Nuclear Regulatory Commission announced its determination that an inspection finding at the Waterford 3 nuclear plant involving unplanned radiation exposure to workers is of "white" or low to moderate safety significance. NRC evaluates performance at plants with a color-coded process that classifies regulatory findings as green, white, yellow, or red in order of increasing significance. The Waterford facility—which is operated by Entergy—is located 25 miles west of New Orleans, Louisiana.

"This finding was caused by the licensee's failure to use effective engineering controls prior to conducting work during a refueling outage," said Region IV Administrator Elmo Collins. "The NRC will determine the appropriate follow-up actions to ensure this issue is being addressed, including additional inspections."

In 2009, during a refueling outage, officials failed to properly contain highly radioactive cooling water from leaking onto work areas, resulting in unplanned radiation doses to workers. Although the radiological doses the workers received were below regulatory limits, NRC regulations require that exposures be limited to As Low As Reasonably Achievable (ALARA).

The issue was identified during an NRC inspection in the spring of 2010 to review the effectiveness of radiological control practices during the previous refueling outage. NRC staff held a regulatory conference with Entergy officials on October 3, during which licensee representatives discussed the inspection finding.

The NRC inspection report is available at http://www.nrc.gov/reading-rm/adams.html using accession number ML112360693.

Midwest Compact/State of Ohio

NRC Concludes Davis-Besse Safe to Restart

Issues Confirmatory Action Letter

On December 2, 2011, the U.S. Nuclear Regulatory Commission announced its determination that the operators of the Davis-Besse nuclear power plant have provided reasonable assurance that the shield building is capable of performing its safety functions and that the utility can proceed with restarting the plant. FirstEnergy Nuclear Operating Corp. (FENOC) operates the plant, which is located in Oak Harbor, Ohio—approximately 40 miles southeast of Toledo.

Background

On October 10, 2011, FENOC informed NRC that its workers had identified cracks in the shield building while conducting work to replace the Davis-Besse reactor vessel head.

The shield building is a 2.5-foot thick reinforced concrete building that surrounds a 1.5-inch thick steel containment vessel that encloses the reactor. The two buildings are separated by a 4.5-foot space.

NRC Assessment and Confirmatory Action Letter

NRC's independent assessment evaluated a wide range of information, such as technical details

ranging from the size of the cracks, the utility's sampling and testing of the concrete in the building to determine the extent of the cracks, and its structural analysis.

However, NRC has issued a Confirmatory Action Letter (CAL) that details and confirms FENOC's agreement to take certain actions to monitor and ensure the cracks in the shield building continue to not adversely impact safety going forward. NRC will review and evaluate FENOC's actions in response to the CAL in order to make sure they are thorough and complete.

FENOC Commitments

FENOC's commitments to NRC include:

- determine and provide the root-cause of the cracks in the shielding building, corrective actions, and develop a long-term monitoring program;
- select multiple areas in the shield building that have no cracks but are adjacent to known cracks to determine whether the area of the cracks has spread; and,
- perform additional analysis in known cracked areas to determine whether the width of the cracks has increased.

Even though NRC has concluded that the shield building can perform its safety functions, NRC will continue to inspect whether the shield building in its current condition meets all design requirements in the plant's license.

Failure to meet the commitments in the CAL may result in additional regulatory action if the utility does not provide reasonable assurance that the NRC can rely on FENOC to meet the agency's requirements and protect public health and safety.

NRC will issue an inspection report documenting its review of this issue and the agency's conclusions within 45 days of completion of the inspection.

Northwest Compact/State of Idaho

Disposal of LLW at US Ecology's Idaho Facility Approved

On October 31, 2011, the U.S. Nuclear Regulatory Commission announced that the agency has approved a request by Westinghouse Electric Co. (WEC) to dispose of low-level waste from decommissioning its former Hematite nuclear fuel fabrication facility at the US Ecology Idaho Inc. facility near Grand View, Idaho. The former Hematite facility is located in Festus, Missouri.

Westinghouse had requested authorization under 10 CFR Part 20.2002 to dispose of about 30,000 cubic yards of low-level radioactive Waste—primarily soil and debris containing source, byproduct and special nuclear Material—at US Ecology's site, which is regulated by Idaho and is not licensed by the NRC. WEC also requested an exemption from NRC regulations requiring disposal of the waste at an NRC-licensed facility.

On October 24, 2011, NRC published an environmental assessment in the *Federal Register*. In the assessment, NRC issued a finding of no significant impact, concluding that there would be no significant difference in environmental impacts resulting from disposal at US Ecology or an NRC-licensed low-level waste disposal site. The assessment also analyzed the "no-action alternative," which would leave the waste in place and require Westinghouse to maintain environmental monitoring and engineered controls to ensure the safety and security of the facility.

The waste covered by Westinghouse's license amendment request will be generated as part of decommissioning activities under a decommissioning plan approved by the NRC on

October 13, 2011. The plan includes digging up 40 unlined burial pits and soil underneath site buildings.

On May 21, 2009, Westinghouse submitted its license amendment request. NRC held a public meeting in Grand View, Idaho on July 28, 2009. The agency then published a draft environmental assessment for public comment on April 25, 2011.

For additional information about the Hematite facility, please go to the NRC's web site at www.nrc.gov.

Northwest Compact/State of Utah

Comment Period Opens re Energy*Solutions* License Amendment

The Utah Department of Environmental Quality, Division of Radiation Control (DRC) is requesting public comment regarding an initial decision by the Executive Secretary of the Utah Radiation Control Board to amend Energy*Solutions* low-level radioactive waste disposal license (RML UT2300249).

Submitting Comments

A thirty-day public comment period commenced on December 12, 2011 by publication of notice in the *Salt Lake Tribune*, the *Deseret News*, and the *Tooele County Transcript-Bulletin*.

Written comments will be accepted if received by the end of business on January 11, 2012.

Written comments may be directed to the Utah Division of Radiation Control, 195 North 1950 West, P.O. Box 144850, Salt Lake City, UT 84114-4850, or by email to rlundberg@utah.gov. All comments received within the comment period will be considered for inclusion in the final modified License.

License Information

The proposed License amendment makes changes to License Conditions 10.E and 85.C.

Specific changes include the following:

- Language has been added to License Condition 10.E to authorize sealed sources used for purposes identified in License Condition 9.I and 9.J to be stored and used on all property owned by the Licensee at their Clive facility. The property is located in Sections 29, 32 and parts of Sections 28 and 33 in Township 1 South, Range 11 West and parts of Sections 4, 5, and 6 Township 2 South Range 11 West, Salt Lake Base Meridian (SLBM).

- The language in License Condition 85.C was removed because the language is required by rule R313-19-34(9) and replaced by the word *Reserved.*

- Several grammatical and formatting errors were corrected throughout the RML.

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

Utah Department of Environmental Quality
Division of Radiation Control
Multi Agency State Office Building/Third Floor
195 North 1950 West
Salt Lake City, Utah 84114-4850

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

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

Utah DEQ seeks further study of SEMPRASAFE

On December 12, 2011, the Division of Radiation Control of the State of Utah announced that it has requested Energy*Solutions* to update its performance assessment on its "SempraSafe" proposal before it can dispose of more than 40,000 cubic feet a year of this waste.

According to the announcement, this action is necessary due to new provisions to a rule that the Radiation Control Board adopted earlier this year that requires further analysis on certain types of wastes that may fall within what the U.S. Nuclear Regulatory Commission considers "large-scale blending operations."

A public comment period will be held in January. For additional information, please see the letter to EnergySolutions and the press release at http://www.deq.utah.gov/Issues/energysolutions/index.htm.

Background

Energy*Solutions* is seeking approval to dispose of waste produced by Studsvik's facility in Tennessee. The SempraSafe process is a joint venture between Energy*Solutions* and Studsvik to process U.S.-generated low-level radioactive ion-exchange resins from nuclear power plants through Studsvik's THOR® process. This process treats the ion-exchange resins using a thermal process in order to treat the organic material, creating a residue containing carbon and metal oxides. The residue is more physically stable after the treated process. It is then placed in containers for shipment and disposal at Energy*Solutions'* Clive facility in Tooele County, Utah.

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

Comments Sought re Proposed Utah Rule Changes

The Utah Radiation Control Board is soliciting comments on proposed rule changes involving the following:

- R313-17, *Administrative Procedures*;
- R313-22-75, *Special Requirements for a Specific License to Manufacture, Assemble, Repair, or Distribute Commodities, Products, or Devices Which Contain Radioactive Material*; and,
- R313-36, *Special Requirements for Industrial Radiographic Operations*.

The proposed rules are available for public review and to be copied between the hours of 8:00 a.m. to 5:00 p.m., Monday through Friday, at the following address:

Multi Agency State Office Building
Division of Radiation Control
195 North 1950 West
Salt Lake City, Utah 84116

Information is also available online at the following websites:

- R313-17: http://www.rules.utah.gov/publicat/bulletin/2011/20111201/35416.htm
- R313-22-75: http://www.rules.utah.gov/publicat/bulletin/2011/20111201/35417.htm
- R313-36: http://www.rules.utah.gov/publicat/bulletin/2011/20111201/35418.htm

Written comments must be received no later than 5:00 p.m. on January 3, 2012, and should be addressed to Rusty Lundberg, Executive Secretary, at the above address.

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

Utah Radiation Control Board Hosts Meeting

The Utah Radiation Control Board held a regularly scheduled meeting on Tuesday, November 8, 2011. The meeting—which was open to the public—was held in Conference Room 1015 of the Multi Agency State Office Building at 195 North 1950 West in Salt Lake City, Utah. It was scheduled from 3:00 pm to 5:00 pm.

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

I. Minutes (Board Action)
   a. Approval of the Minutes from the September 13, 2011 Board Meeting

II. Introduction of new Radiation Control staff (Board Information)

III. Administrative Rules – proposed changes for public comment (Board Action)
   a. R313-17, Administrative Procedures
   b. R313-22, Specific Licenses; R313-36
   c. Special Requirements for Industrial Radiographic Operations

IV. Radioactive Materials Licensing/Inspection

V. X-Ray Registration/Inspection

VI. Radioactive Waste Disposal
   a. Energy*Solutions*
      i. Financial Assurance/Perpetual Care – Five-year Update Report to Legislature per UCA §19-1-307 (Board Information)
      ii. Depleted Uranium Performance Assessment Status (Board Information)
      iii. SempraSafe Status (Board Information)

VII. Uranium Mill Licensing and Inspection
   a. Denison Mines – License Renewal Update (Board Information)
   b. Uranium One – License Extension (Board Information)

VIII. Other Division Issues (Board Information)
   a. Division Activities Report
   b. Nuclear Regulatory Commission – Activity Update
      i. Integrated Materials Performance Evaluation Program (IMPEP) – Draft Report ofNRC Evaluation of DRC Agreement State Programs
      ii. Revised Concentration Averaging

IX. Public Comment

X. The Next Scheduled Board Meeting: December 13, 2011 (Tuesday), 3:00 p.m.

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

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

The Board canceled its December meeting. The next Board meeting is scheduled to take place from 3:00 pm to 5:00 pm on January 10, 2012. The meeting will be held in Conference Room 1015 of the Multi-Agency State Office Building at 195 North 1950 West in Salt Lake City, Utah.

