

# LLW *notes*

Volume 21, Number 2 March/April 2006

## ***National Academy of Sciences***

### **NAS Low Activity Waste Report Released**

On March 9, the National Academy of Sciences released its report titled, "Improving the Regulation and Management of Low-Activity Radioactive Wastes." The report, which is approximately 224 pages in length, was compiled by the National Research Council's Committee on Improving Practices for Regulating and Managing Low-Activity Radioactive Wastes. It concludes, among other things, that "[w]astes containing small concentrations of radioactive material should be regulated based on the risk they pose rather than the type of industry that produced them, as is currently the case."

#### **What did the Report Find?**

The report concludes that "[t]he complicated patchwork of regulations currently governing the management and disposal of low-activity wastes gives federal and state agencies adequate authority to protect the public." However, the committee contends that the rules are inconsistent and that regulations for some low-activity wastes are overly restrictive, thereby limiting disposal options, while other wastes that pose an equal or greater risk are less strictly regulated. As an example, the report cites that "wastes containing uranium or thorium are regulated differently based on whether they arose from ore processing to recover these elements for nuclear applications or from the recovery of other mineral resources."

The report also complains that low-activity wastes from nuclear utilities and other U.S. Nuclear Regulatory Commission-licensed operations are required to be sent to a low-level radioactive waste disposal facility, often via lengthy shipping routes, whereas wastes from other industries that may contain greater radioactivity are allowed to be disposed of in local landfills.

A "risk-informed" approach to regulation could best be implemented, according to the report, by conducting science-based risk assessments with the public's participation. Nonetheless, the committee recognizes that the current regulatory system has evolved over 60 years and rapid changes could be problematic. Accordingly, the committee suggests that agencies adopt a "risk-informed" approach in incremental steps. As a starting point, the committee proposes that agencies work together

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

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# Low-Level Radioactive Waste Forum, Inc.

## LLW Notes

Volume 21, Number 2 March/April 2006

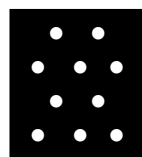
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## Key to Abbreviations

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.***

## **LLW Forum Meets in Austin, Texas**

The Low-Level Radioactive Waste Forum met in Austin, Texas on March 20 – 21, 2006. The meeting was co-sponsored by the Midwest Interstate Low-Level Radioactive Waste Compact and the State of Texas. During the course of the meeting, the officers got together on March 19 and the Executive Committee met on March 20.

### **Attendance**

Attendees at the meeting included 21 state and compact members of the Board of Directors; nine non-federal associate members; 8 federal associate members; 3 other state and compact officials; 2 other federal officials; 8 representatives of industry and other stakeholder groups; and 1 LLW Forum staff.

### **Agenda**

Topics on the agenda at the meeting included new developments in states and compacts; the creation of EnergySolutions; the Advisory Committee on Nuclear Waste's paper on the history and framework of Commercial Low-Level Radioactive Waste Management in the U.S.; the National Academy of Science's Report on Low-Activity Waste Disposal; the U.S. Environmental Protection Agency's development of drinking water standards; hot topics within the U.S. Nuclear Regulatory Commission's low-level waste program; the U.S. Department of Energy's low-level waste strategy development and other initiatives; the U.S. Department of Energy's draft low-level and mixed low-level radioactive waste disposition strategy and collection efforts; operator reports from facilities at American Ecology, Barnwell, Clive Utah, Deer Trail and Waste Control Specialists; license issuance and next steps for the planned Private Fuel Storage spent fuel facility; trends in International Atomic Energy Agency standards and international waste

management practices and their potential impact on the U.S. industry; recent events regarding the Nuclear Waste Policy Act; and a status update on the U.S. Environmental Protection Agency's work on the planned Yucca Mountain high-level radioactive waste repository.

### **Future Meeting Locations and Dates**

The fall 2006 meeting of the LLW Forum will be held at Marco Island, Florida on September 18 – 19 and is being sponsored by the Southeast Compact.

The winter 2007 meeting will be held in San Diego, California on March 19 – 20 and is being sponsored by the Southwestern Compact. The fall 2007 meeting will be in a location, to be determined, in the Central Midwest Compact region and is being sponsored by the compact.

*For additional information, contact Todd D. Lovinger, the LLW Forum's Executive Director, at (202) 265-7990.*

## LLW Meetings Scheduled for May in DC Metro Area

Two meetings regarding commercial low-level radioactive waste disposal have been scheduled for the end of May in the DC metropolitan area: (1) a roundtable discussion to explore the concept of using federal sites and/or federal land that is being co-sponsored by two compacts and three industry organizations and (2) a low-level radioactive waste workshop focusing on regulatory issues that is being hosted by the Advisory Committee on Nuclear Waste (ACNW).

### **“Federal Sites Options” Meeting**

The roundtable discussion will take place on Monday, May 22, in an effort to explore the concept of using federal sites and/or federal land for the disposal of commercial low-level radioactive waste. The meeting is being sponsored by the Nuclear Energy Institute, the Health Physics Society, the Rocky Mountain Low-Level Radioactive Waste Board, the California Radioactive Materials Management Forum and the Southeast Compact Commission. It will take place in Rockville, Maryland.

Topics of discussion will include volumes and types of waste; technical capabilities at existing federal facilities; potential costs of disposal at existing federal facilities or facilities to be constructed on federal land; and, political hurdles to obtaining access to federal capacity.

The meeting will be held at the Marriott Bethesda North Hotel and Conference Center, 5701 Marinelli Road, North Bethesda, Maryland 20852 (1-800-359-3204). Space is limited and advance registration is required. Registration will be done on a first come basis. To register, contact Linda Walters at (919) 821-0500 or [lwalters@secompact.org](mailto:lwalters@secompact.org).

### **ACNW’s LLW Workshop**

The Advisory Committee on Nuclear Waste will be hosting a low-level radioactive waste workshop at NRC headquarters in Rockville, Maryland on Tuesday and Wednesday, May 23 - 24. The meeting is open to the public.

The ACNW plans to post the agenda for the meeting the week of April 24 on its web site at <http://www.nrc.gov/reading-rm/doc-collections/acnw/agenda/2006/>.

Directions to the NRC headquarters complex can be obtained by going to the following NRC web site address: <http://www.nrc.gov/who-we-are/locations/hq.html>.

*For additional information, contact Mike Lee of the ACNW at [MPL@nrc.gov](mailto:MPL@nrc.gov).*

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

## **IEMA Releases Report re Impact of Reduced Disposal Access**

The Illinois Emergency Management Agency (IEMA) has released a report titled, "An Evaluation of the Potential Effects from the Closure of Available Disposal Capacity on the Central Midwest Compact Region's Low-Level Radioactive Waste Generators." The report concludes that regional generators will not suffer an immediate Class B and C low-level radioactive waste management crisis upon the scheduled loss of access to the Barnwell, South Carolina's disposal facility on July 1, 2008.

### **Background**

**Implementation of the Study** In 2004, the Central Midwest Interstate Low-Level Radioactive Waste Compact Commission requested that the State of Illinois evaluate the potential impacts on the region's low-level radioactive waste generators from the pending loss of access to currently available disposal facilities. In order to make an assessment, IEMA initially hosted a conference for the region's waste generators in October 2004. The conference was then followed up with the distribution of a questionnaire designed to assess the potential impacts on the generators and their plans and preferences for managing their waste following disposal facility closure.

**Current Disposal Trends** The bulk of low-level radioactive waste generated in the Central Midwest region is disposed at either the Chem-Nuclear facility located in Barnwell, South Carolina, or the EnergySolutions facility located in Clive, Utah. Class A waste, primarily disposed of at the EnergySolutions facility, comprises approximately 90 % of the waste by volume and has the lowest concentrations of both short and long half-life

radionuclides. Classes B and C waste have greater concentrations of short and long half-life radionuclides, respectively, and are disposed of exclusively at the Chem-Nuclear facility.

### **Pending Reductions in Disposal Access and Impact Thereof**

**Barnwell Facility** The State of South Carolina plans to close the Barnwell facility to out-of-region waste effective July 1, 2008—thereby rendering no available disposal facility for Class B and C wastes. The primary generators of Class B and C waste are the nuclear utilities. They have indicated that they can safely store their Class B and C wastes for the remaining life of their plants (including any plant life extension). There is very little non-reactor generated Class B and C waste produced in the Central Midwest region. Three non-reactor generators combined anticipate generating less than 100 cubic feet of Class B and C waste in the 24-year period following the closure of the Chem-Nuclear facility.

**EnergySolutions Facility** According to the IEMA report, EnergySolutions has estimated 15 years of remaining life for their Clive facility. (Additional land has been purchased adjacent to the facility with the anticipation of expansion; however, there are certain political issues that would need resolution prior to this happening.) Closure of this facility would result in no available disposal facility for Class A waste. The reactor generators anticipate generating 46,000 cubic feet of Class A low-level radioactive waste requiring disposal annually following the closure of EnergySolutions Clive facility. Again, the reactor generators indicated that they could safely store their Class A waste for the remaining life of their plants (including any plant life extension). Twenty-eight non-reactor generators anticipate generating 22,800 cubic feet of Class A low-level radioactive waste requiring disposal annually following the closure of the Clive facility. These wastes will require storage either on-site at the point of generation or at a centralized storage facility.

### Conclusions

The IEMA report provided the following conclusions:

Based on discussions with and responses to questionnaires from the generators located in the Central Midwest Compact Region, there appears to be no immediate Class B and C LLRW management crisis when the Region's generators lose access to the Barnwell LLRW disposal facility on July 1, 2008. The main impact will be on the reactor generators who indicated they could safely manage their waste onsite. The eventual closing of the ... [Energy Solutions Clive] facility in approximately 15 years will impact both reactor and non-reactor generators. Again, the reactor generators have indicated that they could safely manage their waste onsite. The non-reactor generators will be impacted to a greater extent. The Agency will need to work closely with these generators to ensure that they manage their waste in a safe manner.

The Agency needs to regularly monitor the changing developments in LLRW management and periodically gauge the implications for the Central Midwest Compact Region's LLRW generators. Specific activities have been identified to ensure the Agency is prepared to respond to the changing waste management environment.

