

## Interior Rulings Deal Severe Blow to Private Fuel Storage

In early September, the U.S. Department of Interior made two decisions that appear to severely threaten the viability of the plans of Private Fuel Storage LLC to store spent nuclear fuel on an Indian reservation in Utah. PFS is a consortium of eight utilities. It received a license from the U.S. Nuclear Regulatory Commission last February to build and operate the spent fuel storage facility.

In one ruling, Interior's Bureau of Indian Affairs (BIA) rejected the proposed leasing of land by the Skull Valley

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Band of Goshute Indians to PFS. BIA acknowledged that the leadership of the Goshutes had urged Interior to approve the project so that the tribe could get economic and other benefits of having the facility on tribal land, but said that uncertainties of spent fuel storage made it incompatible with the long-term safety and welfare of the tribe. A condition in the NRC license prohibited PFS from beginning construction on the facility until the BIA had taken action.

In a separate ruling, the Bureau of Land Management (BLM) denied permission for PFS to build a rail spur on federal land to bring spent fuel to Skull Valley, citing lack of sufficient police protection at the storage site, questions about when the spent fuel would be removed from the facility, potential adverse impacts on the nearby, newly designated Cedar Mountain Wilderness Area, the uncertainty about whether large trucks carrying spent fuel to PFS

could be safely operated on small reservation roads, and the inability of the Interior Department to carry out its oversight responsibilities for private lease operations on reservations, given the highly technical nature of nuclear waste storage. BLM also denied the PFS application seeking authorization to construct an intermodal transfer facility on public land.

The Interior decisions were a huge victory for the Utah congressional delegation, which has strongly opposed the PFS project. Senator Orrin Hatch (R-Utah) declared that the rulings have killed the project completely. PFS, on the other hand, through a spokeswoman said that it was premature to call the project dead, and that the consortium was considering its options for moving ahead with the project.

## Court: DOE Must Pay \$143 Million in Spent Fuel Costs

On September 30, a federal court ordered the U.S. Department of Energy to pay the owners of three shutdown nuclear power plants \$143 million (roughly 80 percent of what the utilities sought) to cover the costs that utilities have incurred as a result of the DOE's failure to take possession of spent nuclear fuel on schedule.

The U.S. Court of Federal Claims decision was exclusively about how much the DOE owed the owners of the three Yankee plants: Maine Yankee, in Wiscasset, Me.; Connecticut Yankee, in Haddam Neck, Conn.; and Yankee Atomic, in Rowe, Mass. All three plants have been shut down for some time, and have finished or are just finishing up decommissioning work. Judge James Merow ordered the DOE to pay Yankee Atomic \$32.866 million; Connecticut Yankee, \$34.155 million; and Maine Yankee, \$75.775 million. The utilities have stated, however, that they expect the DOE to appeal the decision.

Other courts have concluded that the DOE breached the standard contracts that the department has with the nation's utilities, committing the government agency to taking possession of spent fuel from the utilities' reactor sites by January 31, 1998, for disposal in a deep geological repository. However, the repository project has been seriously delayed, and the earliest possible opening date

for the Yucca Mountain repository is 2017. In January, a court awarded the Tennessee Valley Authority \$34.9 million to cover spent fuel management costs for Sequoyah and Browns Ferry. A few other utilities have settled their cases.

On the other hand, Indiana Michigan Power Co., owner of the D. C. Cook nuclear plant, was awarded no damages, even though the DOE was found to be in breach of contract with that utility. That decision was based on the fact that the utility had not invested any money in a dry fuel storage facility at the time it filed the lawsuit. In general, the courts have been willing to reimburse utilities only for costs incurred up to the time of the filing of the lawsuit. Industry officials have speculated that this means utilities will likely be planning to sue again, for costs incurred between the time they filed the first lawsuit and when the DOE finally is able to take possession of their spent fuel.

Merow's decision contained one interesting feature in that he ruled that the DOE is obligated under the standard contract to assume responsibility for greater-than-Class C waste, which generally includes reactor vessel internals. A prior court ruling, involving the Sacramento Municipal Utility District, held that the DOE's contract did not cover this type of waste.