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

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

Comment Period Extended re White Mesa License Renewal

In early December 2011, the Utah Division of Radiation Control (UDRC) announced another extension of the public comment period regarding a proposal to renew the existing Radioactive Materials License Number UT 1900479 for the Denison Mines, White Mesa Uranium Mill facility located near Blanding Utah.

Written public comments will now be received until 5:00 pm on Wednesday, December 21, 2011. Written comments may be directed to Rusty Lundberg, Utah Division of Radiation Control, P.O. 144850, Salt Lake City, UT 84114-4850, or by email at rlundberg@utah.gov. All comments received will be considered in the formulation of final determinations to be imposed on the renewed License.

The draft Safety Evaluation Report and draft revised License are available at http://www.radiationcontrol.utah.gov/.

For additional information, please contact John Hultquist of the Utah Department of Environmental Quality at (801) 536-4263.

Comment Extension Request for Utah Uranium Mill Facility

In late October 2011, the Utah Department of Environmental Quality (DEQ) Division of Radiation Control (DRC), announced the solicitation of comments on its proposal to grant an extension to the existing Radioactive Material License for the Uranium One America's Inc. Shootaring Canyon Uranium Mill Facility, located near the town of Ticaboo, Utah.

This proposed extension is done under the authority of the Utah Radiation Control Act, Section 19-3-108, and the Uranium Mills and Source Material Mill Tailings Disposal Facility Requirements in the Utah Administrative Code (UAC) R313-24.

Background

The DRC originally issued a License to Plateau Resources Ltd. (previous owner of the Shootaring Canyon Uranium Mill Facility) when the DRC

became an Agreement State for regulatory authority in August, 2004 over the possession and use of 11e.(2) byproduct material (uranium mill tailings) including the facilities that generate such material. Later, in January 2007, Plateau Resources Ltd. submitted a Notice of Change of Control and Ownership request to the DRC. In May, 2007 the name and ownership of the mill and license was executed by the Executive Secretary of the Utah Radiation Control Board.

Proposed Action

On June 27, 2011, Uranium One submitted an extension request regarding RML UT090048. Based on DRC's review of this request, the Executive Secretary has preliminarily decided to agree to a two-year extension. In addition to this two-year extension, the licensee is required to submit an updated reclamation plan, operating procedures, and training records. A Statement of Basis has been prepared by the DRC to explain the details behind the revised draft license.

Comment Period

A 30-day public comment period commenced on Monday, October 24, 2011. On that date, a public notice was published in the *Salt Lake Tribune* and the *Wayne and Garfield County Insider*, as well as on the DRC web page. The public comment period will end at 5:00 p.m. on Friday, November 25, 2011.

Comments should be submitted to the Division of Radiation Control, 195 N. 1950 W. Salt Lake City, Utah 84116, or by email to rlundberg@utah.gov on or before November 25, 2011.

Southeast Compact/State of Florida

Meeting Held re Crystal River Emergency Plan

On November 7, 2011, the U.S. Nuclear Regulatory Commission held a meeting in Atlanta with officials of Progress Energy, operators of the Crystal River nuclear plant, to discuss an inspection finding related to the company's emergency action classifications for the plant.

The purpose of the meeting, which was open to observation by the public, was to discuss the significance of a preliminary white finding related to Crystal River plant radiation monitors that were unable to provide accurate information for plant officials to make emergency classification decisions. NRC evaluates performance at plants with a color-coded process that classifies regulatory findings as green, white, yellow, or red in order of increasing significance. A white finding means the issue is considered to have a low to moderate impact on plant safety.

No decision on NRC actions was made at the meeting. Instead, NRC officials will review the information presented by plant officials and make a decision later on appropriate regulatory action.

The Crystal River plant is located near Crystal River, Florida—approximately 80 miles north of Tampa.

For additional information, the meeting notice and an inspection report are available in ADAMS via the NRC web site at www.nrc.gov using accession number ML110610641.

Southeast Compact/State of Tennessee

Meeting Held re Watts Bar Nuclear Unit 2 Construction

On November 8, 2011, the U.S. Nuclear Regulatory Commission hosted a public meeting in Athens, Tennessee to discuss the status of construction at the Watts Bar nuclear plant's second unit.

The meeting began with a presentation by NRC staff on the Unit 2 construction schedule, including major milestones and potential challenges. After the business portion of the meeting, NRC staff remained available to answer questions from members of the public.

The Watts Bar plant is located near Spring City, Tennessee—approximately 60 miles southwest of Knoxville. NRC extended the construction permit for Watts Bar Unit 2 in 2008. The plant's operator, the Tennessee Valley Authority (TVA), suspended construction of the unit in 1985. In August 2007, TVA decided to complete the project. TVA, which has been operating Unit 1 at the site since 1996, plans to complete construction on Unit 2 in 2013.

Southeast Compact/Commonwealth of Virginia

NRC Approves Restart of North Anna Reactors

On November 11, 2011, the U.S. Nuclear Regulatory Commission announced that—after careful analysis of inspection findings and related information—the agency has concluded that Dominion Generation's North Anna Unit 1 and 2 reactors can be restarted. The North Anna reactors have been shut down since August 23, 2011. On that date, a magnitude 5.8 earthquake occurred about 11 miles from the plant, which is located in Louisa, Virginia.

"The earthquake shook the reactors more strongly than the plant's design anticipated, so Dominion had to prove to us that the quake caused no functional damage to the reactors' safety systems," said Eric Leeds, Director of the NRC's Office of Nuclear Reactor Regulation. "We've asked Dominion dozens of detailed questions, and our experts have examined Dominion's answers as well as information from our own inspections. We're satisfied the plant meets our requirements to restart safely, and we'll monitor Dominion's ongoing tests and inspections during startup of both reactors."

NRC issued Dominion a letter describing the staff's review, which started with existing guidance for determining a reactor's response to an earthquake. The staff used more recent experience, including insights learned from a reactor site in Japan damaged by a 2007 earthquake, in asking Dominion additional questions regarding proper examination of technical areas that included:

- piping systems, including buried segments;
- nuclear fuel assemblies;
- steam generators;
- pumps and valves; and,

- emergency diesel generators.

NRC's independent actions included an Augmented Inspection Team (AIT) that examined the plant shortly after the quake, as well as a restart readiness inspection in mid-October. Both Dominion and NRC's results showed only minor damage that did not affect North Anna's safety systems.

On September 8, 2011, NRC held a public meeting at the agency's headquarters in Rockville, Maryland regarding Dominion's initial assessment. On October 3, 2011, NRC held public meetings near the plant regarding the AIT's findings. On October 21, 2011, NRC staff briefed the Commission regarding the plant's response to the earthquake. On November 1, 2011, additional public meetings were held near the plant regarding the restart readiness inspection findings and the staff's technical review.

NRC has issued Dominion a separate letter documenting the company's commitment to several additional quake-related actions, including:

- updating North Anna's Final Safety Analysis Report to incorporate information from the quake and subsequent analysis;
- additional characterization of the fault responsible for the August 23, 2011 quake, as well as any special ground motion effects at North Anna;
- re-evaluating plant equipment (including an assessment of potential improvements) identified in earlier seismic reviews;
- developing any needed inspections or evaluations for components within the North Anna reactor vessels; and,
- permanently updating seismic monitoring equipment for the North Anna reactors and dry-cask spent fuel storage facility.

The NRC staff's letters to Dominion, as well as its technical evaluation, will be available on the NRC's Virginia quake Web page at www.nrc.gov.

Texas Compact

Texas Compact Commission Holds Various Meetings

In late 2011, the Texas Low-Level Radioactive Waste Disposal Compact Commission (the "Commission") held various meetings as follows:

Regular Commission Meeting

The full Commission met in Austin, Texas on November 9, 2011. The following items, among others, were on the agenda:

- call to order, roll call, and determination of quorum;
- introduction of Commissioners, elected officials and guests;
- public comment of the Commission's Bylaws;
- discussion and possible action on letters of appreciation to outgoing Texas Commissioners and to the Vermont Commissioners who previously served on the Commission;
- discussion and possible action on pending petitions for export;
- Chairman's report on Commission activities since September 1, 2011;
- presentation of site status report and outlook from Waste Control Specialists LLC (WCS);
- consideration of WCS' petition for adoption of rules under 31 T.A.C. Section 675.23 related to the importation of waste from a non-compact generator for disposal;
- presentation from Advocates for Responsible Disposal in Texas concerning compact site use plans and issues;
- site status report from the Texas Commission on Environmental Quality (TCEQ) including discussion of remaining issues to be resolved;
- discussion and possible action on scheduling and establishing the framework for a workshop to be held in Austin, Texas to consider (i) the ramifications of actions taken

by the Texas Legislature in 2011 and (ii) the imminent opening of the disposal site (see below for additional information);
- discussion and possible action on operational matters facing the Commission including fiscal matters; arrangements for the contracting or hiring of personnel; office space; telephone, mail, and Internet services; review of existing contractual arrangements; maintenance of records; minutes; future meeting locations; bonding with those with access to Commission funds; preparation of Commission reports; assignment of Committee membership; and other matters as necessary for operations;
- discussion of and possible action on amendments to the Commission's Bylaws adopted to be effective on September 1, 2011; and,
- agenda items, date and location for next meeting.

The agenda included an opportunity for public comment.

Meeting re Import/Export Issues

On November 22, 2011, the Commission held a videoconference meeting on, among other things, issues related to the import and export of low-level radioactive waste. The agenda for the November 22 meeting was as follows:

- call to order
- determination of quorum
- introductions
- work session on Commission rules as follows:
  - required changes to existing Compact Commission rules related to importation of waste from non-compact locations for disposal on the Compact disposal site in Andrews County, Texas resulting from SB 1504 and SB 1605 of the Texas Legislature's 82nd regular session;
  - response to Petition for Rulemaking submitted by Waste Control Specialists, LLC;
  - requirements for and forms for acceptance of petitions for acceptance of out of compact generated waste for disposal;
  - rules related to procedures to be used for approval of waste generated in non compact party locations when such waste is imported for disposal at the Compact facility;
  - requirements to be contained in agreements for importation for disposal of out of compact generated waste;
  - requirements for forms of Agreements to be executed for importation for disposal of out of compact generated waste;
  - any required changes in existing Compact Commission rules related to export of waste for processing with return to the Compact site for disposal;
  - whether there should be some priority given to particular types of waste or generators of waste (such as sealed sources);
  - questions about who should or may be parties to any import agreements;
  - issues related to export of waste for out-of-compact disposal in the context of anticipated revenue to the operator, Andrews County, and the State when balanced with the need to have capacity reserved for in-Compact generators during the operating life of the site;
  - the need for rules dealing with importation and export of waste for management;
  - discussion of procedures related to export petitions; and,
  - any other subjects deemed appropriate.

Meeting of Rules Committee

At 10:00 am on November 30, 2011, the Commission's Rules Committee gathered in a

work/drafting session in Room 1206, Building F (12100 Park 35 Circle) on the campus of the Texas Commission on Environmental Quality. The Committee's primary focus was on drafting changes and additions to the Commission's existing rules that are necessary or appropriate with respect to actions of the 82nd Texas Legislature. The Commission's existing rules may be found in Title 31, Part 21, Chapter 675, Texas Administrative Code.