*For additional information or to obtain a copy of the report, please contact Marcia Marr of IEMA at (217) 785-9982.*

### *Midwest Compact/State of Minnesota*

## Minnesota Becomes an NRC-Agreement State

The U.S. Nuclear Regulatory Commission has completed an agreement with the State of Minnesota to assume part of the agency's regulatory authority over certain radioactive materials in the state. Minnesota becomes the 34<sup>th</sup> state to sign such an agreement with the NRC. The agreement became effective March 31, 2006.

Under the agreement, NRC has transferred to Minnesota the responsibility for licensing, rulemaking, inspection and enforcement activities for: (1) radioactive materials produced as a result of processes related to the production or utilization of special nuclear material (SNM); (2) uranium and thorium source materials; and (3) SNM in quantities not sufficient to form a critical mass.

The NRC has transferred approximately 150 licenses, most for medical and industrial uses of radioactive material, to Minnesota's jurisdiction. The NRC retains jurisdiction over a number of activities identified in 10 CFR Part 150, including regulation of commercial nuclear power plants and federal agencies using certain nuclear material in the state. In addition, NRC retains authority for the review, evaluation and approval of sealed sources and devices containing certain nuclear materials manufactured in Minnesota and distributed throughout the country.

Before approving the agreement, NRC reviewed Minnesota's radiation control program to ensure it was adequate to protect public health and safety and was compatible with NRC's program for regulating the radioactive materials covered in the agreement. An announcement of the proposed agreement was made in November, inviting comments from the public. No comments were received.

*Copies of the agreement, the Governor of Minnesota's request and supporting documents, as well as the NRC staff's assessment will be available through the NRC's ADAMS online document library.*

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

# **Utah Governor Vetoes Bill re Disposal Authorization**

On March 1, Utah Governor Jon Huntsman, Jr. vetoed SB 70 -- legislation that sought to reduce the Governor's unilateral power regarding hazardous and radioactive waste disposal facilities in the State of Utah. The Senate subsequently overrode the Governor's veto, but the House failed to take it up before adjournment of the 2006 Utah Legislature. Accordingly, the veto stands and the bill is dead.

### **Background**

On January 18, 2006, Utah State Senator Howard Stephenson (R) introduced SB 70—a bill that would effectively allow the legislature to override a governor's decision to halt changes in a disposal operation or the creation of a new disposal facility. The bill was heard on January 23 in the Senate Natural Resources, Agriculture, and Environment Committee and passed out with a favorable recommendation 3 - 2 to the full Senate. (See *LLW Notes*, January/February 2006, p. 10.) The bill passed the Senate by a vote of 22 to 6, providing enough votes to override the veto. The House approved the bill by a vote of 47 to 27, however, three votes shy of the two-thirds majority needed to override a veto.

A 1990 state law requires that all applicants seeking to license a new hazardous or radioactive waste disposal facility in Utah (or to renew or amend an existing application) must receive approval from political leaders (including the legislature and the Governor) in addition to regulators. Stephenson's bill, however, would allow the legislature to override a Governor's objection with a two-thirds vote.

Stephenson serves as president and a registered lobbyist of the Utah Taxpayers Association, a non-profit business group of which Energy.Solutions Clive facility is a member. Despite Stephenson's claim

that the bill was not directed at any particular event, the bill was seen by its critics as an attempt to assist the Clive facility's efforts to expand—a proposal which was approved by the Utah Department of Environmental Quality but which Huntsman opposes. The bill did not allow the legislature to override decisions by a governor on high-level waste disposal issues such as the proposal by Private Fuel Storage, LLC to store spent fuel on the reservation of the Skull Valley Band of Goshute Indians, which Governor Huntsman also opposes.

### **The Governor's Action**

In vetoing the bill, Governor Huntsman sent a letter to legislative leaders that called his decision consistent with his pledge "to resist efforts to turn Utah into our nation's radioactive waste dumping ground." The bill, said Huntsman, "would potentially lead to the proliferation of radioactive waste disposal facilities within our state."

The letter goes on to state that, "By enabling the Legislature to override the governor's refusal to approve a radioactive, solid nonhazardous or hazardous waste facility, this bill would incrementally weaken the governor's authority to protect Utah's image and environment, as well as the health and safety of its 2.5 million residents."

Under Utah law, the governor has 10 days after the passage of a bill to decide what to do with it. Governor Huntsman's veto of SB 70 was his first veto of the year.



## Clean Harbors to Apply for Class A License at Grassy Mountain Facility

At a meeting on March 3, the Utah Department of Environmental Quality's Radiation Control Board will hear additional information about, among other things, the expressed intention of Clean Harbors Environmental Services, Inc. to initiate the Radiological Materials Licensing Process to accept Class A low-level radioactive waste at the company's Grassy Mountain Facility in Utah.

### Expressed Interest in License Application

Clean Harbors formally notified the department of its intent to seek a license by letter dated January 30, 2006. The letter followed a fall 2005 meeting between the department and the company on the issue.

In the letter, Phillip Retallick—Senior Vice President of Compliance and Regulatory Affairs at Clean Harbors—writes as follows:

Based upon our Fall 2005 discussions, we understand that the license review process will take approximately one-year. You noted that the Grassy Mountain Facility had previously submitted an application for a radiological materials disposal license and that much of the background information, including the geo-hydrologic conditions underlying the existing RCRA-approved landfills, could serve as a basis for the expanded application. Before we begin the application preparation process, we would like to meet with you and your staff, to review the licensing process, in greater detail, and to better understand your expectations ...

If, after submittal and review of a license application, the department determines to grant the requested license, approval would also be required

from the Governor and legislature before the facility could begin accepting any Class A radioactive waste. In addition, the facility would need to get approval from Tooele County, which has proven in the past to be an obstacle when the county rejected similar attempts by the Laidlaw Facility in 1997 and Cedar Mountain Environmental Facility in 2004.

### Background on Clean Harbors

Clean Harbors is the nation's largest hazardous waste company, with various facilities throughout the nation. The Grassy Mountain Facility is located in Tooele County, Utah. Both RCRA- and TSCA-permitted, it serves the Utah, Idaho, Wyoming, Eastern Colorado and Arizona markets. Among the industries that Grassy Mountain serves are mining, steel production and automotive manufacturing, and the facility can accept solid PCB-contaminated material.

In June 2005, the Clean Harbors' Deer Trail Facility—which is located in Adams County, Colorado—was designated as a limited regional disposal facility, subject to specified terms and conditions, by the Rocky Mountain Board. (See *LLW Notes*, May/June 2005, p. 17.) Subsequently, the facility had its hazardous waste treatment, storage and disposal permit renewed and was issued a limited radioactive materials license that would authorize it to accept at least 16,000 cubic yards of processing wastes. (See *LLW Notes*, January/February 2005, p. 12.) Adams County has filed a lawsuit, however, challenging the permit renewal and license issuance. (See *LLW Notes*, January/February 2006, p. 19.)

## Tooele Objects to Rad Waste License for Grassy Mountain

At a March 3 meeting of the Utah Radiation Control Board, officials from Tooele County, Utah indicated that they will not give their approval for a radioactive materials license for the Clean Harbors' Grassy Mountain hazardous waste site. The news follows a January 30th letter in which Massachusetts-based Clean Harbors formally notified the Utah Department of Environmental Quality of its intent to initiate the Radiological Materials Licensing Process to accept Class A low-level radioactive waste at the company's Grassy Mountain facility in Utah. The letter was preceded by a fall 2005 meeting between the department and the company on the issue. (See related story, page 9.)

Under a 1990 state law, a company seeking to dispose of radioactive waste must receive a license from the Utah Department of Environmental Quality and get approval from the Governor, legislature and local county officials. At the March 3 meeting, Nicole Cline—Director of the Tooele County Division of Planning and Zoning—said the county would not approve Clean Harbor's request due to an ordinance adopted last fall that reduces the county's hazardous-industries zone and imposes new limits on existing sites.

Energy *Solutions* Clive facility is the only facility that is licensed in Utah to accept radioactive waste. They received county approval last year for plans to expand the facility, but they submitted an application to do so before the ordinance went into effect. Nonetheless, the county rejected similar attempts by the Laidlaw facility in 1997 and Cedar Mountain Environmental facility in 2004 to get approval to accept Class A low-level radioactive waste.

Despite the county's expressed objections, a Radiation Control Board attorney noted that Clean Harbors could submit a license application and subsequently seek to change the Tooele County ordinance.

## *Rocky Mountain Low-Level Radioactive Waste Compact*

### Rocky Mountain Board Issues Deer Trail Regional Facility Designation

On February 28 2006, Larry Boschult—Chair of the Rocky Mountain Low-Level Radioactive Waste Board—formally signed a regional facility designation for the Clean Harbor's Deer Trail Facility for the disposal of waste from the mining, milling, smelting, or similar processing of ores and mineral-bearing material primarily for radium ("radium processing wastes"). The designation follows the issuance to the facility of a radioactive material license by the Colorado Department of Public Health and Environment's (CDPHE) Hazardous Materials and Waste Management Division on December 21, 2005. (See *LLW Notes*, January/February 2006, pp. 12 - 13.)

#### **Terms of the Designation**

The designation states that it is made subject to the following conditions:

1. The facility shall not accept any low-level radioactive waste, as defined by the Rocky Mountain Board's rules, except for radium processing wastes "in which the summed activity for all radionuclides per gram in such wastes shall not exceed 2,000 picocuries (pCi) per gram and the radium 226 activity per gram shall not exceed 400 pCi."
2. No low-level radioactive waste shall be accepted at the facility from outside of the compact region unless the Rocky Mountain Board has granted import authorization in writing for such waste.
3. Within 10 days of the end of each month, the facility shall provide the Rocky Mountain Board with a monthly report specifying the number of tons of radium processing wastes received from each source (generator).

## States and Compacts *continued*

4. The facility shall provide the Rocky Mountain Board, upon request, access to and copies of any shipping documents and/or manifests for radioactive and non-radioactive wastes received at the facility.

5. The facility shall collect the compact surcharge imposed by the Rocky Mountain Board on each unit of radium processing wastes that is received and pay the surcharge to the board within 30 days of the end of each month.

