

Taxpayers, not Waste Fund, Must Pay for DOE Defaults

A federal appeals court ruled on September 24 that billions of dollars in damages the U.S. Department of Energy is likely to owe to nuclear reactor owners for its failure to store nuclear waste will have to come from taxpayers, not electricity consumers. The DOE signed contracts with reactor owners in the early 1980s promising to accept their wastes for burial beginning in January 1998, in exchange for payments based on electricity production. To date, reactor owners have paid more than \$10.5 billion. But the DOE currently says it cannot take waste until 2010, when the Yucca Mountain repository is scheduled to begin operations, and the operators of the reactors are suing because they have been forced to build storage facilities on their reactor sites.

Estimates of the damages run from \$2 billion to \$60 billion, and the decision, from the 11th U.S. Circuit Court of Appeals in Atlanta, twice used the word “nebulous” to describe them. At the National Association of Regulatory Utility Commissioners, which is made up of state officials, Brian O’Connell, the director of the Nuclear Waste Program office, said the number would run “in the billions.” He said that one utility, Northern States Power of Minnesota, put its costs at \$1 billion because it might be forced to shut three reactors prematurely for want of storage space for the radioactive waste.

The only settlement so far is much smaller. The DOE and the owners of the three-reactor Peach Bottom plant agreed on \$80 million, to pay extra costs for storing the wastes onsite. But 13 other reactor owners sued to block the deal, because the money would have come from the Nuclear Waste Fund, money from power customers that they said was supposed to be used only to open a permanent repository. In its ruling, the appeals court stated that money in the fund can be used only for permanent disposal. The court said that the Nuclear Waste Policy Act, the law that allowed the contracts, called for a quid pro quo “in which each utility roughly pays the costs of disposing of its waste and no more.” The plan, the court said, was for a system in which the burden of the government’s breach of contract would “fall on the government, not other utilities.”

Closing the Curtain on Ward Valley

In mid-September, the long saga of the Ward Valley low-level waste disposal site came to a not-unexpected end. California Gov. Gray Davis (D) signed into law a bill that removes Ward Valley from consideration as an LLW disposal site, and requires that any future site in the state contain engineered and natural barriers. The bill outlaws any use of shallow-land burial for LLW.

The bill, AB2214, sponsored by Assemblyman Fred Keeley (D), mandates that any LLW disposal site would

have to be designed and constructed with an engineered vault system with multiple barriers to contain the waste for at least 500 years. The facility would have to provide visual or remote monitoring to detect potential or actual releases, and would have to be sited where soils and hydrology would help minimize the migration of radioactive material if the barriers fail. Finally, the bill specifies that the state Department of Health Services cannot license any site unless there is a preponderance of evidence that the Colorado River or other agricultural or drinking water supply would not be contaminated by the LLW.

The remote Ward Valley desert site was selected as an LLW disposal site for the Southwestern Compact in 1988. Southwestern Compact states include, in addition to California, Arizona and North and South Dakota. The project came to a halt, however, when the Clinton administration refused to transfer federal land on the site to the state. Gov. Davis went along with the administration when he took office in 1999. A lawsuit against the state by site developer US Ecology is still ongoing.

A statement by the California Radioactive Materials Management Forum noted that the state is now “without a means, and . . . not even a plan, for disposal of [LLW] produced by beneficial activities in research, medicine, and energy production.”

NRC Provides Guidance on Dry Storage of High-Burnup Fuel

The U.S. Nuclear Regulatory Commission closed a gap in its regulatory framework in late July by releasing guidance on dry storage of high-burnup fuel. Up to now, there has been no guidance on removing such fuel from storage pools.

The NRC staff had previously favored placing high-burnup fuel in special metal containers and then putting those cans in dry storage containers. The reason for this double encapsulation was the fact that it was thought that high-burnup fuel could be subject to cladding damage once removed from wet storage. An EPRI study, however, found that the cladding would maintain integrity once placed in dry storage. Thus, the NRC concluded, double packaging is unnecessary.

The amount of high-burnup fuel in storage at nuclear reactors is currently small, but by 2007, industry experts predict, such fuel will make up more than 90 percent of spent light-water reactor fuel assemblies to be put in storage.

Milestones

- The U.S. Department of Energy and Fluor Fernald completed demolition of the Safety and Health Building at the Fernald site, marking the demolition of 107 site structures

since 1994 and 12 structures during 2002. With this project complete, Fernald has reached close to the half-way point (48 percent) in site demolition.