According to the official announcement, the public was invited to attend and observe this work/drafting session, but the Committee did not intend to receive public testimony or comments. "The members of the Committee heard extensive comments with regard to the subject matter of its work/drafting session at the Work Session conducted by the Commission on November 22, 2011," stated the announcement. "The Committee's goal is to develop a draft rule or rules on which it will conduct an open forum to receive public comment prior to submitting a draft rule or rules to be considered for publication in the *Texas Register* at a meeting anticipated to be held by the Commission in early January 2012."

The following Commissioners are members of the Committee: Milton Lee II, Chair; John Salsman; Richard H. Saudek, and Robert C. Wilson. Saudek participated by telephone.

Additional Meetings

The Commission has posted announcements regarding the following meetings on its web site:

- Rules Committee meeting, December 12, 2011, Noon, Room 1206, Building F, 12100 Park 35 Circle, 78753 on the campus of the Texas Commission on Environmental Quality (TCEQ);
- Rules Committee meeting, December 29, 9:00 am, Room 201 S, Building E, 12100 Park 35 Circle, 78753 on the TCEQ campus; and,
- Commission meeting, January 5, 2012, 9:30 am, location to be announced, agenda to be published in the *Texas Register*.

As materials may become available, they will be posted on the Meetings table in the Public Meetings and Information Tab of the Commission's web site at www.tllrwdcc.org.

Rules Committee meetings will have capability for "dial in" to listen to the meeting. When instructions are available, they will be posted on the web site.

Agendas and materials for the meetings are posted in the Texas Register and on the Commission web site at http://www.tllrwdcc.org.

For additional information, please contact Margaret Henderson, Interim Executive Director of the Commission, at (512) 820-2930 or at margaret.henderson@tllrwdcc.org, or contact Bob Wilson, the Commission's Chairman, at (512) 820-2930 or at bob.wilson@tllrwdcc.org.

Texas Compact/State of Texas

WCS Announces Opening of Texas Compact Disposal Facility

On November 10, 2011, Waste Control Specialists LLC (WCS) announced the opening of the Texas Low-Level Radioactive Waste Disposal Compact Facility for the disposal of commercial low-level radioactive waste.

"In terms of how this nation disposes of low-level radioactive waste, the opening of the Texas Compact Disposal Facility is a game changer," said WCS' CEO William J. Lindquist. "For the first time in decades, generators have the opportunity to send their waste to a site specifically designed to permanently sequester the waste in a facility that will protect human health and the environment."

The Texas Compact Disposal Facility

The State of Texas owns the Texas Compact Disposal Facility, which is operated by WCS and located in Andrews County, Texas. The facility is currently licensed by the Texas Commission on Environmental Quality (TCEQ) to dispose of commercial Class A, B and C low-level radioactive waste from generators in the Texas Compact.

"Waste Control Specialists is proud to be a partner in providing the Texas Solution to a challenge that has gone unresolved for too long," said Lindquist. "With the Compact Facility now open, waste can be removed from temporary storage at locations throughout the state, mostly in our major urban areas, and permanently disposed of in a specially designed facility. As the operator of the facility, we are ready to begin accepting waste on behalf of the Compact and the [S]tate of Texas and we look forward to the day in the very near future when that first shipment rolls through our gates."

In its press release, WCS touts both the environmental benefits of the facility and its diversification of the Permian Basin economy. When the disposal facilities are accepting waste, according to WCS, they will create 200 jobs and produce new, non-tax revenue for both Andrews County and the State of Texas.

"As soon as disposal operations begin," said Lindquist, "Andrews County will receive 5 percent of the revenue and an additional $32 million in direct payments are projected to be made to the [S]tate of Texas in the 2012-2013 biennium."

Background

Recent Legislative Action During the most recent legislative session, the Texas Legislature passed legislation (SB 1504, SB 1605 and HB 2694) regarding, among other things, the disposal of out-of-region waste at the WCS facility and the terms of Commissioners to the Texas Low-Level Radioactive Waste Disposal Compact Commission (Commission).

Although the bills contain language pertaining to the disposal of out-of-region waste at the WCS facility, no waste may be imported to the State of Texas without approval by the Commission.

For an in-depth overview of waste-related bills as originally approved by the Senate, please see LLW Notes, March/April 2011, pp. 1, 22-28. For an in-depth overview of the House amendments and final bills, please see LLW Notes, May/June 2011, pp. 1,13-15.

Import/Export Rules On January 4, 2011, the Commission approved revised Preliminary Rules on the Exportation and Importation of Waste by a vote of five to two. (See *LLW Notes,* January/February 2010, pp. 1, 16.) Various amendments to the rules were accepted prior to passage,

including those offered by the Vermont Commissioners that clarified issues regarding the reserving of disposal capacity at the regional commercial facility for generators from the State of Vermont.

The vote followed a series of legal maneuvers by Public Citizen and the Texas Civil Rights Project that attempted to block the Commission from proceeding to act on the proposed rules. The groups initially succeeded at getting a state district court judge to enjoin the Commission from adopting, approving, or otherwise implementing the proposed rules. However, a federal district judge subsequently dismissed the case and dissolved the temporary restraining order ("TRO") after determining that neither the state nor federal court had jurisdiction to prevent the Commission from acting on the proposed rules.

A copy of the Commission's import/export rules and other related information may be found on the Commission's web site at http://www.tllrwdcc.org.

Facility Licensing On January 14, 2009, by a vote of 2 to 0, TCEQ Commissioners denied hearing requests and approved an order on WCS' Radioactive Material License Application No. R04100. (See *LLW Notes,* January/February 2009, pp. 1, 9-11.) Following the completion of condemnation proceedings and the acquisition of underlying mineral rights, TCEQ's Executive Director signed the final license on September 10, 2009. (See *LLW Notes,* September/October 2009, pp. 1, 12-13.)

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.

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.

Facility Construction On January 7, 2011, TCEQ Executive Director Mark Vickery approved the commencement of construction of the planned WCS low-level radioactive waste disposal facility "subject to all applicable license conditions, rules and statutes." (See *LLW Notes,* January/February 2010, pp. 19-21.) Earlier the same day, TCEQ and WCS executed a "Lease and Indemnification Agreement Concerning Low-Level Radioactive Waste Disposal in Andrews County, Texas." The document sets forth provisions relating to conveyance of the Compact Waste Disposal Facility to the State of Texas, including indemnification for any liability imposed on the state.

WCS is currently authorized for the processing, storage and disposal of a broad range of hazardous, toxic, and certain types of radioactive waste. The company has been processing and storing low-level radioactive waste at its facility since 1998. WCS is a wholly-owned subsidiary of Valhi, which is engaged in the titanium dioxide products, component products (security products, furniture components and performance marine components) and waste management industries.

For additional information, please contact Susan Jablonski—Director of the Radioactive Materials Division at TCEQ—at (512) 239-6466 or at sjablons@tceq.state.tx.us. You may also contact Rodney Baltzer—President of WCS—at (972) 450-4235 or at rbaltzer@valhi.net. Or, you may contact Bob Wilson, Chair of the TLLRWDCC, at (512) 820-2930 or at bob.wilson@tllrwdcc.org.

WCS Submits Supplemental Materials re Compact Disposal Rates

On November 8, 2011, the Texas Commission on Environmental Quality (TCEQ) received Waste Control Specialist's (WCS) latest supplemental application materials for disposal rates for commercial low-level radioactive waste at the Compact Waste Disposal Facility in Andrews County, Texas.

TCEQ is charged with establishing the maximum disposal rates that may be collected for the disposal of compact waste under Chapter 336, Subchapter N of the agency's rules.

The WCS application and supplements can be found on the TCEQ's web site at http://www.tceq.texas.gov/permitting/radmat/licensing/rates.

Establishing Disposal Rates

TCEQ Rules and Original Application Under TCEQ rules, disposal rates may be based on the cost of operating the disposal facility and a reasonable rate of return—including allowable expenses, the funding of local public projects, the provisions of a revenue requirement comprised of a return of and on its investments, and the payment of other required fees and expenses. Estimated volumes of the various types of low-level waste expected to be disposed at the facility are then used to determine the maximum disposal rates for each type of waste.

The original rate setting application filed by WCS also provides information for consideration by the TCEQ in the determination of an appropriate inflation adjustment, volume adjustment, extraordinary volume adjustment, and relative hazard.

Supplemental Materials WCS filed the supplemental application materials because: more than a year has passed since the company filed its original application; some costs that were originally projected are now actual, incurred costs; some additional expenses have been incurred; some information needs to be updated; and, legislation passed in 2011 clarifies some issues and raises some new ones.

The supplemental application materials state, in part, as follows:

"WCS has completed the application using the rate forms and schedules prescribed by the TCEQ to determine the revenue requirement for its first full test year, which is anticipated to start in 2012. Because the rules require initial maximum disposal rates to be established prior to the initial receipt of [low-level radioactive waste] at the Compact Waste Disposal Facility, the initial rate case is not only based on previously incurred costs and expenses of WCS but also on projections and estimates of future costs, expenses and revenues. In its application, WCS has provided explanations and supporting documents demonstrating the reasonableness of its projections and estimates. For expenses or costs that are not solely for the Compact Waste Disposal Facility, WCS has allocated the portion of the costs or expenses attributable to the Compact Waste Disposal Facility using fair and equitable allocation methodologies, which are described in its application."

Recommended Rates for Initial Year For the calculation of the test year, WCS estimated 45,000 cubic feet of low-level radioactive waste from compact generators and an additional 28,000 cubic feet of low-level radioactive waste from importation—for a total of 73,000 cubic feet of low-level radioactive waste.

Based on the volumes expected and rate revenue requirements summarized in the supplemental

application materials, the related maximum disposal rates recommended by WCS are as follows:

Rate per Cubic Foot for Initial Year:

Class A Compactable	$ 52.57
Class A Non-Compactable	157.70
Class A High Dose Rate	353.56
Class B/C Waste Routine	6,153.01
Class B/C High Activity	18,459.04

WCS is requesting that TCEQ approve the rates contained in its supplemental application materials by expedited rulemaking as the initial maximum disposal rates under section 3336.1309 of the agency's rules.

Background

Interim Disposal Rates On August 25, 2011, TCEQ announced that its Executive Director has established interim disposal rates for commercial low-level radioactive waste at the Compact Waste Disposal Facility. (See *LLW Notes,* July/August 2011, pp. 13-14.)

The Executive Director interim disposal rate establishes a base rate by volume, per cubic foot; by radioactivity, per curie; and surcharges to the base rate related to relative hazard for each waste shipment. Additionally, all waste shipments are subject to state fees.

These interim disposal rates will apply to commercial low-level radioactive waste accepted at the operational Compact Waste Disposal Facility, owned by the State of Texas and operated under license by WCS.

Senate Bill 1504, adopted by the 82nd Texas Legislature, creates the option for the TCEQ Executive Director to set interim disposal rates in advance of the formal disposal rate-setting process. (See *LLW Notes,* May/June 2011, pp. 1, 13-15.)

The interim disposal rates for the Compact Waste Disposal Facility can be found at the following link: http://www.tceq.texas.gov/permitting/radmat/licensing/executive-director-interim-disposal-rate.

Prior Filings On June 1, 2010, WCS filed an application with TCEQ to establish the maximum disposal rates for commercial low-level radioactive waste disposal at its facility in Andrews County, Texas. (See *LLW Notes,* May/June 2010, pp. 19-20.)

The filing included two alternative proposed rate schedules: one reflecting unlimited disposal for generators in the Texas Compact states of Texas and Vermont, and a second based on unlimited disposal by Texas Compact generators and limited disposal by generators from outside of the Texas Compact region.

