Bush Administration 2009 Waste/Cleanup Budget Request

The Bush administration has proposed spending $25 billion on U.S. Department of Energy projects for fiscal 2009, an increase of more than $1 billion from the fiscal 2008 appropriation. The waste and cleanup budget requests are as follows:

- Office of Civilian Radioactive Waste Management: $494.7 million, a $108 million increase over the fiscal 2008 appropriation. The primary focus of the funding will be for the submission of and support for the DOE's license application to the U.S. Nuclear Regulatory Commission for authorization to construct and operate the nation's repository for spent nuclear fuel and high-level waste.
- Office of Environmental Management (EM): $5.5 billion, to clean up Cold War–era legacy waste at sites across the country. Funding is focused on activities that will yield the greatest risk reductions while achieving environmental cleanup: stabilizing radioactive tank waste in preparation for treatment (about one-third of the total EM budget request); storing and safeguarding nuclear materials and spent fuel (about 20 percent of the budget request); and remediation and decontamination and decommissioning of excess facilities (about 23 percent of the budget request). The amount requested will also enable the completion of cleanup at the DOE's Sandia National Laboratories and Argonne National Laboratory by the end of 2009.
- Office of Legacy Management: $186 million, for long-term stewardship responsibilities at DOE sites where active remediation has been completed.

NRC's ACNW&M to Merge with ACRS

The U.S. Nuclear Regulatory Commission'sAdvisory Committee on Nuclear Waste & Materials (ACNW&M) will be merged with the Advisory Committee on Reactor Safeguards (ACRS), with the merger to be completed by the end of May.

The ACNW&M will continue to meet until that time to complete work already on its agenda. That work includes several letter reports to the Commission on issues related to the proposed high-level waste repository at Yucca Mountain; the health effects of low radiation doses; the NRC staff's strategic assessment of low-level waste regulation; use of burnup credit in transportation of spent nuclear fuel; and the recommendations of the International Commission on Radiological Protection on collective dose estimates. The committee will also complete a white paper on the Resource Conservation and Recovery Act and LLW disposal.

"With the committee's work coming to an end, the time is right to use the members' expertise in health physics and other specialties in areas where they will be in increasing demand—namely, in licensing of new reactors and other nuclear facilities," said Dr. Michael Ryan, chairman of the ACNW&M.

Once the ACNW&H completes its work in May, the committee's members will be offered positions as consultants to the ACRS.

Once the ACNW&M completes its work in May, the committee's members will be offered positions as consultants to the ACRS. The ACRS has a current vacancy, which it intends to fill with an expert in nuclear materials and radiation protection. That new member will serve as a subcommittee chairman in charge of issues formerly covered by the ACNW&M.

Yucca Mountain Updates

- The Yucca Mountain license application will be submitted by the end of June, despite the $108 million budget cut the project has suffered for fiscal 2008, according to Ward Sproat, director of the U.S. Department of Energy's Office of Civilian Radioactive Waste Management. Speaking at the U.S. Nuclear Regulatory Commission's Regulatory Information Conference in March, Sproat said he was confident that the application will be of sufficient quality to enable it to be docketed by the NRC for more thorough safety reviews and hearings. [For more on the Regulatory Information Conference, see "Yucca Mountain: Healthy or on Its Deathbed?" this issue, page 44.]