### **Background**

**Application** In January 2005, the State of Colorado received from Clean Harbors a radioactive materials license application that proposes the disposal of Naturally Occurring Radioactive Materials (NORM) and Technologically Enhanced Naturally Occurring Radioactive Materials (TENORM) at the company's Deer Trail Facility. CDPHE accepted public comment on the radioactive materials license application during a 60-day period.

**Review and Initial Designation** In early May 2005, the State of Colorado submitted an application to the Rocky Mountain Board for the designation of the Clean Harbors Deer Trail facility as a limited regional low-level radioactive waste disposal facility. The application submitted to the board was limited to wastes from mining, milling, smelting or similar processing of ores and mineral-bearing material primarily for radium. The Rocky Mountain Board began consideration of the application, which can be viewed on the Board's web page at [www.rmlwb.us](http://www.rmlwb.us), at a meeting on May 27, 2005. The meeting was open to members of the public and other interested parties. At a meeting on June 8, the Rocky Mountain Board designated the facility as a limited regional disposal facility—subject to specified terms and conditions. (See *LLW Notes*, May/June 2005, pp. 1, 7.)

**Opposition Comments** On October 26, the Adams County Colorado Board of County Commissioners ("Adams County") submitted opposition comments to the CDPHE license &

permit and supporting materials through a law firm in response to a Notice of Public Comment issued by the CDPHE on August 26, 2005. The notice which is the subject of the letter refers to CDPHE's proposal to renew the hazardous waste treatment, storage and disposal permit of the Deer Trail Facility and to issue the facility a limited radioactive materials license that would authorize it to accept at least 16,000 cubic yards of radium processing wastes. Adams County opposed the issuance of a final permit and final radiation materials license on the terms and conditions outlined in draft documents earlier released by CDPHE. (See *LLW Notes*, November/December 2005, pp. 10, 11.)

**Licensing** On December 21, CDPHE's Hazardous Materials and Waste Management Division issued a hazardous waste permit renewal and radioactive materials license to the Clean Harbor's Deer Trail Facility. The permit allows the facility to accept limited types of naturally occurring radioactive waste (NORM) or such waste that has been modified in industrial processes ... such as from municipal drinking water treatment plants. It prohibits the acceptance of artificial or artificially altered radioactive material from research, medicine, weapons, nuclear power plants or other operations.

**Legal Challenge** On January 20, 2006, Adams County filed two lawsuits against CDPHE in regard to the Clean Harbor's Deer Trail Facility. One suit—which was filed in the District Court of Adams County—challenges the December 2005 renewal of a hazardous waste permit for the facility. The other suit—which was filed in the District Court for the City and County of Denver—challenges the issuance of a radioactive materials license for the facility on the same date. Both suits remain pending. (See *LLW Notes*, January/February 2006, pp. 19 - 20.)

## Colorado Seeks to Amend Designation

On April 13, 2006, the Colorado Department of Public Health and Environment filed an application with the Rocky Mountain Low-Level Radioactive Waste Board to amend the regional facility designation of the Clean Harbors Deer Trail Facility in Colorado. The application requests that the board's designation be amended to authorize the facility to accept the same wastes as authorized in the Radioactive Materials License issued by the Colorado Department of Public Health and Environment on December 21, 2005 and subsequently amended on January 20, 2006. (See *LLW Notes*, January/February, pp. 12 – 13.)

In particular, the wastes for which the application requests designation consist of naturally-occurring radioactive material (NORM) and technologically-enhanced naturally-occurring radioactive material (TENORM) with a total activity not exceeding 2,000 picocuries per gram (pCi/g) and Radium-226 activity not exceeding 400 pCi/g. Final rate schedules have been reviewed and approved by the Colorado Board of Health, as required by state regulations. Consistent with the original application, the state does not expect to implement a Host State Surcharge at the facility.

The letter transmitting the application states, in part, as follows:

“The Department requests that the Compact Board waive exclusivity and Compact surcharges for in-region materials disposed at this facility under the license regulated as solid waste pursuant to CRS 25-11-201 and 30-20-101. The Department also requests the Compact Board to consider our proposed approach to management of such materials detailed in the Department's draft *Policy and Implementing Guidance for Control and Disposition of Drinking Water Treatment Residuals Containing Technologically Enhanced Naturally Occurring Radioactive Material (TENORM)*, January 2006.”

The Rocky Mountain Board will consider the application at a meeting on May 9 at the Denver Airport Marriott at Gateway Park beginning at 10:00 a.m. An opportunity for public input will be provided.

According to the Rocky Mountain Low-Level Radioactive Waste Compact, the Board shall consider the following criteria in its decision to approve or disapprove the application: (1) There will be for the foreseeable future sufficient demand to render the operation of the proposed facility economically feasible without endangering the economic feasibility of the operation of any other regional facility; and (2) that the proposed facility will have sufficient capacity to serve the needs of the region for a reasonable period of years.

*For a copy of the application and further information about the Rocky Mountain Board, please go to [www.rmlwb.us](http://www.rmlwb.us) or call Vicki Green at (303) 825-1912. For information related to the Deer Trail license, please go to <http://www.cdph.state.co.us/hm/hwy36.htm>.*

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

## **WCS Responds to Second Technical Notice of Deficiency**

On March 31, Waste Control Specialists, LLC (WCS) submitted to the Texas Commission on Environmental Quality (TCEQ) its response to the second and final Notice of Technical Deficiency regarding its license application for near-surface disposal of low-level radioactive waste at a proposed site in West Texas. TCEQ will continue its technical review of the application, which is scheduled to be completed by August 31, 2006.

*A summary of the WCS response, as well as related web links and a project history, can be found at [http://www.tceq.state.tx.us/permitting/waste\\_permits/rad\\_waste/wcs\\_license\\_app.html](http://www.tceq.state.tx.us/permitting/waste_permits/rad_waste/wcs_license_app.html).*

### **The Notices of Technical Deficiency**

TCEQ has been conducting a detailed technical review of WCS license application for the past nine months. The agency issued the first Notice of Technical Deficiency to WCS on September 16, 2005. WCS replied on November 30, 2005. The second notice was issued on January 30, 2006. According to the TCEQ, review of the responses to the first notice “has revealed that many technical deficiencies continue to be unresolved.”

TCEQ has separated the noted deficiencies into 12 attachments. The twelve attachments, each which identifies deficiencies and which correlate to designated sections of the application, are labeled as follows: (1) general information, (2) site characteristics, (3) design, (4) construction, (5) operation, (6) closure, (7) post-closure and institutional care, (8) performance assessment, (9) quality assurance and quality control, (10) personnel, (11) environmental report and alternative management techniques, and (12) financial qualifications and financial assurance.

In regard to the number and significance of the outstanding deficiencies, TCEQ stated in its January

30 correspondence as follows:

The number and nature of the unresolved deficiencies in the license application are significant at this late point in the technical review. It is important to the outcome of technical recommendations that these issues be satisfactorily resolved in a timely manner. ‘If the necessary information is not received by the executive director prior to the end of the response period, the executive director may return the application to the applicant,’ (30 TAC s281.19(c)).

### **Next Step**

The statute allows for a maximum of two such notices to be issued, with the draft license and hearing notice scheduled for publication in July 2006. Thereafter, it is anticipated that administrative hearings will be held in September 2006, with a proposal for licensing decision expected in September 2007. By statute, TCEQ Commissioners would then issue a license or denial 90 days later—in December 2007.

### **Additional Background**

Waste Control Specialists submitted a license application to TCEQ on August 4, 2004. Thereafter, there were three rounds of administrative notice of deficiencies that spanned 225 days, as built into the statutory timeline for license review. On February 18, 2005, TCEQ issued a Notice of Administrative Completeness.

On March 31, 2005, a public meeting was held in Andrews County, Texas to accept formal public comment on the administratively complete application. In addition, written comments were accepted by the TCEQ up to the public meeting to be included in the written evaluation, and at any time during the application review process.

On May 1, 2005, the TCEQ Executive Director evaluated the staff’s written evaluation based on statutory tiered criteria and the administratively

*(Continued on page 19)*

***Healthy Environment Alliance of Utah v. Radiation Control Board of Utah***

## HEAL Utah Challenges Approval re Expansion of Energy Solutions Clive Facility

On February 27th, Healthy Environment Alliance of Utah ("HEAL Utah") filed a lawsuit in the Utah Court of Appeals that seeks review of a January 26 order by the Utah Radiation Control Board. In the contested order, the board grants final approval to an amendment request filed by Energy Solutions Clive facility to expand its low-level radioactive waste disposal operations onto 536-acres of adjacent land that were purchased last year from Cedar Mountain Environmental. In so doing, the board rejected HEAL Utah's original challenge of the expansion plans.

### **The Appeal**

In its petition, HEAL Utah states simply that it "seeks review of the entire Order [of the Radiation Control Board], including the legal bases and associated matters pertaining thereto." Specifically, the petitioner "requests the court to direct the respondent to prepare and certify to this court its entire record, which shall include all of the proceedings and evidence taken in this matter."

In local press articles, HEAL Utah claims that the approval process was a "sham" and that the board failed to meet the legal or technical requirements for granting an extension. "The regulatory board misapplied the law and disregarded the facts of this case," said Jim McConkie—one of the attorneys representing HEAL Utah in its appeal. "The gravity of locking Utah into another half-century of nuclear waste disposal deserves a lot more scrutiny than what was given to this expansion request."

### **The Board's Decision**

The Radiation Control Board's decision to approve the expansion plans follows a January 6 hearing on the amendment request and HEAL Utah's original challenge. During the course of the hearing, board members considered four motions relating to the challenge, including a motion to disqualify and a motion for judgment on the pleadings. According to local press articles, board members appeared poised to approve the expansion request but did not do so due to confusion over the state's authority to regulate waste on the additional 536 acres of land. The Clive Facility contends that the board is only expanding the site's boundary, not the company's ability to take, bury or treat waste in the new area. But Dianne Nielson, Director of the Utah Department of Environmental Quality, expressed concern whether "[t]hat has the potential of being a regulatory quagmire" and whether such an interpretation would have the impact of barring the Clive Facility from handling waste inside the new boundary, including hauling it across the newly added acreage as has been past practice. Accordingly, the board referred the matter to agency lawyers and technical staff for clarification.