By letter dated January 28, 2011, WCS submitted a supplemental response to TCEQ's September 1, 2010 Request for Information (RFI) regarding their proposed disposal rate application. (See *LLW Notes,* January/February 2011, pp. 21-23.) In addition, on February 22, 2011, TCEQ received corrections from WCS to their October 15, 2010 submission on the pending disposal rate application.

On March 10, 2011, TCEQ held a public meeting to take comments and provide an update on the agency's review of the pending rate setting application. TCEQ's meeting announcement stated in part as follows: "As a reminder, this public meeting is not occurring as part of the notice and opportunity for contested case hearing referenced in TCEQ rules at Title 30, Texas Administrative Code (TAC) §336.1309. The official notice for comment and opportunity for a contested case hearing will occur at the time the TCEQ Executive Director completes his review of the WCS proposed rate application and publishes a recommended disposal rate schedule."

On April 12, 2011, TCEQ sent a letter to WCS confirming receipt of the company's supplemental responses on and corrections to its pending rate setting application. (See *LLW Notes,* March/April 2011, pp. 29-31.)

Next Steps

The formal disposal rate-setting process will begin later this year when the TCEQ proposes a recommended disposal rate schedule.

The process will include public notice, consideration of public comment, and the opportunity for a contested case hearing, followed by expedited rulemaking.

For additional information, please contact TCEQ Disposal Rate Project Manager, Sage Chandrasoma, at (512) 239-6069 or at s.chandrasoma@tceq.texas.gov.

Quarterly Revenue Estimates Requested for WCS' Facility

By letter dated November 7, 2011, Texas State Representative Drew Darby requested quarterly revenue estimates from the Texas Low-Level Radioactive Waste Disposal Compact Commission (Commission) for the Waste Control Specialists LLC (WCS) disposal facility in Andrews County, Texas. Representative Darby is Chairman of the Texas House Appropriations Subcommittee on Article VI, which handles funding for the Texas Commission on Environmental Quality (TCEQ).

In his letter, Darby notes that Senate Bill 1504 sets a new surcharge for non-party compact waste that is imported into the Texas Compact Disposal Facility, which surcharges are then to be deposited into the General Revenue Dedicated Low-Level Waste Account No. 88. A probable revenue gain of $32 million in the 2012-13 biennium was indicated in the fiscal note accompanying the legislation.

Representative Darby writes that this revenue is critical for two reasons:

- it will fund the TCEQ's oversight of disposal operations at the Texas Compact Disposal Facility, and
- the revenue generated by disposal operations in fiscal year 2012 will fund the operation of the Commission beginning in fiscal year 2013.

Accordingly, Representative Darby requests quarterly estimates from the Commission for fiscal year 2012.

"Since the first quarter of FY 2012 has closed and the disposal facility is not yet operational, please provide specific quarterly revenue projections for the second, third and fourth quarters of FY 2012," writes Darby. "Also, please provide the total amount of revenue the Commission anticipates contributing to Account No. 88 during FY 2012 in accordance with SB 1504."

For additional information, please contact Margaret Henderson, Interim Executive Director of the Commission, at (512) 820-2930 or at margaret.henderson@tllrwdcc.org.

TCEQ Hosts Meeting re Waste Acceptance

On November 3, 2011, the Texas Commission on Environmental Quality (TCEQ) hosted another in the series of stakeholder discussions on waste acceptance criteria (WAC) for the Texas Low-Level Radioactive Waste Disposal Compact's commercial facility.

Waste Control Specialists LLC (WCS) is to be the operator of the commercial facility, which is owned by the State of Texas, for the disposal of low-level radioactive waste.

To facilitate discussions, there were two sessions:

Non-Utility Waste Generators' Session (8:30 am)

- Introductions (TCEQ)
- TCEQ Revised Draft WAC (TCEQ)
  - addressing operators/generators comments
- Transportation Regulations (DSHS - Richard Ratliff)
  - Draft Regulatory Guide on Transportation Requirements, DSHS Fee Collection Process

Utility Waste Generators' Session (10:30 am)

- Introductions (TCEQ)
- TCEQ Revised Draft WAC (TCEQ)
  - addressing operators/generators comments
- Transportation Regulations (DSHS - Richard Ratliff)
  - Draft Regulatory Guide on Transportation Requirements, DSHS Fee Collection Process

Both meetings will be held at the TCEQ main campus in Austin, Texas in Building E, Room 201S.For those unable to attend, a call-in number was provided.

An agenda, revised draft waste acceptance criteria, and draft forms are posted on the TCEQ's web site at: http://www.tceq.texas.gov/permitting/radmat/licensing/wcs_license_app.html.

For additional information, please contact Brad Broussard, TCEQ Project Manager, at (512) 239-6380 or at brad.broussard@tceq.texas.gov with any questions.

Commonwealth of Massachusetts

Pilgrim Cited for Finding of Low to Moderate Significance

On November 21, 2011, the U.S. Nuclear Regulatory Commission announced that the Pilgrim nuclear power plant would receive additional oversight following the finalization of a white inspection finding. The Pilgrim facility is located in Plymouth, Massachusetts.

The inspection finding involves the failure of Pilgrim control room operators to follow appropriate standards and procedures on reactivity control during a start-up of the reactor on May 10, 2011. This failure contributed to an unrecognized subcriticality, or the reactor going below power-production levels, followed by an unrecognized return to criticality and a subsequent automatic reactor scram, or shutdown. The shutdown was safely carried out.

An NRC team identified the finding during a Special Inspection initiated on May 16th at Pilgrim, which is owned and operated by Entergy Nuclear. The Special Inspection was launched in response to the May 10th event.

NRC issued Entergy a preliminary white finding in an inspection report issued in September 2011. On October 3, 2011, Entergy provided a written response disagreeing with the NRC's determination of risk associated with the event. Entergy said it had taken the reactor scram event very seriously and instituted numerous corrective actions including the completion of a case study of the event, the results of which were provided to control room operators; the retraining of control room operators on criticality operations; and, the establishment of management oversight in the control room for 100 percent of the time when the reactor is in start-up mode.

NRC, as part of its final significance determination report, answered that it believes the risk classification is appropriate when all factors—including human performance errors identified during the inspection—are factored. At a future date, NRC will perform a supplemental inspection at Pilgrim to evaluate the company's root-cause analysis of what occurred during the event and its corrective actions.

Japan Task Force

NRC Approves Prioritization of Recommendations of Japan Task Force

On December 15, 2011, the U.S. Nuclear Regulatory Commission announced the approval of the agency staff's prioritization of recommendations of the NRC's Japan Near-Term Task Force, which examined the Fukushima Dai-ichi nuclear accident in Japan.

Prioritization

Tier 1 recommendations include those that the staff determined could be implemented without unnecessary delay and for which sufficient resources are available. Tier 2 include those that cannot be initiated in the near term due to factors that include the need for further technical assessment and alignment, dependence on Tier 1 issues, or availability of critical skill sets. The staff's prioritization was provided to the Commission in staff paper SECY 11-0137.

In a Staff Requirements Memorandum (SRM) issued on December 15, 2011, the Commission directed the staff to prepare notation vote papers for its consideration when proposing orders to impose new safety requirements on the nation's nuclear power plants.

"In approving the prioritization, the Commission has taken an important next step in responding to and implementing the safety recommendations of the Task Force," said NRC Chairman Gregory Jaczko.

The Commission also directed the staff to determine whether any regulatory action is required on additional issues identified by the staff as relevant to the Fukushima Dai'ichi crisis. On one of those issues—filtration of containment vents in reactors—the Commission directed the staff to merge it with Tier 1 action on hardened vents for Mark I and Mark II reactor containments.

Under the SRM, the staff is to provide the Commission within nine months of its evaluation of the schedule and milestones, resources, and implementation challenges for the Tier 3 recommendations, those that require further staff study, or are dependent on completion of an associated short-term action.

Task Force Recommendations

NRC's Japan Task Force proposed improvements in areas ranging from loss of power to earthquakes, flooding, spent fuel pools, and venting and preparedness. The Task Force recommends that a "patchwork of regulatory requirements" developed "piece-by-piece over the decades" should be replaced with a "logical, systematic, and coherent regulatory framework" to further bolster reactor safety in the United States.

While declaring that "a sequence of events like the Fukushima accident is unlikely to occur in the United States" and that plants can be operated safely, the Task Force also recognized that "an accident involving core damage and uncontrolled release of radioactivity to the environment, even one without significant health consequences, is inherently unacceptable." Thus, the Task Force developed a comprehensive set of 12 recommendations—many with both short and long term elements—to increase safety and redefine what level of protection of public health is regarded as adequate. It also recommended additional study of some issues.

The Task Force report was given to the five members of the NRC, who are responsible for making decisions regarding the Task Force's recommendations.

For a full list of the Task Force report recommendations, please see LLW Notes, July/August 2011, pp. 1, 23-24.

Background

The Commission established the Task Force to examine the agency's regulatory requirements, programs, processes, and implementation in light of information from the accident at the Fukushima Dai-ichi nuclear plant in Japan following the earthquake and tsunami on March 11, 2011. The Task Force presented its report to the Commission on July 12, 2011.

The report proposed 12 recommendations on improving several safety-related areas. The recommendations covered areas including loss of electrical power, earthquakes, flooding, spent fuel pools, venting and preparedness.

On August 19, 2011, NRC announced that staff has been directed to complete several actions within the next 45 days in response to recommendations from the Task Force. (See *LLW Notes,* July/August 2011, pp. 1, 23-24.) On October 11, 2011, the Commission met to discuss the staff's prioritization proposal. (See *LLW Notes,* September/October 2011, pp. 23-25.)

The Commission's direction to the staff and the Task Force report are both available on the NRC web site at www.nrc.gov.

International Conference on Structural Mechanics in Reactor Technology (SMiRT)/Indian Atomic Energy Regulatory Board (AERB)

NRC Chairman Jaczko Visits India

From November 14-18, 2011, U.S. Nuclear Regulatory Commission Chairman Gregory Jaczko lead a five-person NRC delegation to visit New Delhi, Mumbai, and Chennai in India to take part in meetings with the Atomic Energy Regulatory Board (AERB), other Government of India agencies, and visit a variety of nuclear facilities. The purpose of the visit was to exchange information and share experiences on safety standards and regulation for the safe operation of nuclear power plants.

The NRC delegation visited nuclear power plants in Tarapur (Tarapur Atomic Power Station) and Chennai (Madras Atomic Power Station), and laboratories at the Bhabba Atomic Research Centre in Mumbai and the Indira Ghandi Centre for Atomic Research in Chennai. While there, the Chairman met with appropriate Indian Government officials, as well as staff of nuclear agencies and organizations.

"I look forward to the continuation and advancement of our long-term relationships with our AERB Indian counterparts and with other Indian organizations in the area of nuclear safety," said Chairman Jaczko.

Prior to the Chairman's visit, a nine-member technical delegation from NRC (including two from the Chairman's group) traveled to New Delhi to participate in the 21st International Conference on Structural Mechanics in Reactor Technology (SMiRT) that was held at the India Habitat Centre on November 6-11, 2011. The main SMiRT conference was held in New Delhi from November 6-11, followed by post-conference seminars in Mumbai and Tamil Nadu from November 14-15 on topics that included advances in seismic design of structures, innovative fast reactor design, and high temperature design reactors.