### **Domenici Yucca Mountain Bill Introduced in Senate; Other Yucca Mountain Updates**

In late September, shortly before Congress adjourned for the fall campaign, Sen. Pete Domenici (R-N.M.) introduced his long-awaited "fix Yucca Mountain" bill. The bill's plan, "Nuclear Waste Acceleration to Yucca, or NUWAY," would authorize commercial nuclear power plants to begin sending spent fuel to Nevada for temporary on-site storage by late 2011, or as soon as the U.S. Department of Energy receives a U.S. Nuclear Regulatory Commission license to operate the spent fuel/high-level waste repository at Yucca Mountain, which is adjacent to the nation's Nevada Test Site. It would also authorize the DOE to begin moving defense HLW to an above-ground storage facility at the NTS as soon as the repository is li-

censed. According to Domenici, this expedited shipping schedule would shave more than seven years from the DOE's current schedule for shipping defense waste to Nevada, and more than five and a half years from the schedule for shipping commercial spent fuel to the mountain.

Just a few days earlier, the nuclear industry's Nuclear Energy Institute introduced its own "fix-Yucca" legislation, The Used Nuclear Fuel Management Improvement Act, which, in addition to authorizing interim storage of commercial spent fuel at the NTS prior to emplacement in an operating repository, would also override a court decision requiring million-year radiation release standards for the repository and would streamline the NRC's process for reviewing a repository license application. The legislation would also require the DOE to sign contracts with the owners of any potential new nuclear power plants obligating the DOE to assume responsibility for the plants' spent fuel, a move that would mitigate a major concern among utility executives pondering new nuclear power plants.

Given this year's shortened legislative schedule, however, neither the Domenici bill nor the NEI bill, nor any other "fix Yucca" legislation, was expected to see any action this year, and all will have to be reintroduced in the next Congress.

- The U.S. Department of Energy has instituted changes in the design of repository facilities for Yucca Mountain to accommodate the use of standardized transport/aging/disposal (TAD) canisters. Under the new design, the DOE would build four types of spent fuel handling facilities at the repository site: an initial handling facility (IHF) for Navy fuel and defense high-level waste; a canister receipt and closure facility for TAD canisters containing commercial spent fuel; a wet handling facility for commercial fuel not in TAD canisters; and a receipt facility for fuel that would need to be placed on aging pads for additional cooling prior to disposal. Under the new plan, the DOE would construct the IHF three to four years prior to building the other facilities.

- In mid-September, the U.S. Department of Energy issued three requests for proposals (RFPs) for independent reviews of the engineering, quality assurance, and license application for the spent fuel/high-level waste repository

project at Yucca Mountain. The values of the contracts for the reviews were not released. Bidders were also asked to estimate the time needed to complete the assignments.

- It would cost the U.S. Nuclear Regulatory Commission some \$300 million and require hundreds of full-time-equivalent positions to license away-from-reactor dry storage facilities in the 31 states that have operating nuclear power plants, according to testimony from Luis Reyes, the NRC's executive director of operations, before the House Energy and Commerce subcommittee. The \$300 million represents half of the agency's annual budget request for fiscal 2007. The Senate energy and water appropriations bill for fiscal 2007 contains provisions requiring the U.S. Department of Energy to site dry storage facilities on DOE-owned land in the 31 states with nuclear power plants, or to site regional facilities for the spent fuel.

### D&D Updates

- The U.S. Department of Energy and the state of South Carolina have reached agreement on salt waste cleanup at the Savannah River Site, so that between 1 million and 2 million curies will be disposed of in the site's saltstone vaults, instead of the DOE's original estimate of 3 million to 5 million curies. In particular, the new agreement limits the DOE's use of a cleanup technique known as deliquification, dissolution, and adjustment (DDA), a near-term, less-effective waste processing method. Under the agreement, DDA can be used only for the 1.23 million gallons of waste that were contained in Tank 41H in June 2003, along with associated low-level waste streams used to adjust salt levels for processing requirements. In addition, the agreement requires the DOE to treat and destroy organic chemicals contained in the 235 000 gallons of mixed waste in Tank 48H. The DOE had originally hoped to only minimally process the waste and dispose of most of its radioactive and chemical contaminants in saltstone to be buried at the site.

The DOE is planning more sophisticated chemical processing methods to be undertaken at new facilities to be built at the site over the next few years to handle the rest of the salt waste.

- Management of the Independent Spent Fuel Storage Installation (ISFSI) at the Big Rock Point site would be part of the deal if Consumers Energy succeeds in selling Palisades to Entergy. As part of the sale agreement, Consumers would pay Entergy \$30 million to assume responsibility for the ISFSI. Transferring the facility to

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Entergy would allow Consumers to get out of the nuclear business completely and would eliminate the need for the utility to continue to maintain technical staffing capability. In addition, transferring the facility to Entergy would cap Consumers's costs for the facility, which to date has cost \$55 million to construct and operate.