**Approval of the Amendment Request** The January 26 Proposed Order and Findings of Fact and Conclusions, as approved, state as follows:

This License Amendment does not confer a right or authorize nor does it create an expectation of a right or authorization to [the Clive Facility] to store, treat, dispose of or otherwise manage waste on ... [the new acreage], or to construct significant new facilities related to the storage, treatment, management or disposal of waste on ... [the new acreage] unless [the Clive Facility] submits and obtains approval for such license amendment application(s).

The language underscores the board's intent that the approval is for a boundary change only, not for waste disposal on the new acreage that could

require additional safety and engineering reviews that have not been conducted.

**Rejection of HEAL Utah's Challenge** The board's decision specifically rejects HEAL Utah's challenge and grants the Clive Facility's Motion for Judgment on the Pleadings. In so doing, the board held that "[t]he process is allowed by the applicable regulations and is consistent with the past practices of the Division of Radiation Control."

### **Background**

The Clive Facility was established in 1988. Every five years, the company is required to renew its license. The pending change would be the 23rd since the last renewal.

**Basis for the Challenge** HEAL Utah's original challenge contested an August 2005 decision by the Utah Division of Radiation Control to grant a preliminary license for the 536-acre expansion into adjacent land that the new owners of EnergySolutions purchased last year from Cedar Mountain Environmental. In particular, the administrative challenge called for more information on the quantity of waste that would be disposed in the expanded area as well as the type of waste, its origins and "the schedule for developing disposal sites, and how disposal sites will be constructed." HEAL Utah contends that the new acreage has not been fully and appropriately analyzed for its suitability to hold waste.

**Preliminary and Required Approvals** The Clive Facility unsuccessfully lobbied to have the expansion considered during a special session of the legislature in April 2005, but received the preliminary approval anyway. The preliminary approval requires the company to provide regulators with technical data and get a final approval prior to constructing specific facilities. In addition, approval from the legislature and governor are also required under Utah law.

**Governor's Expressed Opposition** In mid-November, Utah Governor Jon Huntsman, Jr. told local press that he will not approve the Clive

Facility's amendment request to expand the site. (See *LLW Notes*, November/December 2005, pp. 1, 7-8.) The announcement, which came as a surprise to most, followed the transmittal of opposition letters from Citizen's Against Radioactive Waste to the governor and Utah's 104 legislators that calls on them to reject the expansion plans. Mike Mower, the Governor's Deputy Chief of Staff, was quoted in the local press as saying that Governor Huntsman was clear when running for office "that Utah shouldn't become a dumping ground." Indeed, the Governor opposed the Clive Facility's earlier efforts to accept Class B and C low-level radioactive waste, lobbied the federal government to move the Atlas Corporation uranium mill tailings from the Colorado River's edge, and continues to fight plans by Private Fuel Storage, LLC to store spent fuel on the Skull Valley Band of Goshute Indians Reservation.

### **Clive Facility's Suspension of Expansion Plans**

Shortly after the board's decision, the Clive Facility announced that it is suspending the expansion plans. "In this instance," said the company in a statement, "we feel it is in everyone's best interest to announce that we will not pursue legislative approval for ... [the new section] at this time." Under current state law, legislative and gubernatorial approvals are required before the amendment can go into effect.

*For additional information, contact Bill Sinclair, Deputy Director, Utah Department of Environmental Quality, at (801) 536-4405 or Tye Rogers, Vice President of Compliance and Permitting, the Clive Facility, at (801) 532-1330.*

***State of Utah v. U.S. Nuclear Regulatory Commission and the United States of America***

**Utah Challenges License Issuance to PFS**

On March 6, the State of Utah filed a Petition for Review in the U.S. Court of Appeals for the District of Columbia Circuit that challenges, among other things, the U.S. Nuclear Regulatory Commission’s recent decision to issue a license—subject to specified terms and conditions—to Private Fuel Storage, LLC to construct and operate a spent fuel storage facility on the reservation of the Skull Valley Band of Goshute Indians in Utah. (See LLW Forum News Flash titled, “NRC Issues PFS Spent Fuel Storage License, February 2006.”) In addition, the petition requests that the court review NRC adjudicatory rejection of all of Utah’s contentions in opposition to the proposed facility including

- ◆ the probability of a crash impacting the facility by an aircraft from the nearby Air Force facility;
- ◆ the risk of the U.S. Department of Energy refusing to accept spent nuclear fuel welded shut in PFS canisters;
- ◆ the alleged lack of financial assurance; and,
- ◆ allegations that PFS did not comply with National Environmental Protection Act (NEPA) requirements.

**The Petition**

**Prior Legal Filings** The State of Utah first petitioned the court to review the case on November 8, 2005. The state’s suit—which was consolidated with a related challenge filed by Ohngo Guadadeh Devia—was filed in response to NRC’s September 9 denial of Utah’s final appeals regarding the proposed facility and a 3 to 1 vote by the Commission that authorized staff to issue PFS a license once the requisite findings are made under NRC regulations. (See *LLW Notes*, September/October 2005, p. 25.) In so acting, the Commission stated that its decision “concludes this protracted

adjudication—which has generated more than 40 published Board decisions and more than 30 published Commission decisions” and that “[t]here are no remaining adjudicatory issues to resolve.” On December 14, NRC filed a motion, with the consent of all parties and intervenors, to hold proceedings in abeyance due to the pendency of certain matters still before the Commission. The court agreed on February 2, 2006. On February 21, NRC issued PFS a license to construct and operate the proposed facility, subject to specified terms and conditions.

**Petitioner’s Claims** Utah claims that each of the contentions that it raised during the licensing process focused on a particular “defect” in the proposal by PFS. The state contends that “[f]or a number of Utah’s contentions, the NRC Licensing Board and the Commission acted arbitrarily and capriciously and contrary to law by failing to comply with their own prior decisions (without articulating a basis for doing so); by failing to follow the NRC’s regulations or the federal statutes out of which those regulations arise; by failing to consider important evidence that would have changed the outcome of the various decisions; by violating Utah’s due process rights; and by committing other reversible errors.”

**Requested Relief** Utah is requesting that the court provide the following relief:

- ◆ grant the petition for review;
- ◆ declare that the NRC decisions relating to the PFS license application are arbitrary and capricious and inconsistent with applicable law;
- ◆ direct the NRC to revoke the license issued to PFS, to withdraw its approval of that license, and to refrain from issuing a license to PFS; and
- ◆ grant such other relief as the court deems just and proper.

**Continued Obstacles**

**Financial Hurdles** Despite the license issuance, PFS faces several hurdles before it can construct and operate the facility. For one thing, in December 2005, one partner (Alabama-based



Southern Company) announced plans to drop out of the group and another (Minnesota-based Excel Energy) formalized a decision not to provide any additional funding to the project. (See *LLW Notes*, January/February 2006, p. 11.) PFS is required to have commitments for the cost of constructing and decommissioning the site before work can begin. A company spokesperson has declined to say whether or not PFS has any signed contracts at this time.

**Other Hurdles** Besides the financial hurdles, the PFS proposal continues to face several other obstacles. For one thing, the Bureau of Land Management must approve a revision of the land resource management plan to allow PFS to build a railroad spur to the proposed repository site. Recently, however, a BLM official sent a letter stating that he cannot approve the revision due to a Congressional moratorium on land-use planning. (See *LLW Notes*, November/December 2005, pp. 8 - 9.) Separate from the BLM's approval of the land resource management plan, the Bureau of Indian Affairs must issue final approval of the lease between the company and the Skull Valley Band of Goshute Indians.

### **Background**

PFS submitted its application for a license to construct and operate a spent fuel storage facility to the NRC in June 1997. The NRC issued its final Environmental Impact Statement in January 2002 and a Consolidated Safety Evaluation Report in March 2002. On September 9, 2005, NRC denied the final appeals of the State of Utah in adjudication of PFS' application. In so ruling, NRC upheld a February 24 decision by the Atomic Safety and Licensing Board (ASLB) that rejected Utah's contention that the license application should be denied because there is too high a probability of a radiation release resulting from an accidental crash of one of 7,000 flights over the Skull Valley each year by F-16 single-engine jets from Hill Air Force Base. By a 3 to 1 vote, the Commission authorized staff to issue PFS a license once the requisite findings are made under NRC regulations. (See *LLW Notes*, September/October 2005, p. 25-26.)

PFS seeks to locate its facility on the reservation of the Skull Valley Band of Goshute Indians—about 50 miles southwest of Salt Lake City. The proposed above-ground facility would use up to 4,000 NRC-approved Holtec International HI-STORM 100 storage casks, each of which can hold up to 10 tons of spent fuel. The HI-STORM cask consists of a steel canister in which the fuel is stored and a steel and concrete overpack. To shield the spent fuel, the canister is welded closed and then placed in the overpack of two steel shells encasing a wall of concrete more than two feet thick. The concrete provides additional shielding from radiation during storage. The cask weighs 180 tons when full.

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## ***State of Idaho v. U.S. Department of Energy***

### **DOE Fights Idaho's Demand to Remove Waste**

In February, a trial was held in a lawsuit brought by the State of Idaho against the U.S. Department of Energy that concerns a landmark 1995 agreement between the parties to remove decaying radioactive waste at the Idaho National Laboratory.

The state insists that DOE must remove all transuranic waste—including equipment, clothing and soil—from the Eastern Idaho nuclear research compound by 2018. The waste, asserts the state, is located near the Snake River aquifer—which provides drinking and irrigation water for most of southern Idaho. The state claims that the 1995 agreement provides that DOE will remove all transuranic waste from INL and ship it to the Waste Isolation Pilot Plant in New Mexico by the 2018 deadline.

DOE argues, however, that the waste should be left where it is because the risk of contamination during excavation outweighs the risk of letting the waste decay in place. The agreement, according to DOE, only covered transuranic waste stored above

## Organizations & Associations *continued*

ground. It does not, asserts the department, cover radioactive waste from Cold War nuclear weapons manufacturing that was put into drums and cardboard boxes and disposed of in pits and trenches for burial at INL between 1954 and 1970. Moreover, DOE contends that Idaho is ignoring scientific evidence that exhuming the buried nuclear waste could pose a threat to public safety.