- In late January, Sen. James Inhofe (R-Okla.), ranking member of the Senate's Environment and Public Works Committee, introduced a bill, the Nuclear Waste Policy Amendments Act of 2008, to accelerate the licensing of the Yucca Mountain nuclear waste repository by reducing the licensing period to 300 years. During this time, a long-term science and technology program would be established to monitor and analyze the repository's performance and to conduct research into technologies that would improve the facility. The repository license will be amended every 50 years, at a minimum, to incorporate these improvements. During this phase, waste would remain retrievable so that future generations may recover valuable material or upgrade disposal systems, for example. In addition, the change would delay the need for a radiation protection standard from the U.S. Environmental Protection Agency. Cosponsors of the bill include Sens. John Barrasso (R-Wyo.), Larry Craig (R-Idaho), Lamar Alexander (R-Tenn.), Kit Bond (R-Mo.), Mike Crapo (R-Idaho), and Jim DeMint (R-S.C.).
- The U.S. Environmental Protection Agency's radiation protection standard for a high-level waste repository at Yucca Mountain is still in interagency review, and there are no projections on when the regulation might be ready, an EPA representative said in mid-January. The interagency review includes the EPA, the U.S. Department of Energy, the U.S. Nuclear Regulatory Commission, and the White House Office of Management and Budget. Issues in contention include such things as where at the site radiation doses would be measured, as well as the EPA decision to use an arithmetic means in setting the dose limit for the first 10 000 years and a median limit for the balance of the one-million-year period. The NRC's repository requirements must be based on the EPA standard, and until one is promulgated, the NRC cannot make a licensing determination.
- Between 500 and 1000 employees of the U.S. Department of Energy's Repository Program could be laid off before the end of the current fiscal year. The layoffs are due to the $108 million shortfall in appropriated funding. The program had some 2400 workers at the beginning of the year. Bechtel SAIC, the prime contractor for the program, laid off 63 of its workers at the end of January, another 70 to 80 in February, and more in March. Additional staffers could be let go in the April–June time frame. In addition, most consultants and many other contract employees have been let go.
- The U.S. Department of Energy's Office of Inspector General (OIG) has found the agency's lack of documentation on its selection of a legal services contractor for the Yucca Mountain project "disturbing." The DOE hired Morgan, Lewis, and Bockius LLC last year to help with the preparation of the license application for the repository. Its consideration of Morgan Lewis for the 2007 contract reversed an earlier DOE prohibition against hiring law firms to work on repository matters if these firms also represented utility clients in their lawsuits against the DOE over the agency's failure to take possession of spent fuel by the January 31, 1998, date mandated in the Nuclear Waste Policy Act of 1982. The OIG said the DOE did not document its rationale for that apparent shift in procurement strategy or its comparative analysis of bids that led to the selection of Morgan Lewis. The OIG did not say it found a conflict of interest in the selection.

DOE D&D Progress

- In mid-March, the U.S. Department of Energy released an "Engineering and Technology Roadmap" detailing initiatives aimed at reducing the technical risks and uncertainties associated with cleaning up Cold War–era nuclear waste over the next 10 years. Specifically, the Roadmap consists of 13 strategic initiatives that address anticipated technical risks and uncertainties in the following six areas: waste processing; groundwater and soil remediation; deactivation and decommissioning and facility engineering; spent nuclear fuel; challenging materials; and integration and cross-cutting initiatives. The DOE's national laboratories, led by Savannah River National Laboratory, will spearhead the integration of these engineering and technology efforts, the DOE said.
- The 100 000th container of transuranic (TRU) waste was safely disposed of at the DOE's Waste Isolation Pilot Plant near Carlsbad, N.M., the DOE announced in April.
- The DOE has safely processed more than 1 million gallons of decontaminated salt solution at the Savannah River site, mixing the solution into a cement-like material and pouring it into vaults, the DOE announced in mid-March. The 1 million gallons of material was processed to support Defense Waste Processing Facility operations and tank closure work. "This processing milestone demonstrates real progress in the safe removal and permanent disposition of low-activity salt waste and supports the DOE's ultimate priority to close our tank farm system and reduce risk," noted Terrel Spears, assistant manager for the SRS Waste Disposition Project.
- The DOE is accelerating groundwater cleanup efforts near the Hanford Site's K East Reactor building. The work is being funded as part of a $10 million fiscal 2008

congressional plus to speed cleanup along the Columbia River Corridor. The contamination resulted from discharges of reactor effluent into a long trench next to the Columbia River. During production years (1950s and 1960s), sodium dichromate was added to the water that cooled the reactors to prevent corrosion of the process tubes. The water was then discharged into the trench. Construction of the pump-and-treat facility began last year and was originally scheduled to be phased over three years. The additional funding will allow contractor Fluor Hanford to finish construction a year earlier than originally planned. The treatment system will pump contaminated water from the ground and remove the chromium from the water.

Also at K East, the DOE has finished draining the K East spent fuel basin, the DOE announced in mid-March. Workers began draining the basin in February and transported the contaminated water to a treatment facility on the Hanford site. The basin contained roughly 1 million gallons of water, the DOE said. The basin will now be filled with a sand-like material.

