

Budget Cuts Threaten Yucca Mountain License Application; Other Yucca Mountain Updates

Senate Majority Leader Harry Reid (D-Nev.), a longtime opponent of the proposed Yucca Mountain high-level waste and spent fuel repository, succeeded at the end of 2007 in cutting the fiscal 2008 budget for the project by more than \$100 million. The Bush administration's budget request for the fiscal year was \$494 million; the final appropriation was \$390 million, the lowest award since the Yucca Mountain site was approved in 2002. Reid commented, "It is clear that the Yucca Mountain Project is a dying beast and I hope that this cut in funding will help drive the final nail into its coffin."

Ward Sproat, director of the U.S. Department of Energy's Office of Civilian Radioactive Waste Management, has warned of delays to the program, including a delay in the submittal of the license application, if the budget requests are not met. Sources close to the project, however, predict that the license application will be submitted on time (by the end of June 2008), but that most other work at the project will be suspended, resulting in large layoffs of both DOE and contractor staffers.

- In mid-December, the U.S. Nuclear Regulatory Commission ruled that the DOE's certified database on the Licensing Support Network for the Yucca Mountain

Project is complete. The LSN is an extensive online library of documents relating to the license application. The database must be declared complete at least six months prior to submission of the license application. In making the ruling, the NRC rejected the state of Nevada's petition to strike the DOE's certification of the document collection.

In other Yucca Mountain news, two independent assessments of the Yucca Mountain quality assurance and engineering programs concluded that the QA and engineering processes and procedures were consistent with standard nuclear industry practices.

EnergySolutions To Undertake Zion D&D

Exelon Nuclear, owner of the shutdown two-unit Zion nuclear power plant, has contracted with EnergySolutions to decommission the plant by removing the two reactors; dismantling all structures and support buildings and debris; and returning the site to its original state. The station's license and decommissioning funds will have to be transferred to EnergySolutions before it can take possession of the site to carry out the decommissioning work. This will require approval of the U.S. Nuclear Regulatory Commission, expected during the latter half of 2008.

The decommissioning is expected to be completed in 2018, at which time the property will be returned to Exelon for as-yet unspecified future use. Originally, Exelon had planned to begin Zion D&D in the 2020s, although completion of the process could have extended to the middle of the century.

According to EnergySolutions CEO Steve Creamer, "This project launches our license stewardship strategy whereby we conduct decommissioning and site restoration work as both owner and licensee." The company also operates a low-level waste disposal facility in Clive, Utah.

The two 1098-MWe pressurized water reactors on the Zion site started operation in 1973 and 1974, and were officially shut down in 1998. Spent fuel currently stored in the reactors' spent fuel pools will be moved to a dry cask storage facility to be constructed onsite and will remain under Exelon control until it is transferred to a permanent repository.

Work Begun at Hanford River Corridor High-Risk Waste Site

In early January, workers at Washington Closure Hanford began work on the first high-risk burial ground since being approved to do such work by the U.S. Department of Energy in November 2007. Work on the 618-7 Burial

Ground is considered high-risk because of its proximity to the town of Richland, Wash., and to the Columbia River, as well as because of the potential waste that could be encountered. The burial ground was used from 1960-73 as a disposal site for reactor fuel fabrication and laboratory process debris, including radioactive and hazardous wastes.

The 618-7 Burial Ground, about 10 acres in size, contains three burial trenches, one of which is known to contain thorium-contaminated wastes believed to be from research and development activities. It is located directly across the highway from Hanford's 300 area, which is located on the banks of the Columbia River, and about one mile north of Richland.

To help minimize the risk of exposure to workers, only five drums within the excavation will be exposed at any time, and only one drum will be removed from the excavated area until its contents have been identified and stabilized, if necessary. For additional protection, workers at the dig face will be suited in protective clothing and breathing supplied air. Any drums in poor condition will be placed in new containers and stabilized. Intact drums will be opened inside a specially equipped enclosure. Once it is ready for transport, the exhumed waste will be sent to the onsite Environmental Restoration Disposal Facility or to an offsite facility for treatment and disposal. Cleanup work at the site is expected to take about a year.

Industry news ▼**EnergySolutions Seeks Approval for Waste Import from Italy**

EnergySolutions has asked the U.S. Nuclear Regulatory Commission for permission to import some 1600 tons (one million cubic feet) of low-level radioactive waste from Italy. The waste would be processed, burned, and/or recycled at a Tennessee facility, and the remains would be sent to the company's LLW burial facility in Clive, Utah. This marks the largest volume of foreign waste that the NRC has ever considered for processing and disposal in this country.

GAO: Enrichment Plant D&D Fund Insufficient to Cover Plant Cleanups

A study by the Government Accountability Office, the investigative arm of the U.S. Congress, indicates that the Uranium Enrichment Decontamination and Decommissioning Fund, established by the 1993 Energy Policy Act, will be insufficient to cover all authorized activities in cleaning up the nation's three uranium enrichment plants. The study report stated that cleanup costs could exceed revenues by between \$3.8 billion and \$6.2 billion (in 2007 dollars).