- CH2M Hill has completed field work to remove radioactive and chemical sludge and other solid wastes from a fifth single-shell tank on the Hanford site. At the time retrieval began, the 530 000-gallon-capacity C-103 tank held approximately 78 000 gallons of waste. The waste was removed using a technique known as modified sluicing, which uses liquids to break up and mobilize the waste and wash it to a central pump. But instead of using raw water, as has been used in other recent retrieval operations, the C-103 operation used recycled liquid waste from a nearby double-shell tank, significantly reducing the volume of waste generated.

Hanford's C Tank Farm contains 16 tanks, four of them 55 000-gallon tanks, and the other twelve 530 000-gallon tanks. Three of the smaller tanks have already been emptied, and a fourth is now being pumped. Work is under way to prepare Tank C-108 for retrieval, and plans include the start of retrieval on waste from C-109, C-104, and C-110 in the coming months.

- Construction on parts of Hanford's massive Waste Treatment Plant will continue to be halted during all of

fiscal year 2007, which began October 1. The pause on construction of the High-Level Waste and Pretreatment facilities was instituted earlier this year amid concerns about earthquake standards and a reduced budget. In the meantime, construction work will continue on the Low-Activity Waste Facility, the Analytical Laboratory, and support buildings—which are not affected by the seismic concerns.

- Since 1994, the 242-A Evaporator at the Hanford site has completed a total of 17 waste reduction campaigns, reducing Hanford's total tank waste volume by nearly 14.5 million gallons. The most recent campaign, which ran around-the-clock from August 29 to September 10, reduced nearly 600 000 gallons of liquid radioactive and chemical tank waste to a volume of about 300 000 gallons. The evaporator, which began operations in 1977, has gone through several upgrades to ensure it remains a state-of-the-art facility. According to operator CH2M Hill, it can remain in service until at least 2018.

### International Briefs

- The European Commission has approved the second phase of the SAPIERR project. The first phase of SAPIERR (Support Action on a Pilot Initiative for European Regional Repositories) concluded that there were economic benefits to having shared repositories and that efforts must be increased now if a regional repository strategy is to be implemented in the future. The objectives of SAPIERR-2 are to develop an organizational framework and project plan to facilitate development of a European Development Organization that can work in parallel with national waste agencies; to further study key issues related to economics, design, public and political attitudes, and the safety and security of shared storage and disposal facilities; and to achieve and document the consensus on a preferred way forward after 2008. The formal partners in the SAPIERR-2 project include ARAO (Slovenia), Arius (Switzerland), COVRA (the Netherlands), Decom (Slovakia), ENEA (Italy), Enviro (Spain), RATA (Lithuania), and SAM (the United Kingdom). Organizations from additional European countries will be invited to participate in an associated working group.

- The Dutch government, reversing its earlier nuclear phase-out policy, has opened the door to new nuclear plants in the Netherlands. However, before any plant can operate, and no later than 2016, the government must decide on a disposal strategy for existing high-level waste. Spent fuel can be stored until 2025, when a choice must be made among direct disposal, reprocessing, or partitioning and transmutation.

- Russia will dismantle five Victor class nuclear submarines decommissioned from the Pacific Fleet by 2010 under a joint project with Japan. Japan has allocated 20 billion yen (about \$171 million) for the project. There are around 30 decommissioned nuclear submarines moored at various ports in the Russian Far East.

- British Nuclear Fuels plc (BNFL) will most likely sell its British Nuclear Group (BNG) subsidiary in five parcels over the next three years. In August, Fluor Corp. offered to buy BNG in its entirety for £400 million (\$750), but that offer was rejected by BNFL in early September. A quick sale is anticipated for BNG's "Project Services" group, which contains around three-quarters of BNG's 800 staffers. Project Services is a specialist decommissioning and remediation contractor and consultant, working in both the United Kingdom and abroad. Fluor remains interested in the Project Services group, as does Energy Solutions International Group. BNG's one-third share in AWE Management Ltd., which manages the Aldermaston military installation, is also expected to be sold fairly quickly. The other members of that consortium, Serco and Lockheed Martin, have preemptive rights to buy BNG's share once a sale is announced. The other "parcels" of BNG are involved in site management work at Sellafield or at Magnox reactor sites.

- Separate consortia led by Babcock International Group, Energy Solutions, and Washington Group International have been put on the short list to submit bids for the U.K. Nuclear Decommissioning Authority's contract to manage the country's low-level radioactive waste disposal facility at Drigg. The contract could be worth between £200 million and £500 million (\$370 million and \$925 million), depending on the work's scope. Bid documents must be returned by late January, and the contract award will most likely be announced in October 2007. ■