- An innovative waste treatment approach that removes aluminum from Savannah River Site tank waste will ultimately eliminate approximately 100 canisters of vitrified waste from the lifecycle cost of treating this waste. By eliminating most of the aluminum in the sludge waste, thousands of gallons of waste will not have to be sent to the Site's Defense Waste Processing Facility for vitrification. Reducing the number of canisters produced by 100 will save approximately $40 million in radioactive waste disposal lifecycle costs, the DOE said. The aluminum waste solution will eventually be treated at the Salt Waste Processing Facility and put into above-ground storage vaults at the Saltstone Disposal Facility on the site.

International Briefs

- The funding model of the United Kingdom's Nuclear Decommissioning Authority (NDA) is "unsustainable," a report by the House of Commons Business and Enterprise Committee states. The report expressed concern that the NDA funding accounts for more than 40 percent of the total budget of the U.K. Department of Business, Enterprise and Regulatory Reform (BERR). NDA funding is made up of a combination of government funds and income from commercial operations, including reprocessing and sales of electricity from Magnox stations remaining in operation at Wylfa and Oldbury. The NDA also hopes to receive funds from waste substitution contracts that have been drawn up with reprocessing customers, in which smaller quantities of higher level waste are returned to customers, instead of larger quantities of low- and intermediate-level waste. The committee's report states, however, that there is confusion on just when the NDA will be able to make use of the funds arising from the substitution contracts.

A separate report by the U.K. National Audit Office (NAO) stated that the NDA needs to revise its methods of estimating long-term costs and progress to put escalating figures in perspective. The NDA has faced criticism for its revised cost estimates for cleaning up the country's nuclear legacy. The estimated cost of this 100-year project, which includes decommissioning 26 Magnox reactors; the Dounreay, Windscale, Harwell, and Winfrith research sites; and the Sellafield complex, has risen from a 2005 estimate of £63 billion (around $126 billion) to £73 billion (about $146 billion). The report agreed that the cost increase was a result of a greater understanding of the task ahead, but added that it expected medium-term cost estimates to be settled by now, whereas cost estimates for the first five-year period rose by more than 40 percent between 2005 and 2007.

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- Japan Nuclear Fuel Ltd. announced in March that the scheduled completion of its Rokkasho reprocessing plant has been pushed back from February to May. It also announced that the amount of fuel reprocessed in the financial year ending March 31, 2008, had been reduced from 315 tonnes to 210 tonnes. Plans now call for the plant to reprocess 395 tonnes, 480 tonnes, and 640 tonnes, respectively, over the following three years. Starting in financial year 2011, reprocessing will proceed at an annual rate of 800 tonnes, the company said.
- The Cumbria County Council's Development Control and Regulation Committee has given planning permission for a new vault to store low-level radioactive waste at the U.K.'s Drigg LLW disposal site. Vault 9, with a total capacity of 5500 ISO steel containers, is expected to receive around 700 ISO containers per year, with two-thirds of the waste coming from Sellafield and the rest coming from Ministry of Defense sites, nuclear power plants, hospitals, universities, medical companies, and the oil industry. The vault will have an operational life of around eight years.
- Mining authorities in the German state of Lower Saxony have awarded the final permit needed to begin onsite engineering and construction work to convert the former Konrad iron mine into a national repository for low- and medium-level radioactive waste. The awarding of the license should allow the Federal Radiation Protection Agency to open the facility in 2013. Konrad has been under development as a radwaste disposal project since 1975.
- In early April, France's Nuclear Safety Authority (ASN) issued a draft policy on decommissioning, open to public comment through May 31. The draft policy recommends that French nuclear installations licensees adopt immediate dismantlement strategies rather than postponing decommissioning work. Deferring decommissioning work presents both technical and socio-economic risks, including funding availability, the ASN draft policy stated.
- The U.K.'s Nuclear Decommissioning Authority (NDA), which owns the largest civilian separated stockpile of plutonium in the world, is seeking contractors to provide plutonium disposition advice. NDA has also spent the past two years conducting studies and talking with public stakeholder groups on the issue. The options are to convert the plutonium into fuel for new reactors, immobilize it for underground deep disposal, or put it into storage pending future decisions.