The final cleanup decision for waste buried in pits and trenches, according to DOE, has not been made and is still being studied under a separate Superfund site cleanup plan that the parties signed in 1991. In response, state officials have testified that they believe the two cleanup pacts "complement" each other, but that the 1995 agreement requires the removal of all transuranic waste stored at INL, regardless of whether the waste is stored on the surface or underground.

Both sides have submitted written closing arguments in the case.

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under their existing authorities to change licenses and permits for specific waste generators or disposal sites. "In certain cases," notes the committee, "implementing a risk-informed approach may require agencies to rewrite official guidance documents or regulations, or to seek legislative changes." The committee also recommends that agencies continue to improve efforts to involve the public in waste-disposal decisions "which can bolster public acceptance of the choices made."

Finally the report encourages American agencies to collaborate with their overseas counterparts, citing significant progress by the European Commission and the International Atomic Energy Agency in developing risk-based standards for low-activity wastes. "Using international consensus standards as a basis for U.S. regulations could also help garner public support," noted the committee.

### **What is Low-Activity Waste?**

According to the report, "[s]o-called low-activity wastes are by far the largest volume of radioactive wastes generated each year in the United States." Such waste is generated by hospitals, utilities, research institutions, and defense installations where nuclear material is used. In addition, millions of cubic feet of low-activity wastes arise incidentally every year from non-nuclear enterprises such as mining and water treatment. These wastes present a significantly smaller radiation hazard than spent nuclear fuel or high-level radioactive wastes, but can cause health risks if not properly controlled.

### **Background**

The report, which was initiated by the board itself in 2002, was conducted in phases due to funding constraints. It was discontinued after the completion of phase I due to a lack of funds. However, in 2004, the council received enough additional funding to continue with the study. (See *LLW Notes*, November/December 2004, p. 12.) The study was conducted by a 15-member National Research Council committee with expertise in nuclear engineering/fuel cycle, waste generation, waste processing and disposal practices, international practices, health physics, risk analysis, performance assessment, legal and regulatory practices, environmental policy, and economics.

The study was sponsored by the U.S. Army Corps of Engineers; California Environmental Protection Agency; U.S. Department of Defense Executive Agent for Low-Level Radioactive Waste Disposal; U.S. Department of Energy; U.S. Environmental Protection Agency; Japanese Institute of Applied Energy; French Institute for Radiation Protection and Nuclear Security; Midwest Interstate Low-Level Radioactive Waste Compact Commission; U.S. Nuclear Regulatory Commission; and the Southeast Compact Commission for Low-Level Radioactive Waste Management.

The National Research Council is the principal operating arm of the National Academy of Sciences and the National Academy of Engineering. It is a

### NRC Welcomes NAS Report

In response to release of the NAS report, the U.S. Nuclear Regulatory Commission welcomed the findings on the transportation of spent nuclear fuel, which the agency believes validates its efforts to ensure the safe transport of spent fuel and high-level waste.

In regard to spent fuel, the report's principal finding is that there are "no fundamental technical barriers to the safe transport of spent nuclear fuel and high-level radioactive waste in the United States." Shipment by rail or truck is "a low-radiological-risk activity with manageable safety, health, and environmental consequences when conducted in strict adherence to existing regulations."

The report also concluded that "the radiological risks associated with the transportation of spent fuel and high-level waste are well understood and are generally low." It attributed this conclusion in part to "rigorous international standards and U.S. regulations for the design, construction, testing, and maintenance of spent fuel packages."

The committee recommended that the NRC conduct further research into the health and safety risks of long-duration fires engulfing spent fuel transportation casks. Although the committee took note of the NRC's recent study modeling the effects of the 2001 Baltimore tunnel fire on spent fuel casks, that study was not completed in time to be considered fully by the NAS. That NRC study, and a similar one modeling the effects of a long-duration fire on a truck cask, concluded that no spent fuel would likely be released from NRC-certified casks under such fire conditions.

The report also recommended that "full-scale package testing should continue to be used as part of integrated analytical, computer simulation, scale model, and testing programs to validate package performance." This recommendation is also consistent with the goals of the NRC's Package Performance Study, which is now under development.

Although the NAS panel did not assess security risks of spent fuel transportation, it recommended that an independent assessment of security issues be conducted. The NRC has ordered licensees to implement several security enhancements since the September 11, 2001, terrorist attacks and is in the process of completing a series of security assessments of spent fuel storage and transportation in the post-September 11 threat environment.

private, nonprofit institution that provides science and technology advice under a congressional charter.

*For additional background information on the study—including policy issues, technical information, and statement of task—see LLW Notes, January/February 2002, pp. 1, 9 - 10.*

*Copies of the report are available from the National Academies Press at (202) 334-3313 or (800) 624-6242 or on the Internet at <http://www.nap.edu>.*

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complete application materials. The criteria are as follows:

- Tier 1 Criteria: site characteristics and financial assurance requirements
- Tier 2 Criteria: engineering and design
- Tier 3 Criteria: technical qualifications and facility operations
- Tier 4 Criteria: land use compatibility and socioeconomic effect

On September 16, 2005, TCEQ sent a certified letter to WCS itemizing the first round of various technical deficiencies contained in the company's license application. WCS responded by letter dated November 30, 2005.

### ***Atomic Safety and Licensing Board***

## **ASLB Holds Hearing re NM Uranium Enrichment Plant**

On March 6, the U.S. Nuclear Regulatory Commission's Atomic Safety and Licensing Board began an evidentiary hearing in Hobbs, New Mexico on a proposed uranium enrichment plant to be built in Lea County. The board held special sessions on March 5 – 6 to allow members of the public to make brief statements.

During the evidentiary hearing, the ASLB received testimony and exhibits in the "mandatory hearing" portion of the adjudication concerning the proposed National Enrichment Facility to be built by Louisiana Energy Services near Eunice, New Mexico. This hearing concerned safety and environmental matters other than those that were raised by intervening parties and that are currently being litigated in a separate "contested" hearing. LES and the NRC staff were parties in the mandatory hearing.

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### ***Advisory Committee on Reactor Safeguards***

## **NRC Seeks ACRS Nominations**

The U.S. Nuclear Regulatory Commission is seeking qualified candidates for its Advisory Committee on Reactor Safeguards (ACRS), which provides the Commission with independent expert advice on the safety of existing and proposed nuclear facilities, and the adequacy of proposed reactor safety standards. The ACRS also provides advice related to the integration of safety and security at commercial reactors.

At present, the committee is focusing on risk-informed and performance-based regulations; license renewal applications; power uprates; and the

use of mixed oxide and high burn-up fuels. The committee is also increasing its emphasis on new reactor designs and technologies.

ACRS members are drawn from a variety of engineering and scientific disciplines, and serve a four-year term with the possibility of re-appointment for an additional two terms. At this time, the NRC is seeking individuals with at least 10 years experience in such areas as: thermal hydraulics, materials and metallurgy, plant operations, severe accident analysis, probabilistic risk assessment, design engineering, digital instrumentation and control, or nuclear analysis. Candidates should have a demonstrated record of accomplishments in nuclear reactor safety; those with pertinent graduate-level education will receive additional consideration.

It is the NRC's policy to select the best applicant for the job, regardless of race, gender, age, religion or any other non-merit factor. Consistent with the requirements of the Federal Advisory Committee Act, the NRC seeks candidates with varying views and diverse backgrounds so that ACRS membership is balanced.

Conflict-of-interest regulations restrict the participation of members actively involved in regulated aspects of the nuclear industry, so the degree and nature of any such involvement will be weighed. Each qualified candidate's financial interests must be reconciled with federal and NRC rules and regulations prior to final appointment. This might require divestiture of securities issued by nuclear industry entities, or the discontinuance of industry-funded research contracts or grants. A security background investigation for a "Q" clearance (or the transfer of an up-to-date "Q" clearance) is also required.

Candidates must be citizens of the United States and be able to devote from 80 to 100 days per year to ACRS business. Applicants should send a resume describing their educational and professional background including any special accomplishments; professional references, current address and telephone number should also be

included. Resumes are being accepted on an ongoing basis throughout 2006. They should be sent to: Sherry Meador, ACRS/ACNW, Mail Stop T2E-26, U.S. Nuclear Regulatory Commission, Washington, D.C. 20555-0001 or via email to [sam@nrc.gov](mailto:sam@nrc.gov).

### **NRC Names J. Sam Armijo to ACRS**

J. Sam Armijo, Ph. D, an Adjunct Professor of Materials Science and Engineering at the University of Nevada, Reno, has been named to the Advisory Committee on Reactor Safeguards (ACRS) by the U.S. Nuclear Regulatory Commission.

Dr. Armijo earned his B.S. and M.S. degrees in Metallurgical Engineering from Texas Western College and the University of Arizona; and, his Ph. D. in Materials Science from Stanford University. Dr. Armijo is internationally recognized as a technical expert in nuclear fuels, plant materials, water chemistry, and advanced nuclear power systems. He has published more than 40 technical papers on advanced nuclear power systems, materials technology and coolant technology and has received several patents. He invented and led the development of zirconium barrier fuel cladding used in boiling water reactors worldwide, and has received several awards for technical excellence.

Prior to his retirement in 1999, he worked for GE Nuclear Energy as General Manager of the Nuclear Fuel business and Chief Technologist. In addition, he served as President of GE-ENUSA Nuclear Fuels S.A., and as Director of the Japan Nuclear Fuel Co. Ltd.

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

## **20.2002 Transparency Paper Approved by NRC Commissioners**

On March 31, Commissioners approved U.S. Nuclear Regulatory Commission staff's recommended option number two for improving transparency in the 10 CFR 20.2002 low-level radioactive waste disposal process. According to NRC, "[t]his option would increase the background information available to the public on 10 CFR 20.2002 disposals, and apply resources for additional public outreach to case-specific requests based on defined criteria."