The 21stSMiRT was dedicated to the art, science and practice of nuclear structural mechanics. It featured seminars on the mechanics of materials; fracture mechanics and structural integrity; design and construction issues; safety, reliability, risk and margins; issues related to reactor operations, inspection, and maintenance; fuel cycle facilities, waste management, and decommissioning; and, the challenges of new reactors.

Advisory Committee on Medical Uses of Isotopes (ACMUI)

ACMUI Holds Teleconference Meeting

On December 15, 2011, the U.S. Nuclear Regulatory Commission's Advisory Committee on the Medical Uses of Isotopes (ACMUI) convened a teleconference meeting to discuss the committee's recommendations on proposed revisions to the Abnormal Occurrence medical event criteria.

The ACMUI advises NRC on policy and technical issues that arise in the regulation of the medical use of radioactive materials.

The meeting summary will be available at the end of January on the ACMUI web page. The draft transcript will be available on or about January 15 on the ACMUI web page and in the NRC public document room.

For additional information, please see the ACMUI web page on the NRC's web site at www.nrc.gov.

(Continued from page 1)

- The use of stylized scenarios should be replaced with an approach that takes into consideration site specific geohydrological features, depth of burial, waste characteristics, engineered disposal features, and their degradation over time.

- If the staff believes that 10 CFR Part 61 constrains the use of a more risk-informed, performance-based treatment of intruder scenarios, then ACRS recommends using the same scenarios used to develop 10 CFR Part 61 without creating additional unrealistic scenarios to determine allowable concentrations or amounts of low-level radioactive waste to be disposed.

Discussion

In its December 2011, ACRS provides comments on four main topics in the draft CA BTP including guidance on alternative approaches, guidance on blending of low-level radioactive waste, guidance on encapsulation of low-level radioactive waste, and updates to the intruder scenarios.

Guidance on Alternative Approaches: ACRS notes that the draft CA BTP removes the restrictive Alternative Provision section from the 1995 version and provides applicable "look up" guidance for users of the draft CA BTP on alternative ways to address site-specific considerations to meet the draft CA BTP provisions. According to ACRS, NRC staff stated that they will include additional examples to demonstrate the use of the Alternative Approaches section of the draft CA BTP including factors such as likelihood of intrusion, large component disposal, and encapsulation of sealed sources. ACRS states in its letter that this approach will provide greater flexibility than the guidance in the 1995 version.

Guidance on Blending: The draft CA BTP provides a method to average radionuclide concentrations of radioactive materials contained in packages of "blended" LLRW to assess conformance with the protection requirements for a hypothetical inadvertent intruder. ACRS believes that the draft CA BTP removes several unnecessary conservatisms from its 1995 version. For example, the draft CA BTP removes the factor of 10 constraint for blending wastes and the exceptions previously in place for homogeneous wastes.

The draft CA BTP also provides guidance by which to evaluate radioactive material homogeneity in wastes for the purpose of protecting inadvertent intruders (e.g., resident farmers, homesteaders, and others) from exposure

scenarios consistent with those evaluated during the promulgation of 10 CFR Part 61. In this regard, ACRS finds that NRC staff's approach is consistent with Commission direction to revise the CA BTP regarding the circumstances under which large-scale blending would be acceptable.

The ACRS letter states that blending involves mixing of potentially large volumes of multiple classes of waste which when aggregated will be classified as a lower class of waste. This process is intended to create blended wastes that will meet Class A requirements. According to ACRS, however, care must be taken to assure that the final waste product will have appropriate physical and chemical characteristics so that the waste will meet all requirements for the entire period of performance. As an example, ACRS points out that the blending resins of different forms may create or result in a final waste form with undesirable chemical characteristics, such as gas generation, that are not intended, or physical characteristics that cause the waste form to behave in undesirable ways.

According to ACRS, blending waste forms to achieve class reduction and or volume reduction should be preceded by tests or other actions to ensure that the final waste form has the required chemical and physical characteristics.

Guidance on Encapsulation: The draft CA BTP provides additional guidance on encapsulation of wastes, specifically to address disposal of sealed sources. The limits on the disposal of these sources are driven by the consideration of inadvertent intruders.

The December 2011 letter states ACRS' belief that the scenarios used to develop the limits on the encapsulation of sealed sources in the draft CA BTP are overly conservative. They are based on postulated future intrusion by persons with no knowledge regarding the disposed radioactive materials. These intruders are assumed to be unable to recognize or determine that they are on a radioactive waste disposal facility. ACRS finds, however, that they do not take into consideration important elements such as the depth of burial.

In addition, ACRS finds that the scenarios are inconsistent with the scenarios used in the development of 10 CFR Part 61, which ACRS believes are also overly conservative.

In regards to the inability of intruders to recognize the presence of a radioactive waste disposal site, ACRS points out that in the Environmental Impact Statement (EIS) supporting 10 CFR Part 61, the intruder scenario most relevant to the encapsulated source is intruder discovery (exposure to an individual who digs into the waste, realizes something is wrong and ceases his excavation activities). ACRS notes, however, that the scenario used to calculate the limits in the draft CA BTP—where an item of waste, such as a sealed source, is discovered and carried away—was not considered likely in the EIS.

ACRS states that it is possible to consider new waste streams using the same assumptions as in 10 CFR Part 61 without creating additional stylized scenarios to determine allowable concentrations or amounts of disposed low-level radioactive waste. Accordingly, if NRC staff believes 10 CFR Part 61 constrains the use of a more risk-informed, performance-based treatment of intruder scenarios in the draft CA BTP, then ACRS recommends using the same scenarios used to develop 10 CFR Part 61.

Improving the Intruder Scenarios Evaluated in the Draft CA BTP: The ACRS letter states that the EIS supporting 10 CFR Part 61 considered three intrusion events. The events were characterized as "intruder construction (exposure to workers constructing a house at the site), intruder agriculture (exposure to individuals living in the house constructed and consuming food grown onsite), and intruder discovery (exposure to an individual who digs into the waste, realizes something is wrong and ceases his excavation activities)."

ACRS believes, however, that the use of a limited number of predefined stylized scenarios that presume an intruder would make direct contact with buried wastes does not realistically account for site-specific features that affect either the likelihood or the consequences of an intrusion event. As a result, ACRS recommends that these scenarios should be replaced with an approach that takes into consideration site-specific geohydrological features, depth of burial, waste characteristics, engineered disposal features, and their degradation over time.

In addition, ACRS finds that the approach to developing intruder scenarios in the draft CA BTP does not account for improvements in management practices made since promulgation of 10 CFR Part 61 that make intrusion less likely. According to ACRS, current disposal facilities have collected large perpetual care funds that provide for monitoring and maintenance over much longer periods of time than originally assumed. In addition, ACRS states that record-keeping and information management technology have improved to the extent that there is little chance of a complete loss of information about the locations of low-level radioactive waste disposal facilities. ACRS believes that these institutional controls make inadvertent intrusion very unlikely.

In addition, ACRS finds that the draft CA BTP does not account properly for radioactive decay and the distribution of the remaining radioactive materials in the disposal facility as a function of time. After 300 years, states ACRS, most radionuclides in a typical low-level radioactive waste inventory would have decayed to insignificant levels, leaving behind an inventory containing mainly U-238, C-14, I-129, Tc-99, and Ni-63. Accordingly, ACRS recommends that guidance considering radioactive decay should be part of the draft CA BTP.

The ACRS letter acknowledges that NRC staff explained that the current institutional control requirements of the rule (§61.59) constrain their assumptions in conducting the analysis that supports the draft CA BTP. Specifically, the analysis supporting 10 CFR Part 61 bounds the calculation for protecting the intruder by assuming institutional controls are not relied on at the end of the control period. The EIS supporting 10 CFR Part 61 states that the "NRC does not assume that the government fails at the end of the 100-year institutional control period, but rather that the government ceases active control over access to the site. The rule does not presuppose collapse or failure of government, but rather places a restriction on the character of radioactive material disposable by near surface disposal that serves to relieve government of the burden of actively excluding persons from the site in perpetuity."

Accordingly, if NRC staff believes 10 CFR Part 61 constrains the use of a more risk-informed, performance-based treatment of intruder scenarios in the draft CA BTP, then ACRS recommends using the same scenarios used to develop 10 CFR Part 61.

Additional Considerations Regarding Inadvertent Intrusion: In its December 2011 letter, ACRS recommends that the relative importance of protection of the intruder versus the other performance objectives should be reconsidered. In this regard, ACRS believes that the protection of the intruder as described in the 10 CFR Part 61 performance objective (§61.42) which states, "Design, operation, and closure of the land disposal facility must ensure protection of any individual inadvertently intruding into the disposal site and occupying the site or contacting the waste at any time after active institutional controls over the disposal site are removed," should not overshadow the other performance objectives of 10 CFR Part 61 in any analyses conducted to support implementation of the rule. According to ACRS, these include:

- protection of the general population from release of the radioactive materials over the period of performance (§61.41);

- protection of workers from unnecessary occupational exposure (§61.43); and,
- stability of the disposal site after closure (§61.44).

ACRS references its report on 10 CFR Part 61 rulemaking dated September 22, 2011 to reiterate its position that the use of overly conservative scenarios "for inadvertent intrusion into presumably abandoned, unmarked, and unsecured [low-level radioactive waste] disposal facilities can change the focus of the facility design from the protection of the health and safety of the public during the period of operation of the facility (and a reasonable period thereafter), to the protection of hypothetical intruders many thousands of years in the future."

Background

On April 7, 2010, NRC staff transmitted SECY-10-0043, "Blending of Low-Level Radioactive Waste," with a recommendation that the Commission adopt a risk-informed, performance-based approach to low-level radioactive waste blending. (See *LLW Notes,* March/April 2010, pp. 1, 25-29.) In a Staff Requirements Memorandum (SRM) dated October 13, 2010, the Commission approved the staff's plan and directed that the staff develop a draft CA BTP addressing the circumstances under which large-scale blending would be acceptable. (See *LLW Notes,* September/October 2010, pp. 1, 27-28.) This SRM also directed the ACRS to review the draft CA BTP prior to being issued for public comment.

ACRS reviewed the document during its recent meeting on December 1-3, 2011. (See *LLW Forum* News Flash titled, "NRC Staff to Meet with ACRS re CA BTP," November 16, 2011.) In addition, ACRS' Radiation Protection and Nuclear Materials Subcommittee also reviewed the draft CA BTP and associated issues on October 4, 2011. These meetings included discussions with staff of the NRC and the U.S. Department of Energy.

The draft CA BTP can be found on the NRC's public web site at www.nrc.gov under Agencywide Documents Access and Management System (ADAMS) at ML112061191.

NRC Staff Meets with ACRS re CA BTP

On December 1, 2011, staff of the U.S. Nuclear Regulatory Commission held a public meeting with the Advisory Committee on Reactor Safeguards (ACRS) full committee to discuss the Draft Branch Technical Position on Concentration Averaging and Encapsulation (CA BTP).

The meeting, which took place from 10:45 am – 12:45 pm, was held at the NRC headquarters in Rockville, Maryland.

For additional information, please contact Derek Widmayer of the NRC at (301) 415-7366 or at Derek.Widmayer@nrc.gov.