The GAO urged the U.S. Department of Energy to prepare decommissioning plans for the three facilities. Until

such plans are available, the GAO said, it is not possible to more precisely determine the total funding needed to cover the authorized cleanup activities.

The report, "Uranium Enrichment: Extension of Decontamination and Decommissioning Fund May Be Needed to Cover Projected Cleanup Costs," (GAO-08-277T), based on testimony before the Senate Committee on Energy and Natural Resources, was issued November 15, 2007. It can be found on the Internet at www.gao.gov.

GNEP Steering Group Meeting Outlines Priorities, Sets Cooperative Activities

In December, the U.S. Department of Energy's Global Nuclear Energy Partnership held its first steering group meeting, with representatives from GNEP's 19 countries developing and adopting an action plan detailing the groundwork for future cooperation. The three-day meeting was held at the International Atomic Energy Agency (IAEA) headquarters in Vienna, Austria. During the meeting, the United States was elected to serve as chair of the group, with China, France, and Japan serving as vice-chairs. The chair and vice-chairs will serve two-year terms.

The action plan named two key working groups to ad-

dress issues facing the safe and secure global expansion of civilian nuclear energy. The GNEP Working Group on Infrastructure Development aims to identify common interests among partners, recommend practical measures, and carry out activities necessary to address critical elements needed for the development and implementation of an effective nuclear energy infrastructure. The GNEP Working Group on Reliable Nuclear Fuel Services will identify common interests among GNEP partners and recommend practical measures for moving toward reliable, comprehensive fuel arrangements, including spent fuel management.

The Steering Group also discussed the ongoing expansion of the partnership and heard presentations by the IAEA on nuclear energy subjects relevant to the future work of GNEP to help ensure that the partnership's efforts enhance, rather than duplicate, the work under way by the IAEA.

Spent Fuel Storage

On the last day of 2007, workers at the Indian Point-2 nuclear power plant began transferring fuel from the plant's spent fuel pool to dry casks. Three casks will be loaded with IP-2 spent fuel and a further five casks will

be loaded with fuel from the long-shutdown Indian Point-1 plant. The pool at IP-1 will then be drained because it is suspected of leaking radioactive water into the ground.

- In other dry storage news, the dry cask storage facility at Entergy Nuclear's Vermont Yankee plant is due to start operation this spring. The facility is starting out with five casks, at an estimated cost of \$1 million per cask. Each cask will hold about 68 spent fuel assemblies.

Savannah River Site To Be Used for Army Training?

The U.S. Army is eyeing the Savannah River Site as a potential location for training light infantry units in battle exercises, according to a report in *USA Today*. The exercises could involve anywhere from a handful of troops to several thousand. The attractions of the site include its isolation, the fact that only about 10 percent of its 310 square miles is in use, its challenging terrain (swamps, timberland, and some areas intersected with roadways), and its darkness (there are no major cities nearby). Before any such use can begin, an environmental assessment must be conducted, and the Energy Department must approve the Army's request. Training would not begin before 2009 in any case.

International Briefs

- On December 17, the first shipment of Caorso spent fuel from Italy to France was completed. The fuel went to the La Hague reprocessing facility for reprocessing, under terms of an agreement between the Italian decommissioning company, Societa Gestione Impianti Nucleari (Sogin), and France's Areva. The deal covers the treatment of 235 tonnes of irradiated fuel still in Italy, of which 190 tons will come from the Caorso boiling water reactor plant, 32 tonnes from the pressurized water reactor plant at Trino, and 13 tonnes from the BWR in Garigliano. The shipments of Caorso fuel will take three years to complete; the rest of the fuel will be shipped over an additional two years. Italian nuclear power plants shut down in 1990 after an Italian referendum on nuclear power following the 1986 Chernobyl nuclear accident.
- The European Commission is evaluating potential legislative measures in the area of transport of radioactive materials. Among the issues of concern are:
 - Inconsistencies in the way that applications for approval of packages, shipments, etc. are considered by competent authorities in different countries.
 - Lack of information available on local restrictions on routes of radioactive material shipments.
 - Variations between member states in the requirements relating to the security of radioactive material during transport.

According to a recent European Commission survey, the transport of radioactive materials is one of the major fears of European citizens concerning radioactive waste; indeed, seven out of ten EU citizens believe that even the transport of low-level radioactive waste presents a risk.

- Most of Sellafield's overseas customers have chosen "waste substitution" as the way to account for the lower level radioactive wastes that result from reprocessing spent fuel at the United Kingdom's Thorp facility. Under this program, customers take back a smaller quantity of high-level waste in lieu of the bulkier intermediate- and low-level wastes. Most utilities favor this option because it simplifies waste return arrangements and reduces the number of waste transports required. The extra HLW is radiologically equivalent to the lower level wastes generated, which in turn are retained in the U.K.

- SKB, the Swedish nuclear waste company, has been granted a license to operate the extended central interim spent fuel storage facility (Clab) at Oskarshamn. The license allows the company to operate a second spent fuel pool at the facility. The original spent fuel pool was commissioned in 1985 and has a storage capacity of some 5000 tonnes of uranium. With the addition of the second pool, the facility now has a storage capacity of 8000 tonnes. Currently, about 4500 tonnes of spent fuel are being stored at Clab. ■