Shortly thereafter, NRC publicly released the staff's 20.2002 transparency paper and the Commissioners decision thereon. The documents can be located on NRC's web site at:

- ◆ SECY-06-0056, Staff Commission Paper: <http://www.nrc.gov/reading-rm/doc-collections/commission/secys/2006/>
- ◆ SRM-SECY-06-0056, Commission Decision: <http://www.nrc.gov/reading-rm/doc-collections/commission/srm/2006/>
- ◆ Commission Voting Record: <http://www.nrc.gov/reading-rm/doc-collections/commission/cvr/2006/>

### **The NRC Staff's Paper**

**Requested Action** In Staff Requirements Memorandum (SRM) COMGBJ-05-001, the Commission directed NRC staff, working in cooperation with the Office of the General Counsel (OGC), to develop options to enhance public understanding and awareness of 10 CFR 20.2002 approvals. In addition, the SRM directed staff to provide recommendations to the Commission to identify potential adverse impacts on the agency's well-established regulatory framework and to "...

## Federal Agencies and Committees *continued*

encourage stakeholder input by individuals who may be directly affected by an NRC decision.”

**Background** 10 CFR 20.2002 provides for alternative disposal authorizations for low-level radioactive waste, different than those already defined in 10 CFR 20.2001, provided that doses are maintained as-low-as-reasonably-achievable (ALARA) and within the dose limits identified in Part 20. In practice, section 20.2002 has been most frequently used for the disposal of radioactive waste in hazardous or solid waste landfills that are permitted under the Resource Conservation and Recovery Act (RCRA). Nonetheless, section 20.2002 may be used for any type of disposal not already defined in the regulations, such as disposal on a licensee’s site or on offsite property.

Special public involvement requirements are not included in section 20.2002. For the most part, public interest in 20.2002 approvals has been limited. Two exceptions were the disposal of large quantities of demolition debris from the Big Rock Point Nuclear Power Plant in a nearby landfill and the disposal of large amounts of demolition debris from the Connecticut Yankee power plant at a hazardous waste disposal facility in Idaho. In the latter case, the level of interest was affected at least in part by NRC’s proposed rulemaking on the disposition of solid material, which was released one day before approval of the 20.2002 disposal. In the end, the disposal facility and generator decided not to pursue the waste’s acceptance at the facility. Since that time, NRC has approved five 10 CFR 20.2002 requests from licensees without any significant public interest.

**Discussion** In its paper, NRC staff discuss three options to enhance public understanding and awareness of 20.2002 disposals and to encourage stakeholder input by those “directly affected” by a 20.2002 approval. As directed, the paper also identifies potential adverse impacts on NRC’s regulatory program.

**“No-Action” Alternative:** The first option is a “no-action” alternative that reflects current practice. Under this alternative, information on specific

20.2002 requests is available to the public in the Agencywide Documents Access Management System (ADAMS) and in the public document room. Generic information under this approach is very limited, however, and none is available on the NRC public web site. Depending on the type of request, there are several opportunities for “directly affected” parties to provide input to staff including:

- ◆ Affected states are provided a copy of a draft environmental assessment (EA) for review and comment before the final EA is published.
- ◆ In certain cases, where there is significant interest in a proposed disposal and unique circumstances, the staff may hold a public meeting to solicit input from the public.
- ◆ Materials and fuel cycle 20.2002 requests are approved with a license amendment that affords an opportunity for a hearing, whereas reactor approvals are generally granted with a letter and there is no opportunity for hearing.
- ◆ The staff may obtain information from the state permitting agency and disposal facility operator during the review, depending on the specific request.

According to NRC staff, “[t]he primary advantage of the current approach is that it can be viewed as appropriate because 1) the number of 10 CFR 20.2002 requests received each year is small (twenty in the last six years), 2) the risk-significance of the 10 CFR 20.2002 authorizations is low, and 3) with the exception of a few cases in the last several years, the level of public interest has been small.” Staff did note, however, that this option’s primary disadvantage is that there would continue to be no basic information available to the public on 20.2002 authorizations and that any current misunderstandings would likely continue.

**Graded Approach:** This approach recognizes that there are significant differences in the types of 20.2002 disposals that are requested by licensees and that a graded approach for transparency may be appropriate. It would provide both basic, generic information on 20.2002 disposals on the agency’s public web site, as well as define and document a more systematic approach for interacting with the

## Federal Agencies and Committees *continued*

public and obtaining input on particular requests than current practice. It also provides for enhanced communications and coordination among the licensee requesting the authorization, the disposal facility operator, and the State and/or local permitting agency for certain proposed disposals. According to NRC staff, “[t]he primary advantage of this approach is that it would increase public understanding and awareness and provide for input from stakeholders, without a large expenditure in staff resources.” The primary disadvantage, according to staff, is “that these resources would be expended for a small number of requests for such disposals.”

**“Real Time” Option:** This option treats 20.2002 requests in a manner similar to high-visibility NRC activities, such as the renewal of a power reactor license. “Real-time” information would be posted on the NRC’s public web page regarding the status of all reviews, along with links with documents to ADAMS. In addition, reactor 20.2002 requests would be approved with a license amendment and thereby afford an opportunity for hearing. According to staff, “[t]he advantage of this option is that it would provide stakeholders to determine quickly and efficiently the status of individual reviews, obtain important documents related to the request, and understand what opportunities there might be for public input.” The disadvantage, according to staff, “is that the level of effort to implement the option would be significant compared to the first two options.” In addition, if a reactor hearing were necessary, significantly more resources might be needed and significant delays in decision-making could result.

**Recommendation** NRC staff recommended option 2 (Graded Approach) for improving transparency in 20.2002 process. According to NRC staff:

This option would increase the background information available to the public on 10 CFR 20.2002 disposals, and apply resources for additional public outreach to case-specific requests based on defined

criteria. It would also: (1) minimize the resource impacts on the low-level waste (LLW) budget, which is currently 5.0 full-time equivalents (FTEs) in FY 07; (2) appropriately weigh, in the staff’s view, NRC’s strategic goal of openness with its safety, security, and effectiveness goals for this particular type of regulatory action; and (3) enable NRC to have flexibility in addressing the wide variety of 10 CFR 20.2002 disposals.

NRC staff noted in their paper that they intend to formalize and document the procedure for reviewing 20.2002 requests, independent of the transparency measures identified.

### Commission Decision

As recommended, the Commissioners determined to approve NRC staff recommended option 2 (Graded Approach) for improving transparency in 20.2002 process. In so ruling, the Commissioners stated as follows:

In its Communication Plan and the website, staff should discuss how 10 CFR 20.2002 authorized on-site disposals at operating facilities are again addressed at the time of license termination. Staff also should provide a basis and justification of why some 10 CFR 20.2002 disposals are authorized by letter and why some are authorized by license amendment.

In its forthcoming paper on how 10 CFR 20.2002 approvals are granted and whether any changes may be appropriate, staff should also address what happens when a decommissioning power reactor is transferred from NRR to NMSS. Staff should present a range of reasonable options in a risk informed manner. It should not be solely focusing on an all or nothing approach (i.e., all NRR approvals must be by letter and all NMSS approvals must be by amendment). Under a risk informed approach, it may be possible that some approvals are by letter and other

approvals are by amendments, regardless of which office has the lead. Staff should address the pros and cons of such an amendment.

Staff should inform the Commission when it receives a 10 CFR 20.2002 disposal request it deems “significant.”

### NRC Issues PFS Spent Fuel Storage License

On February 22, the U.S. Nuclear Regulatory Commission issued a license to Private Fuel Storage, LLC to construct and operate a spent nuclear fuel storage facility on the reservation of the Skull Valley Band of Goshute Indians in Utah. PFS, a consortium of eight nuclear utilities, plans to use the facility for the temporary above-ground storage of up to 44,000 tons of spent nuclear fuel from commercial nuclear power plants.

Although the license is effective immediately, it conditions construction authorization on the company first arranging for adequate funding. In addition, PFS must obtain necessary approvals from other agencies, including the Bureau of Land Management, the Bureau of Indian Affairs, and the Surface Transportation Board.

The license—which incorporates some changes prompted by comments by PFS and the State of Utah on a draft of the license that was made public on February 13—is effective for a period of 20 years.

#### Continued Obstacles

**Financial Hurdles** Despite the license issuance, PFS faces several hurdles before it can construct and operate the facility. For one thing, in December 2005, one partner (Alabama-based Southern Company) announced plans to drop out of the group and another (Minnesota-based Excel

Energy) formalized a decision not to provide any additional funding to the project. (See *LLW Notes*, January/February 2006, p. 11.) PFS is required to have commitments for the cost of constructing and decommissioning the site before work can begin. A company spokesperson has declined to say whether or not PFS has any signed contracts at this time.

**Other Hurdles** Besides the financial hurdles, the PFS proposal continues to face several other obstacles. For one thing, the Bureau of Land Management must approve a revision of the land resource management plan to allow PFS to build a railroad spur to the proposed repository site. Recently, however, a BLM official sent a letter stating that he cannot approve the revision due to a Congressional moratorium on land-use planning. (See *LLW Notes*, November/December 2005, pp. 8 - 9.) Separate from the BLM’s approval of the land resource management plan, the Bureau of Indian Affairs must issue final approval of the lease between the company and the Skull Valley Band of Goshute Indians.

#### Background

PFS submitted its application for a license to construct and operate a spent fuel storage facility to the NRC in June 1997. The NRC issued its final Environmental Impact Statement in January 2002 and a Consolidated Safety Evaluation Report in March 2002. On September 9, 2005, NRC denied the final appeals of the State of Utah in adjudication of PFS’ application. In so ruling, NRC upheld a February 24 decision by the Atomic Safety and Licensing Board (ASLB) that rejected Utah’s contention that the license application should be denied because there is too high a probability of a radiation release resulting from an accidental crash of one of 7,000 flights over the Skull Valley each year by F-16 single-engine jets from Hill Air Force Base. By a 3 to 1 vote, the Commission authorized staff to issue PFS a license once the requisite findings are made under NRC regulations. (See *LLW Notes*, September/October 2005, p. 25-26.)

PFS seeks to locate its facility on the reservation of the Skull Valley Band of Goshute Indians—about



50 miles southwest of Salt Lake City. The proposed above-ground facility would use up to 4,000 NRC-approved Holtec International HI-STORM 100 storage casks, each of which can hold up to 10 tons of spent fuel. The HI-STORM cask consists of a steel canister in which the fuel is stored and a steel and concrete overpack. To shield the spent fuel, the canister is welded closed and then placed in the overpack of two steel shells encasing a wall of concrete more than two feet thick. The concrete provides additional shielding from radiation during storage. The cask weighs 180 tons when full.