Background

NRC requires that radioactive waste proposed for near-surface disposal must be classified, based on its hazard to the intruder, in order to protect individuals from inadvertent intrusion into a waste disposal facility. "Licensing Requirements for Land Disposal of Radioactive Waste," 10 CFR Part 61, establishes a waste classification system based on the classification of specific radionuclides contained in the waste. 10 CFR 61.55(a)(8) states in part that, "The concentration of a radionuclide [in waste] may be averaged over the volume of the waste, or weight of the waste if the units [on the volumes tabulated in the concentration tables] are expressed as nanocuries per gram."

In May 1983, NRC initially developed a technical position on radioactive waste classification as contained in ADAMS at ML033630755. That

technical position paper described overall procedures acceptable to NRC staff that could be used by licensees to determine the presence and concentrations of the radionuclides listed in 10 CFR 61.55, and thereby classify waste for near-surface disposal.

NRC published the CA BTP in 1995, expanding and further defining section C.3 of the 1983 BTP dealing with concentration averaging. As part of its 2007 strategic assessment of the low-level radioactive waste program, NRC staff informed the Commission of its plans to update the CA BTP. (See SECY-07-0180.) Staff classified the planned revision, which would incorporate risk-informed approaches, as a high-priority task.

Subsequently, in 2010, staff responded to a request from the Commission to provide options for the agency's policy on blending—one of eight topic areas in the CA BTP. (See SECY-10-0043.) The Commission ultimately adopted the staff's recommendation to revise the blending position contained in the CA BTP to be risk-informed and performance-based. "With this direction from the Commission," stated the NRC in an associated *Federal Register* notice, "the staff is initiating revisions to the entire CA BTP to include the Commission's new position on blending, as well as to consider risk-informed, performance-based approaches for the remainder of the CA BTP."

On January 26, 2011, NRC issued a *Federal Register* notice announcing that the agency would hold a public meeting to solicit input on issues associated with revising the CA BTP. In addition, the agency accepted written comments on issues and questions presented in the *Federal Register* notice. The comment period closed on April 25, 2011. Subsequently, NRC has held various workshops and public meetings on the CA BTP.

A copy of the January 26 *Federal Register* notice may be obtained at *http://frwebgate1.access.gpo.gov/cgi-bin/PDFgate.cgi?WAISdocID=H39GsI/0/2/0&WAISaction=retrieve.*

The draft CA BTP can be found on the NRC's public web site at www.nrc.gov under Agencywide Documents Access and Management System (ADAMS) at ML112061191.

ACRS Meets in December 2011

The U.S. Nuclear Regulatory Commission's Advisory Committee on Reactor Safeguards (ACRS) held a public meeting on December 1-3, 2011 in Rockville, Maryland.

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

- Levy County, Units 1 and 3, combined reactor license application;
- concentration averaging and encapsulation of low-level radioactive waste;
- proposed requirements for maintenance of inspections test, analysis and acceptance criteria (ITAAC) and the associated regulatory guidance for reactors; and,
- draft report on the biennial ACRS review of the NRC safety research program.

The ACRS advises the Commission, independently from the NRC staff, on safety issues related to the licensing and operation of nuclear power plants and in areas of health physics and radiation protection. Portions of ACRS meetings may be closed to discuss proprietary information, as well as organizational and personnel matters.

Complete agendas for ACRS meetings are available on the NRC web site at http://www.nrc.gov/reading-rm/doc-collections/acrs/agenda/2011/.

Atomic Safety and Licensing Board

Oral Argument Held re Proposed Ross Uranium Recovery Project

On December 20, 2011, the U.S. Nuclear Regulatory Commission's Atomic Safety and Licensing Board (ASLB) held oral arguments regarding the proposed Ross in situ leach uranium recovery project in Crook County, Wyoming. The hearing—which was held at the agency's headquarters in Rockville, Maryland—focused on petitioners' standing to intervene and the admissibility of contentions.

Srata Energy, Inc. filed its application to construct and operate the Ross facility on January 6, 2011. NRC completed its initial adequacy review and docketed the application on June 28, 2011. The Natural Resources Defense Council and Powder River Basin Resource Council jointly petitioned for a hearing, raising several environmental contentions about the application.

During the session, the ASLB and participants discussed whether the petitioners have standing to raise their concerns and whether their contentions meet the criteria for admissibility in a hearing.

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

Meeting Held re Performance at Mixed Oxide Facility

On December 15, 2011, officials of Shaw Areva MOX Services met with officials from the U.S. Nuclear Regulatory Commission to discuss the results of the Applicant Performance Review for the Mixed Oxide Fuel Fabrication Facility currently under construction at the Savannah River Site. During the meeting, which was open to the public, NRC officials were available to answer questions.

The MOX facility, which is owned by the U.S. Department of Energy's National Nuclear Security Administration, is part of an effort to make surplus weapons-grade plutonium into more proliferation-resistant forms. Converting the plutonium into MOX fuel will enable it to be used in commercial reactors to generate electricity. In the United States, only those reactors authorized by the NRC will be permitted to use MOX fuel.

The NRC review covered the period from October 1, 2010 through September 30, 2011. It found MOX facility construction activities to be acceptable. The review also determined that the construction program was being sufficiently implemented. NRC did not identify any areas needing improvement during the most recent assessment period.

The performance review letter for the MOX facility is available on the NRC web site at www.nrc.gov/reading-rm/adams.html using accession number ML11319A354.

U.S. Nuclear Regulatory Commission

NRC Seeks Comments re Risk Management in Regulatory Programs

The U.S. Nuclear Regulatory Commission is considering the development of a strategic vision to better incorporate risk management concepts into its regulatory programs. In this regard, as well as in an effort to continue the agency's longstanding goal to move toward more risk-informed, performance-based approaches in its regulatory programs, NRC Chairman Gregory Jaczko has chartered a task force headed by NRC Commissioner George Apostolakis to develop a strategic vision and options for adopting a more comprehensive and holistic risk-informed, performance-based regulatory approach that would continue to ensure the safe and secure use of nuclear material.

On November 22, 2011, as part of this initiative, the task force published a notice in the *Federal Register* seeking comments from external stakeholders on a series of questions that will provide input for the task force to consider in its work.

The deadline for submitting comments is January 6, 2012.

The Federal Register notice can be found at http://www.gpo.gov/fdsys/pkg/FR-2011-11-22/pdf/2011-30098.pdf.

Risk Management

In recent years, NRC has undertaken various initiatives to make its regulatory programs less deterministic and prescriptive and more risk-informed and performance-based. The risk-informed approach has provided NRC with the ability to make regulatory decision making more systematic, more objective, more consistent, and more transparent. In addition, it has allowed NRC to better focus its licensing and inspection efforts on the most risk significant areas and has provided flexibility in addressing technological change, thus increasing effectiveness and efficiency. However, current projections for flat or declining budgets for the foreseeable future may necessitate NRC to adjust the way it does business to continue to fulfill its mission.

Accordingly, a task force headed by Commissioner George Apostolakis is developing a strategic vision and options for adopting a more comprehensive and holistic risk-informed, performance-based regulatory approach for reactors, materials, waste, fuel cycle, and transportation that would continue to ensure the safe and secure use of nuclear material (ADAMS Accession No. ML110680621). The task force was afforded the flexibility to provide options ranging from a complement to or alternative to the existing regulatory framework. The task force is expected to complete its work by May 2012.

One of the approaches being considered by the task force is risk management, which is being widely used in various sectors—including government agencies, financial institutions and technology companies—to address the kinds of challenges the NRC faces and that the task force must address. In a 2008 report, the Government Accountability Office (GAO) stated that:

Using principles of risk management can help policymakers reach informed decisions regarding the best ways to prioritize investments in security programs so that these investments target the areas of greatest need. Broadly defined, risk management is a strategic process for helping policymakers make decisions about assessing risk, allocating finite resources, and taking actions under conditions of uncertainty.

While the GAO report was focused on homeland security issues, the task force believes that risk management concepts may represent a logical

evolution from the risk-informed, performance-based philosophy that has governed many NRC regulatory activities for more than a decade and may be particularly effective in addressing the challenges that NRC faces in the years to come. Risk management concepts and approaches vary, but generally include the following:

- identification and framing of the issue;
- identification of options;
- analysis;
- deliberation for integrated decision making;
- implementation; and,
- performance monitoring and feedback.

Risk management allows for various approaches to consideration of risk in decision making, including both quantitative and qualitative tools, which is essential in the broad range of NRC regulatory programs. It may also provide program managers with a more systematic approach to resource allocation, whether in budget formulation, response to events, or licensing decisions.

Stakeholder Input

According to NRC, this effort could not be successful without meaningful stakeholder input. Accordingly, the task force is soliciting the views of both internal and external stakeholders to assist them in developing sound and effective long-term strategies. The process of interaction with internal stakeholders is ongoing. However, the November 22 *Federal Register* notice is intended to solicit the views of external stakeholders on the options and specific actions that the NRC might undertake in moving toward a more comprehensive and holistic risk management approach for its regulatory programs.

The *Federal Register* notice includes the following questions from which the task force is seeking stakeholder input to assist in its work:

1. Do you believe there is a common understanding and usage of the terms risk-informed, performance-based, and defense-in-depth within the NRC, industry, and other stakeholders? Which terms are especially unclear?
2. What are the relevant lessons learned from the previous successful and unsuccessful risk-informed and performance-based initiatives?
3. What are the relevant lessons learned from the previous successful and unsuccessful deterministic regulatory actions?
4. What are the key characteristics for a holistic risk management regulatory structure for reactors, materials, waste, fuel cycle, and security?
5. Should the traditional deterministic approaches be integrated into a risk management regulatory structure? If so, how?
6. What are the challenges in accomplishing the goal of a holistic risk management regulatory structure? How could these challenges be overcome?
7. What is a reasonable time period for a transition to a risk management regulatory structure?
8. From your perspective, what particular areas or issues might benefit the most by transitioning to a risk management regulatory approach?

The task force will use the comments received to inform its deliberations, and its report will address the key issues raised in the comments which are relevant to task force activities. However, the task force does not plan to prepare a detailed response to individual comments or prepare an analysis of comments.

Submitting Comments

The deadline for submitting comments is January 6, 2012. Comments received after this date will be considered, if it is practical to do so, but the

Commission is able to ensure consideration only for comments received on or before this date.

Comments may be submitted by any one of the following methods:

- Federal Rulemaking Web site: Go to http://www.regulations.gov and search for documents filed under Docket ID NRC–2011–0269. Address questions about NRC dockets to Carol Gallagher at (301) 492–3668 or at Carol.Gallagher@nrc.gov.

- Mail comments to: Cindy Bladey, Chief, Rules, Announcements, and Directives Branch (RADB), Office of Administration, Mail Stop: TWB–05–B01M, U.S. Nuclear Regulatory Commission, Washington, DC 20555-0001.

- Fax comments to: RADB at (301) 492–3446.

Please include Docket ID NRC–2011–0269 in the subject line of your comments.

Background

NRC has a longstanding goal to move toward more risk-informed, performance-based approaches in its regulatory programs. In 1995, the Commission finalized and published its policy on how risk assessment would be used in agency decision making. (For additional information, see http://www.nrc.gov/readingrm/doccollections/commission/policy/60fr42622.pdf). Over the last two decades, NRC staff also undertook a number of initiatives to better incorporate risk insights and performance considerations into its regulatory programs. These initiatives resulted in fundamental changes to how the NRC conducts its licensing, inspection and rulemaking programs.