### NRC Creates Tritium Task Force

The U.S. Nuclear Regulatory Commission has assembled a group of experts from its offices around the nation to examine the issue of inadvertent, unmonitored releases of radioactive liquids containing tritium from U.S. commercial nuclear power plants. The creation of the group was directed by agency leaders earlier this year following reports of unmonitored releases of water containing tritium.

“The available information on these releases shows no hazard to the public,” said NRC Executive Director for Operations Luis Reyes. “Nonetheless, we need to conduct an in-depth review to see if the NRC needs to take additional action of a broad nature.”

At the same time that the NRC decided to establish the tritium study group, they also decided to create a page on the NRC web site to provide the public the latest available information on tritium issues. The information can be found at <http://www.nrc.gov/reactors/operating/ops-experience/grndwtr-contam-tritium.html>.

Eleven of the 12 task force members come from the agency’s Offices of Nuclear Reactor Regulations, Nuclear Material Safety and Safeguards

and Nuclear Regulatory Research, as well as from regional offices. The twelfth, a representative of state government, is being selected. The group will report to Bill Kane, the Deputy Executive Director for Reactor and Preparedness Programs, and is required to complete its review by August 31. A written report summarizing the task force’s finding will be issued late this year.

The task force is required to address several topics, including:

- ◆ a general assessment of the potential public health impact from these releases;
- ◆ how the issue was communicated to the public, state and local officials, other federal agencies, Congress and other interested parties;
- ◆ a review of other inadvertent releases at nuclear power plants, including decommissioning sites, from 1996 to the present;
- ◆ industry actions in response to the releases, including the timing of remediation efforts; and,
- ◆ NRC oversight of inadvertent releases, both under the Reactor Oversight Process (ROP) and the process in place prior to the ROP.

The task force can also consider issues not listed in its charter, and can identify issues for longer-term review by NRC staff.

The task force’s charter is available on the NRC’s web site by entering ML060690186 at this address: <http://adamswebsearch.nrc.gov/dologin.htm>.

## License Renewals Continue to Move Forward

On March 22, the U.S. Nuclear Regulatory Commission announced the opportunity to request a hearing on an application to renew the operating license for the Vermont Yankee Nuclear Power Station for an additional 20 years. Earlier the same month, NRC held a public information session to discuss how the agency will review a renewal application for the Pilgrim Nuclear Power Plant and issued a draft environmental report for renewal of the operating license for the Palisades Nuclear Power Plant. The agency issued a draft environmental report for renewal of the Monticello Nuclear Power Plant's operating license a month earlier, in February.

### Vermont Yankee Nuclear Power Station

The Vermont Yankee Nuclear Plant is a boiling water reactor located in the town of Vernon, Vermont. Entergy Nuclear Operations, Inc. submitted a renewal application for the operating license of the plant on January 25. The current operating license expires on March 21, 2012.

NRC staff have determined that the application contains sufficient information for the agency to "docket," or file, the application and begin a technical review. A notice of opportunity to request a hearing was published in the *Federal Register* in March. The deadline for requesting a hearing is 60 days after such publication.

The Vermont Yankee renewal application can be found on-line at <http://www.nrc.gov/reactors/operating/licensing/renewal/applications/vermont-yankee.html>.

### Pilgrim Nuclear Power Station

The Pilgrim Nuclear Plant is a boiling water reactor located on the western shore of Cape Cod bay in the town of Plymouth, Massachusetts. Entergy Nuclear Operations, Inc. submitted an application

to renew the operating license for the plant on January 25. The current operating license expires on June 8, 2012.

NRC staff have determined that the application contains sufficient information for the agency to "docket," or file, the application and begin a technical review. A notice of opportunity to request a hearing was published in the *Federal Register* in March. The deadline for requesting a hearing is 60 days after such publication.

The Pilgrim renewal application can be found at <http://www.nrc.gov/reactors/operating/licensing/renewal/applications/pilgrim.html>.

### Palisades Nuclear Power Plant

NRC staff have reached the preliminary conclusion that there are no environmental impacts which would preclude renewal of the operating license for the Palisades Nuclear Power Plant located at Covert, Michigan. NRC is seeking public comment on the draft environmental impact statement—which statement is open for public comment until May 18 and was the subject of public meetings on April 5 in South Haven, Massachusetts.

Nuclear Management Company submitted the Palisades Nuclear Power Plant renewal application on March 22, 2005. The current license for the Palisades plant expires on March 4, 2011. If approved, the plant's NRC license would be extended for 20 years.

A copy of the draft EIS and other documents related to the license application can be found on NRC's web site at <http://www.nrc.gov/reactors/operating/licensing/renewal/applications/palisades.html>.

### Monticello Nuclear Power Plant

NRC staff have reached the preliminary conclusion that there are no environmental impacts which would preclude renewal of the operating license for the Monticello Nuclear Power Plant. NRC is seeking public comment on the draft environmental

impact statement—which statement is open for public comment until May 4 and was the subject of public meetings on March 22 in Monticello.

The Monticello plant is located approximately 30 miles northwest of Minneapolis, Minnesota and its current operating license expires on September 9, 2010. The licensee, Nuclear Management Company, submitted a renewal application on March 24. A notice of opportunity to request a hearing was filed in the *Federal Register* on May 12. The deadline for requesting a hearing was July 11.

The draft EIS and other documents related to the renewal of the Monticello Nuclear Generating Plant can be found on line at <http://www.nrc.gov/reactors/operating/licensing/renewal/applications/monticello.html>.

### **NRC Regulations/Status of Renewals**

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 39 reactor units. In addition, NRC is currently processing license renewal requests for several other reactors.

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

## **ESP Applications Proceed**

On February 10, the U.S. Nuclear Regulatory Commission announced that it has asked Dominion Nuclear North Anna, LLC to supplement its revised application for an Early Site Permit at the North Anna Nuclear Power Plant site. Shortly thereafter, on February 17, the agency announced that it has updated its safety evaluation report (SER) for an ESP for the Clinton site.

The ESP process allows an applicant to resolve certain safety and environmental issues related to siting prior to submitting an application to build a new nuclear power plant. An ESP denotes a site's suitability for construction and operation of a nuclear plant.

### **North Anna**

The North Anna site is located in Louisa County, Virginia—about 40 miles northwest of Richmond. Dominion filed the North Anna application on September 25, 2003. If approved, the permit would allow Dominion to reserve the site for up to 20 years. A future application for a construction permit or combined license at the North Anna site could then reference the ESP.

Late last year, Dominion Nuclear North Anna, LLC informed the U.S. Nuclear Regulatory Commission that it intended to supplement its application in January 2006 to modify the proposed cooling method for a potential third reactor at the North Anna site. As a result of this late change, NRC staff determined not to issue a final environmental impact statement (EIS) in December 2006 as initially scheduled. Though NRC suspended work on the affected portions of the EIS, staff continues to work on the rest of the statement.

The staff must complete its final Safety Evaluation Report and the EIS, the NRC's independent Advisory Committee on Reactor Safeguards must issue a report on the ESP application, and an NRC Atomic Safety and Licensing Board Panel must conclude a hearing on the application before the

Commission can reach a final conclusion on issuing the ESP.

### **Clinton**

NRC staff has updated its safety evaluation report (SER) for an Early Site Permit (ESP) for the Clinton site, which is located about six miles east of Clinton, Ill. The Clinton application was filed on September 25, 2003, by Exelon Generation Company, LLC. The SER update summarizes the NRC staff's technical evaluation of the Clinton site's suitability in terms of seismology and geology. The original draft SER, issued in February, did not include these areas because Exelon used a new method for determining the site's largest earthquake the plant could withstand and still shut down safely.

The SER summarizes the NRC staff's technical evaluation of the Clinton site's suitability in terms of seismology, geology, and other environmental and safety factors. Along with completing the SER, the staff must complete an EIS, the Advisory Committee on Reactor Safeguards must issue a report on the ESP application, and an NRC Atomic Safety and Licensing Board Panel must conclude a hearing on the application before the Commission can reach a final conclusion on issuing the ESP. The NRC expects to finish this process by early 2007.

## **NRC Proposes Changes to Reactor Licensing**

The U.S. Nuclear Regulatory Commission is proposing revisions to its regulations dealing with the licensing and approval of new nuclear power plants. The requirements are outlined in a proposed rule to clarify the interrelationships of NRC reactor licensing regulations. This includes how the NRC's regulations covering existing nuclear reactors apply to licensing processes under Part 52 of the Code of Federal Regulations, such as Early Site Permits (ESP), Standard Design Certifications and Combined Licenses. Since the agency adopted Part 52 in 1989, reviews of its provisions have revealed a need for clarification on the application of Part 50's general provisions to Part 52. The proposed rule would supersede revisions proposed in July 2003, and would incorporate lessons learned during review of the first three ESP applications.

The agency held a workshop at its headquarters in Rockville, Maryland on March 14 to discuss the proposal. The meeting was intended to provide additional information on the basis for the proposed changes and to give interested parties an opportunity to ask questions about the proposed rule.

*For more information on the proposed rule, contact NRC staff members Nanette Gilles at (301) 415-1180 or [nvg@nrc.gov](mailto:nvg@nrc.gov) or Jerry Wilson at (301) 415-3145 or [jnw@nrc.gov](mailto:jnw@nrc.gov). Comments on the changes should include the identification number RIN 3150 AG-24 in the header or subject line and may be emailed to [SECY@nrc.gov](mailto:SECY@nrc.gov) or submitted at <http://ruleform.llnl.gov>.*

## NRC Posts Info from Emergency Preparedness Meeting

The U.S. Nuclear Regulatory Commission has posted more than 700 generic comments and questions provided during and after the agency's 2005 emergency preparedness public meeting. NRC is considering the comments as part of an on-going review of emergency preparedness regulations and guidance for commercial nuclear power plants. The comments, along with responses from the NRC and Department of Homeland Security (DHS)/Federal Emergency Management Agency (FEMA), can be found at: <http://www.nrc.gov/public-involve/public-meetings/epreview2005.html>.

The call for comments was part of a two-day emergency preparedness public meeting that featured discussions among senior officials from the agency's Office of Nuclear Security and Incident Response, FEMA, local, state and tribal representatives, advocacy groups and nuclear industry representatives. Attendees were given the opportunity to submit additional comments and questions for NRC review after the meeting.

"We received a large volume of valuable stakeholder input and we appreciate the interest the public showed in this subject," said Eric Leeds, director of the NRC's Division of Preparedness and Response. "We've made significant improvements over the past few years in the NRC's emergency preparedness program, but we continue to look for ways to improve. We will consider what we've learned from this call for comments as we move forward."

Each of the nation's commercial nuclear power plants has onsite and offsite emergency plans to ensure appropriate protective measures would be

taken in the event of a radiological emergency. Federal oversight of these emergency plans is shared by the NRC and DHS.

*Additional information about NRC's emergency preparedness program can be found at <http://www.nrc.gov/what-we-do/emerg-preparedness.html>.*

## NRC Issues Annual Assessments

The U.S. Nuclear Regulatory Commission has issued annual assessment letters to the nation's 103 operating commercial nuclear power plants. According to the agency, all of the plants continue to operate safely.

"These annual assessments give the public an overview of how each plant has performed over the past year," said Michael Case, Director of the Division of Inspection and Regional Support in the NRC's Office of Nuclear Reactor Regulation. "Later this spring, the NRC will meet with the operators of every plant in nearby locations to publicly discuss plant performance."

A separate announcement will be issued for each plant meeting. In addition to the annual assessment letters, plants also receive an NRC inspection plan for the coming year. Updated information on plant performance is posted to the NRC web site every quarter. The plants also receive a mid-cycle assessment letter during the year; the next mid-cycle letters will be issued in September.

*The assessment letters are available on the NRC web site at <http://www.nrc.gov/NRR/OVERSIGHT/ASSESS/index.html>.*

## 2005 Survey Results Released

The U.S. Nuclear Regulatory Commission has announced the public release of its 2005 Safety Culture and Climate Survey. According to the results, NRC improved in essentially all areas as compared to the 2002 survey, with the largest gains in communication, mission and strategic planning, employee engagement, recruiting, developing and retaining staff, and management leadership.

The survey, which had a 70 percent response rate, found that workload and stress continue to be challenges for employees. Better knowledge transfer from staff who are retiring and use of the Differing Professional Opinion program are also areas of opportunity for continued improvement.

The survey was conducted by the NRC's Office of Inspector General (OIG) with assistance from a contractor research firm to gain a better understanding of NRC's safety culture and climate. It is the third survey conducted; previous surveys were conducted in 1998 and 2002.

Each office and region within the NRC will receive their specific survey scores to analyze and develop future improvements for their organizations. In addition, a management team will determine whether there are any agency-wide areas that need additional attention.

*The 2005 report is now available on the NRC's web site at <http://www.nrc.gov/reading-rm/doc-collections/insp-gen/2006>.*

## NRC Releases 2007 Budget Request

On February 6, the U.S. Nuclear Regulatory Commission released its proposed budget for fiscal year 2007, requesting \$777 million – an increase of \$35 million over its FY 2006 budget. The agency's Nuclear Reactor Safety program, which includes review of new power plant license applications, saw an increase of \$22 million – reflecting the anticipated receipt of new power plant license applications.

The budget reflects a decrease of about \$18 million for the Nuclear Materials and Waste Safety program in light of the potential delay in the Department of Energy's application for the high-level waste repository at Yucca Mountain, and other program changes. The proposed budget also includes an increase of approximately \$10 million to fund federal pay raises and other compensation and benefits increases, and an increase of \$21 million for the agency's infrastructure and support activities.

Specific funding levels include:

- ◆ \$ 341.3 million for reactor licensing, including security reviews and activities;
- ◆ \$ 222 million for reactor inspection, including security oversight;
- ◆ \$ 205.1 million for nuclear materials and waste safety; and
- ◆ \$ 8.1 million for the Inspector General.

The proposed budget is offset by \$627.7 million from fees the NRC collects from its licensees and \$41 million from the Nuclear Waste Fund, resulting in a request from the General Fund of \$107.9 million.

*More details on the NRC proposed 2007 budget can be found on the agency's web site at [www.nrc.gov](http://www.nrc.gov).*

## To Obtain Federal Government Information

### by telephone

- DOE Public Affairs/Press Office ..... (202) 586-5806
- DOE Distribution Center ..... (202) 586-9642
- DOE's National Low-Level Waste Management Program Document Center ..... (208) 526-6927
- EPA Information Resources Center ..... (202) 260-5922
- GAO Document Room ..... (202) 512-6000
- Government Printing Office (to order entire *Federal Register* notices) ..... (202) 512-1800
- NRC Public Document Room ..... (202) 634-3273
- Legislative Resource Center (to order U.S. House of Representatives documents) ..... (202) 226-5200
- U.S. Senate Document Room ..... (202) 224-7860

### by internet

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

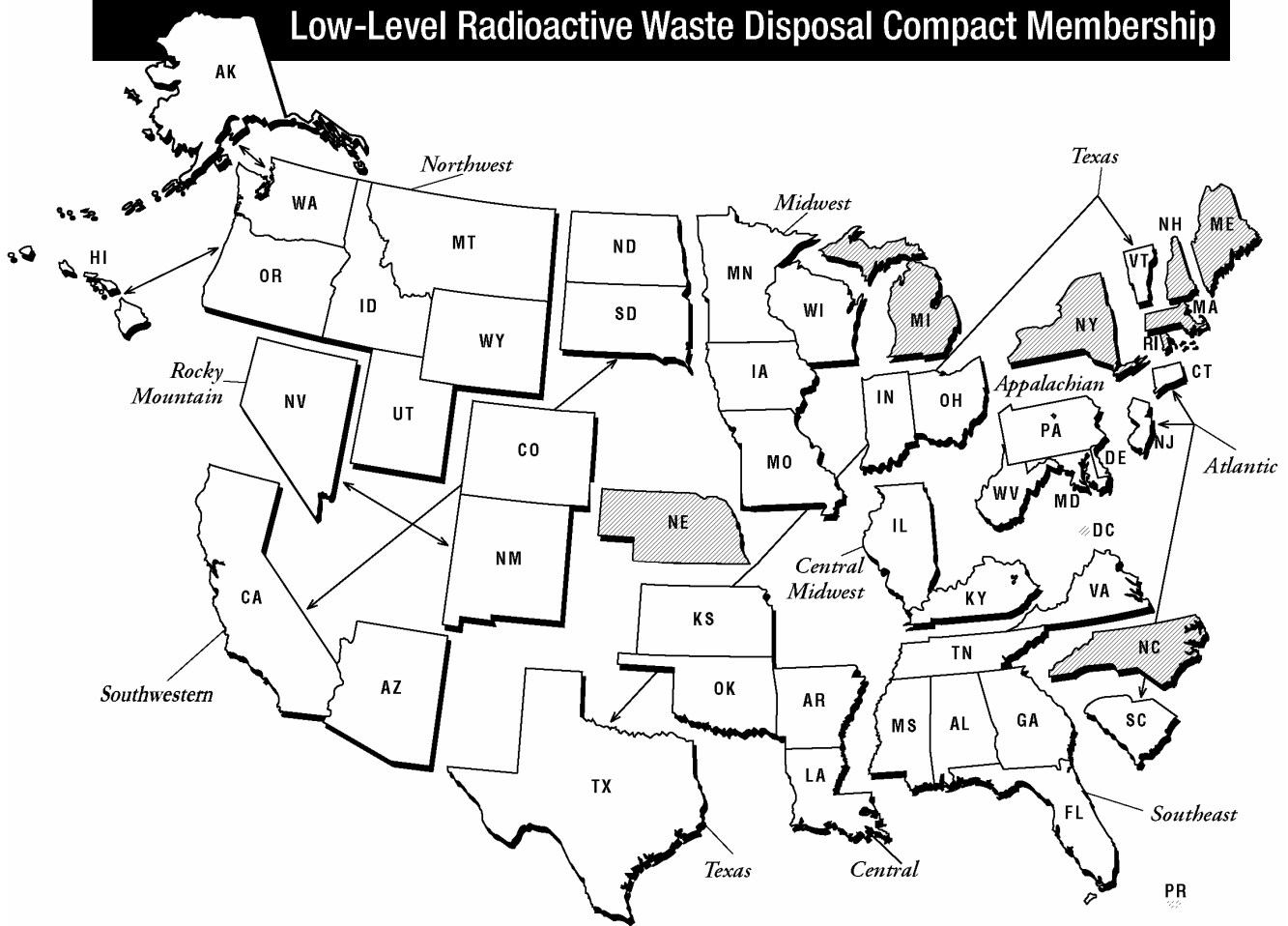
**To access a variety of documents through numerous links, visit the web site for the LLW Forum, Inc. at [www.llwforum.org](http://www.llwforum.org)**

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

*LLW Notes*, LLW Forum Meeting Reports 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 LLW Forum Meeting Reports are also available on the LLW Forum web site at [www.llwforum.org](http://www.llwforum.org). The *Summary Report* and accompanying Development Chart, as well as LLW Forum News Flashes, 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.

# Low-Level Radioactive Waste Disposal Compact Membership



**Appalachian Compact**

Delaware  
Maryland  
Pennsylvania  
West Virginia

**Atlantic Compact**

Connecticut  
New Jersey  
South Carolina

**Central Compact**

Arkansas  
Kansas  
Louisiana  
Oklahoma

**Central Midwest Compact**

Illinois  
Kentucky

**Northwest Compact**

Alaska  
Hawaii  
Idaho  
Montana  
Oregon  
Utah  
Washington  
Wyoming

**Midwest Compact**

Indiana  
Iowa  
Minnesota  
Missouri  
Ohio  
Wisconsin

**Rocky Mountain Compact**

Colorado  
Nevada  
New Mexico

*Northwest accepts Rocky Mountain waste as agreed between compacts*

**Southeast Compact**

Alabama  
Florida  
Georgia  
Mississippi  
Tennessee  
Virginia

**Southwestern Compact**

Arizona  
California  
North Dakota  
South Dakota

**Texas Compact**

Texas  
Vermont

**Unaffiliated States**

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