In addition, the Commission has directed NRC staff to solicit input from industry and other stakeholders on performance-based initiatives—including areas that are not amenable to risk-informed approaches—to supplement NRC's traditional deterministic system of licensing and oversight. In this regard, the *Federal Register* notice points out that deterministic 1 and prescriptive 2 regulatory requirements were based mostly on experience, testing programs and expert judgment—considering factors such as engineering margins and the principle of defense-in depth. These requirements are viewed as being successful in establishing and maintaining adequate safety margins for NRC-licensed activities. The NRC has recognized that deterministic and prescriptive approaches can limit the flexibility of both the regulated industries and the NRC to respond to lessons learned from operating experience and support the adoption of improved designs or processes.

NRC includes as one of its primary safety goal strategies the use of sound science and state-of-the-art methods to establish, where appropriate, risk-informed and performance-based regulations. In this regard, NRC issued SECY–98–144, ''White Paper on Risk-Informed and Performance -Based Regulation,'' to define the terminology and expectations for evaluating and implementing the initiatives related to risk-informed, performance-based approaches. (The White Paper can be found at http://www.nrc.gov/readingrm/doccollections/commission/secys/1998/secy1998-144/1998-144scy.pdf.) The paper defines a performance-based approach as follows:

A performance-based regulatory approach is one that establishes performance and results as the primary basis for regulatory decisionmaking, and incorporates the following attributes:

(1) Measurable (or calculable) parameters (i.e., direct measurement of the physical parameter of interest or of related parameters that can be used to calculate the parameter of interest) exist to monitor system, including facility and licensee, performance;
(2) objective criteria to assess performance are established based on risk insights, deterministic analyses and/or performance history;

(3) licensees have flexibility to determine how to meet the established performance criteria in ways that will encourage and reward improved outcomes; and,
(4) a framework exists in which the failure to meet a performance criterion, while undesirable, will not in and of itself constitute or result in an immediate safety concern.

Performance-based approaches can be pursued either independently or in combination with risk-informed approaches. In this regard, NRC staff and the Commission continued to make progress on developing policies and guidance related to performance-based approaches and subsequently issued documents such as SECY–00–191, ''High Level Guidelines for Performance-Based Activities,'' and NUREG/BR–0303, ''Guidance for Performance-Based Regulation.'' (These documents can be found at (http://www.nrc.gov/reading-rm/doccollections/commission/secys/2000/secy2000-0191/2000-0191scy.pdf and at http://www.nrc.gov/reading-rm/doccollections/nuregs/brochures/br0303/.)

Risk and performance considerations for materials and fuel cycle licensees were documented in SECY–99–062, ''Nuclear Byproduct Material Risk Review'' (see http://www.nrc.gov/reading-rm/doc-collections/commission/secys/1999/secy1999-062/1999-062scy.pdf); SECY–99–100, ''Framework for Risk-Informed Regulation in the Office of Nuclear Material Safety and Safeguards'' (see http://www.nrc.gov/reading-rm/doccollections/commission/secys/1999/secy1999-100/1999-100scy.pdf); SECY–00–0048, ''Nuclear Byproduct Material Risk Review'' (see http://www.nrc.gov/reading-rm/doc-collections/commission/secys/2000/secy2000-0048/2000-0048scy.pdf); and the Phase II Byproduct Material Review (ADAMS Accession No. ML012430396).

Perhaps the most significant programmatic adoption of risk-informed and performance-based considerations in the reactor area took place with implementation of the Reactor Oversight Process (ROP) in April of 2000. The ROP replaced the previous Systematic Assessment of Licensee Performance (SALP) program with explicit consideration of risk and performance considerations. The normal ''baseline'' inspection program is focused on the more risk-important areas of plant operations. In addition, events or conditions at plants are assessed for significance using probabilistic risk models. The results of such assessments are used to direct additional oversight to plants with more significant findings.

A more recent reactor initiative that adopts a risk-informed and performance-based approach is the incorporation of the National Fire Protection Association (NFPA) standard NFPA 805, ''Performance-Based Standard for Fire Protection for Light-Water Reactor Electric Generating Plants'' into NRC's regulations (see http://edocket.access.gpo.gov/2004/pdf/04-13522.pdf). NFPA 805 provides deterministic requirements that are very similar to those in NRC's traditional fire protection regulations, and also includes performance-based methods for evaluating plant configurations that provide a comparable and equivalent level of safety intended by the conservative deterministic requirements. The performance-based methods allow engineering analyses to demonstrate that the changes in overall plant risk that result from these plant configurations is acceptably small and that fire protection defense-in-depth is maintained. Defense-in-depth as applied to fire protection means that an appropriate balance is maintained between: (1) preventing fires from starting; (2) timely detection and extinguishing of fires that might occur; and, (3) protection of SSCs important to safety from a fire that is not promptly extinguished. The adoption of NFPA 805 provides a licensee with flexibility regarding how to implement its fire protection program while maintaining an acceptable level of fire safety.

In the materials area, the NUREG–1556 series, Volumes 1–21, ''Consolidated Guidance About Materials Licensees'' (see http://www.nrc.gov/

reading-rm/doccollections/nuregs/staff/sr1556/) was developed in the late 1990s to combine into one place the various guidance documents written over the years for the wide variety of materials licensees. These documents allow license applicants to find the applicable regulations, guidance and acceptance criteria used in granting a materials license. Operational experience (performance) and risk insights guided the development of these documents. Over time the guidance in NUREG–1556 has been revised to further incorporate risk insights, performance considerations and changing technology. A new revision to the series is under development to address security and other issues.

The materials inspection program was fundamentally revised in 2001—both in terms of approach and frequency—in the Phase II Byproduct Material Review. The inspection approach was modified to emphasize licensee knowledge and performance of NRC-licensed activities over document review. Inspectors now review a licensee's program against focus areas that reflect those attributes which are considered to be most risk significant. If a licensee's performance against a given focus element during the inspection is considered to be acceptable, the inspector moves on to the next focus element. Performance concerns or questions lead an inspector to go deeper into that area. In addition, inspection frequencies were revised based on risk insights from the NUREG/CR–6642 effort as well as licensee performance over time.

For additional information, please contact Christiana Lui of the NRC's Risk Management Task Force, Office of Commissioner Apostolakis, at (301) 415-1801 or at Christiana.Lui@nrc.gov.

Final Rule Approved to Amend ABWR Reactor Design Certification

On November 1, 2011, in accordance with the agency's 2009 aircraft impact assessment rule, the U.S. Nuclear Regulatory Commission directed its staff to publish a final rule amending the Advanced Boiling Water Reactor (ABWR) design certification to address the effects of the impact of a large commercial aircraft.

Both the rule and the staff's discussion of the rule basis are available on the NRC web site at www.nrc.gov. The final text as published may differ somewhat to reflect changes directed by the Commission.

Background

NRC certified the original ABWR design in 1997, and it can be referenced by a company applying for a license to build and operate a nuclear power plant.

In recent years, NRC has taken several steps to improve security at existing nuclear power plants, including adopting a rule in March 2007 that requires both existing and potential new reactors to defend against a more realistic threat. In February 2002, the agency also issued an Order requiring all existing nuclear power plants to develop and adopt mitigative strategies to cope with large fires and explosions from any cause, including potential aircraft impacts. In March 2009, NRC issued an updated security rule codifying these requirements for all existing and future nuclear power plants.

In June 2009, STP Nuclear Operating Company (STPNOC) submitted an application to amend the ABWR design.

The Final Rule

The rule certifies that STPNOC's option for the ABWR design has appropriately accounted for aircraft impact effects. This means that following such an impact, only minimal operator actions would be necessary to meet two conditions:

- the reactor core remains cooled or the containment remains intact; and
- spent nuclear fuel cooling or spent fuel pool integrity is maintained.

The rule will become effective 30 days after its publication in the *Federal Register,* expected shortly.

Aircraft Impacts

In a press release announcing approval of the final rule, NRC states that the agency does not believe nuclear power plant operators should be required to prevent the impact of large commercial aircraft. That responsibility, states NRC, rests with the federal government. In this regard, NRC works closely with other federal agencies such as NORAD, the Federal Aviation Administration and the intelligence community to provide layered protection against such a threat.

NRC expects the above-stated efforts would effectively preclude an aircraft attack from occurring. Should such an unlikely event take place at a new plant designed in accordance with the new rule, however, NRC expects the plant would be better able to withstand such a crash than the same design without changes resulting from the rule.

ESBWR Certification Scheduled for May 2012

In a recent letter to GE-Hitachi (GEH), federal regulators indicate that final approval of the Economic Simplified Boiling Water Reactor (ESBWR) design should come in May 2012.

The final Safety Evaluation Report for the Generation III+ design was completed in March 2011, with a final rulemaking from the U.S. Nuclear Regulatory Commission initially scheduled for September 2011. According to news reports, regulators now plan to place the design certification rule before the Commissioners in January 2012.

According to NRC, staff prioritized combined license applications for new nuclear power plants and the design certification for the Westinghouse AP 1000 reactor, which is now under construction at the Vogtle nuclear power plant in Georgia.

NRC approved GE-Hitachi's Advanced Boiling Water Reactor (ABWR) design in late October 2011, making it the first Generation III plant to meet new aircraft impact resistance requirements. (See related story, this issue.)

The ESBWR design was first submitted to NRC in 2005. According to the applicant, it takes the technical developments of the ABWR, which is currently in operation in plants in Asia, even further by incorporating passive safety features such as isolation condensers, a gravity-driven cooling system, and other pumpless components.

The applicant states that the design is simpler, with fewer systems overall and 25 percent fewer pumps, valves, and motors than previous designs. According to GEH, the 4,500 megawatt-thermal reactor also costs 30 to 40 percent less to build than other light-water reactors.

Comment Sought re Implementation of Reactor Oversight Process

On November 29, 2011, the U.S. Nuclear Regulatory Commission announced that the agency is seeking public comment on implementation of the Reactor Oversight Process (ROP), which the agency put in place 11 years ago to revamp and improve its inspection and enforcement programs for commercial nuclear power plants. Every two years, NRC seeks feedback from the public to help the agency continue to improve its regulatory approach. The comment period runs through January 13, 2012.

In particular, NRC is seeking the public's feedback on a list of questions relating to the ROP, including the following:

- Does the Inspection Program adequately cover areas important to safety?
- Is the information in NRC inspection reports useful to you?
- Is the ROP understandable, and are the processes, procedures and products clear and written in plain English?
- Has the public had sufficient opportunity to participate in the ROP and provide input and comments?

Interested stakeholders may submit survey forms by emailing the electronic version via the NRC web site and select "submit survey" button; emailing scanned survey forms to ROPSurvey@nrc.gov, or mail the forms to Cindy Bladey, Chief, Rules, Announcements and Directives Branch, Office of Administration, Mail Stop TWV-05-B01M, U.S. Nuclear Regulatory Commission, Washington, DC 20555-0001. Include Docket ID NRC-2011-0270 in the subject line of your submission.

Information regarding the ROP and licensee performance can be found on the NRC web site at www.nrc.gov. Public survey submissions and supporting materials related to this action can be found at Regulations.gov by searching Docket ID NRC-2011-0270, as well as in the agency's electronic document management system using

License Renewals Continue to Move Forward

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

- On November 26, 2011, NRC announced that an application for a 20-year renewal of the operating license for the Grand Gulf Nuclear Station, Unit 1, is available for public review. Grand Gulf Nuclear Station, Unit 1, is a boiling-water nuclear reactor. It is located in Port Gibson, Mississippi—approximately 20 miles southwest of Vicksburg. The current operating license expires on November 1, 2024. The licensee, Entergy Operations Inc., submitted a renewal application on October 31, 2011. NRC staff is currently conducting an initial review of the application to determine whether it contains sufficient information required for the required formal review. If the application has sufficient information, the NRC will formally "docket," or file, the application and will announce an opportunity to request a public hearing. *For additional information, please contact project managers Nathaniel Ferrer or David Drucker at the Division of License Renewal, Office of Nuclear Reactor Regulation, at (301) 415-1045 or Nathaniel.Ferrer@nrc.gov or at (301) 415-6223 or David.Drucker@nrc.gov respectively.*

- On October 26, 2011, NRC announced that the agency has issued a final environmental assessment (EA) and finding of no significant impact from the proposed renewal of the operating license for Nuclear Fuel Services Inc. (NFS) in Erwin, Tennessee. NRC staff has determined that renewal of the NFS license for a 40-year period would not significantly affect the quality of the human environment. Thus, the EA makes a finding of no significant impact. NRC staff is currently conducting a safety review of the NFS license renewal application as well. Under the conditions of a special nuclear materials license (License SNM-124), NFS operates a nuclear fuel fabrication facility. If granted, the renewal would allow NFS to continue operations and activities at the site for a 40-year period that would begin with issuance of the renewed license. The current license authorizes NFS to receive, possess, store, use, and ship special nuclear material enriched up to 100 percent. Under the proposed action, NFS would continue production of reactor fuel for the U.S. Navy and for commercial domestic operations. NFS submitted its license renewal application and accompanying environmental report (ER) on June 30, 2009. Upon publication of a notice in the *Federal Register,* no requests for hearing were received. On October 15, 2010, NRC staff published for public comment a draft EA for the proposed action. NRC accepted comments on the EA until December 31, 2010. NRC also hosted a meeting in Erwin to accept oral and written public comments. NRC revised the draft EA in response to some of the comments. *Documents related to the action—including the NFS renewal application (ML091880040), NFS environmental report (ML091900072), and NRC Final EA (ML112560265)—may be found in NRC's ADAMS online document database at www.nrc.gov.*

Under NRC regulations, a nuclear power plant's original operating license may last up to 40 years. License renewal may then be granted for up to an additional 20 years, if NRC requirements are met. To date, NRC has approved license extension requests for 71 reactor units. In addition, NRC is currently processing 10 other license renewal requests.

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.

COL Application Reviews Continue

The U.S. Nuclear Regulatory Commission continues to process Combined License (COL) applications.

If issued, a COL provides 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 will take and/or recently took the following actions:

- On January 12, 2012, the Atomic Safety and Licensing Board—which is handling the challenge to Progress Energy Florida's application to construct and operate two nuclear power reactors in Levy County, Florida—will host a meeting to hear statements from the public. The ASLB is the independent body within NRC that rules on legal challenges to proposed licensing actions. Progress Energy submitted its application on July 30, 2008 seeking to construct and operate two new nuclear reactors at the Levy County site—approximately 10 miles northeast of Crystal River. The Nuclear Information Resource Service, the Ecology Party of

Florida and the Green Party of Florida filed a legal challenge opposing the application. The groups allege that Progress and the NRC staff failed to adequately analyze and discuss the environmental impacts of the proposed reactors on wetlands, floodplains, special aquatic sites, and other waters associated with the site. Progress and the NRC staff deny these allegations.

- NRC is seeking public comments on its preliminary finding that there are no environmental impacts that would preclude issuing COL's for two new reactors at the Lee site near Gaffney, South Carolina. In this regard, on January 19, 2012, staff from the NRC and U.S. Army Corps of Engineers will discuss the Draft Environmental Impact Statement (DEIS) in meetings in Gaffney. Duke Energy submitted its new reactor application on December 12, 2007, requesting licenses to build and operate two AP1000 reactors at the Lee site—which is approximately 25 miles northeast of Spartanburg, South Carolina. NRC will consider written comments on the DEIS through March 6, 2012. Comments may be submitted through the federal government's Rulemaking web site at www.regulations.gov using Docket ID NRC 2008-0170.

- NRC is seeking public comments on its preliminary finding that there are no environmental impacts that would preclude issuing an operating license for the under-construction Watts Bar 2 reactor near Spring City, Tennessee. In this regard, on December 8, 2011, NRC discussed their Draft Supplement to the Final Environmental Statement (DSFES). The Tennessee Valley Authority (TVA) originally applied for Unit 2's operating license in 1976, then halted construction in late 1985. In August 2007, TVA informed the NRC that it would resume construction of Unit 2. TVA issued a Final Supplemental Environmental Impact Statement for Unit 2 in February 2008 and updated its operating license application on March 4, 2009. NRC held meetings to gather the community's comments on the environmental review—and sought input from federal, state, tribal, regional and local agencies—before drafting the DSFES. NRC continues its safety review of the license application, and the agency expects to update its Final Safety Evaluation Report on Unit 2 in May 2012. NRC must complete both the safety and environmental reviews before reaching a decision on whether TVA can begin operating the Watts Bar Unit 2—which is a 1,150-megawatt electric, Westinghouse-designed pressurized-water reactor of the same type as Unit 1, which began operating in 1996. The Watts Bar site is approximately 50 miles northeast of Chattanooga, Tennessee.

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.

Meeting Held re Alternative Dispute Resolution Program

On November 8, 2011, the U.S. Nuclear Regulatory Commission held a public meeting at the agency's headquarters in Rockville, Maryland to solicit feedback from stakeholders on its Alternative Dispute Resolution (ADR) program. The ADR program is in the NRC's Office of Enforcement—which oversees, manages, develops guidance for, and participates in this program. The ADR is an important aspect of the NRC's enforcement program.

ADR encompasses a variety of voluntary processes that may be used as alternatives to litigation to resolve potential disputes. The most common examples of ADR include settlement

following direct negotiation between opposing parties, mediation (negotiation mediated by a neutral third party), arbitration (where a neutral third party acts as an arbiter to issue a final decision regarding a dispute), conciliation and facilitation. NRC has elected to use mediation as its means to ADR. These ADR techniques often result in cordial, effective and fair resolution of disputed issues.

The meeting was composed of panel discussions addressing implementation of the ADR program and whether changes could be made to the program to make it more effective, transparent, and efficient. The panel included members of the NRC, NRC-regulated industries, and the public. Panel discussions were followed by opportunities for other meeting participants to ask questions and provide comments.

On September 6, 2011, NRC announced its intention to hold a public meeting addressing implementation of the ADR program and solicited nominations of individuals to participate on a panel to discuss various aspects of the program's effectiveness, transparency and efficiency. (See 76 *Federal Register* 55,136 in ADAMS using accession number ML11237A115.)

For additional information, please contact Shahram Ghasemian at (301) 415-3591 or Shahram.Ghasemian@nrc.gov or Maria Schwartz at (301) 415-1888 or Maria.Schwartz@nrc.gov.

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- 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

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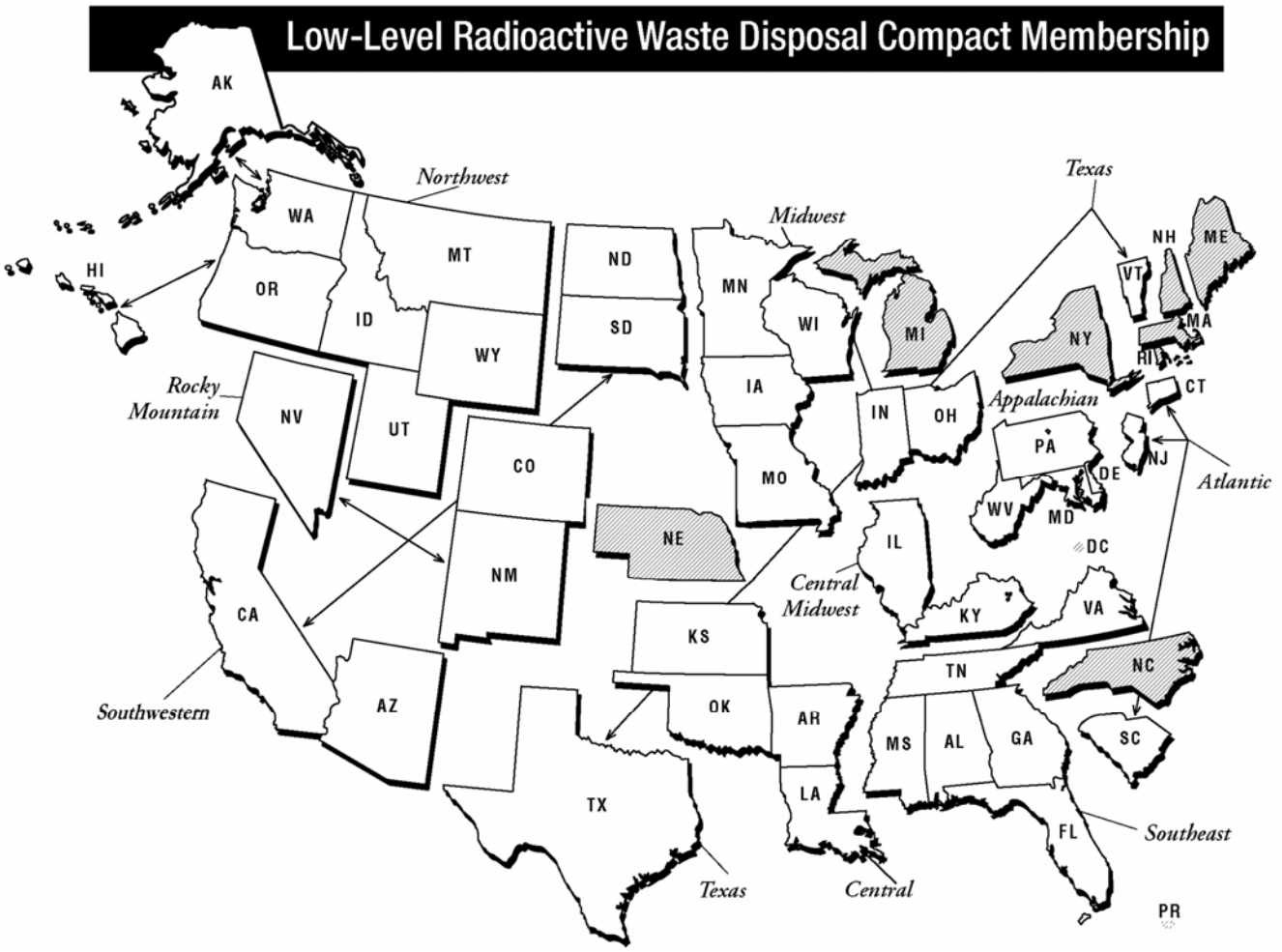
LLW Notes, LLW Forum *Contact Information* and the *Summary Report: Low-Level Radioactive Waste Management Activities in the States and Compacts* are distributed to the Board of Directors of the LLW Forum, Inc. As of March 1998, *LLW Notes* and membership information are also available on the LLW Forum 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.



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Rocky Mountain Compact
Colorado
Nevada
New Mexico

Northwest accepts Rocky Mountain waste as agreed between compacts

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Florida
Georgia
Mississippi
Tennessee
Virginia

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