The next major demolition project is the five-story Pilot Plant, where workers during the Cold War developed operating prototypes for all phases of Fernald production processes. Within five months after the U.S. Atomic Energy Commission broke ground for the uranium-processing facility in 1951, the Pilot Plant began operations. Fernald is also in the process of relocating workers from the 73 876-square-foot Analytical Laboratory to prepare for decontamination and demolition. During the production years, lab technicians conducted routine analyses for the major uranium processing facilities and later provided analytical services for the cleanup projects. The Fernald cleanup and closure project is on schedule for completion in late 2006.

- The West Valley Demonstration Project completed its high-level radioactive waste vitrification program in late September. The project was brought to a conclusion following system flushing and shutdown of the glass melter. During its six-year run, the vitrification project successfully solidified more than 600 000 gallons of high-level liquid radioactive waste into glass, encased in 277 stainless steel canisters. Each canister weighs approximately 2.5 tons and contains some 86 000 curies. The solidified waste will remain in temporary storage at West Valley until it is eventually shipped to a nuclear waste repository in the future.
- Bechtel Hanford finished “cocooning” the Hanford site’s DR reactor on September 26, four days ahead of schedule. That means Hanford has now completed cleaning out and sealing two old plutonium-production reactors and has likely six more to go. DR Reactor was on line from 1950 to 1964, when it became Hanford’s first reactor to shut down. Cocooning DR Reactor cost about \$14.5 million. All that remains to be done is some minor mopping up work and welding the entrance shut.

Hanford has nine defunct plutonium reactors. B Reactor is earmarked tentatively as a future museum because it is the world’s first full-sized plutonium production reactor. The others are to be cocooned. That means all the outlying buildings are demolished, with the contaminated rubble trucked to a central Hanford landfill. All the old pits and pools are filled in. The main chamber with a 12 000- to 16 000-ton reactor remains, but with a new roof to prevent rainwater from seeping in. Once completed, a cocooned reactor takes up about one-fifth the footprint it had while operating. In 1998, C Reactor was the first to be cocooned.

Work is ongoing to cocoon three other reactors. D and F reactors are supposed to be done sometime in 2003, and H Reactor is supposed to be finished in 2004. Work on the N, K East, and K West reactors will have to be scheduled around the removal of spent nuclear fuel, water, and sludge from the K Basins. Those reactors will likely be tackled in the second half of this decade.

Utah LLW Tax Initiative To Be on November Ballot

An August 26 Utah Supreme Court ruling means that an initiative to vastly increase the radioactive waste tax in the state will be on the November ballot after all. The initiative would increase the tax on low-level waste buried at the Envirocare of Utah site from 10 cents per cubic foot to as much as \$150 per cubic foot. Also, the initiative would completely restrict Utah from licensing or siting a Class B or C radioactive waste storage facility.

Initially, the group proposing the initiative, Utahns for Radioactive Waste Control, had failed to gather enough signatures in enough counties to qualify for ballot placement (see “Headlines,” *Radwaste Solutions*, Sept./Oct. 2002, p. 8). The state Supreme Court, however, struck down a state law that required initiative petitioners to gather signatures from 10 percent of the registered voters in 20 of the state’s 29 counties who had voted in the last gubernatorial election, stating that such conditions were too onerous.

Proponents of the initiative say that it will bring up to \$200 million into the state treasury. Opponents, however, say the initiative, if passed, would put Envirocare of Utah out of business, thus giving the state no income from the measure. If Envirocare does go out of business, it will leave many nuclear facilities without a waste disposal option.

Court Rules Against Nebraska in LLW Lawsuit

Following a two-month trial that ended in August, U.S. District Court Judge Richard G. Kopf at the end of September entered judgment in favor of the Central Interstate Low-Level Radioactive Waste Commission and other plaintiffs against the state of Nebraska for the sum of more than \$151 million, plus post-judgment interest. US Ecology, the Commission contractor, had submitted an application to construct and operate a proposed low-level waste disposal site in Butte, Neb., in 1990. In December 1998, the state of Nebraska denied the license. Four electric companies that had substantially funded the project filed suit, alleging bad faith. The Commission later joined the lawsuit as a plaintiff. One of the electric utilities eventually dropped out of the suit, and US Ecology intervened to recover its contributions to the project.

The Court found that Nebraska, and the state’s governor, breached a good-faith obligation to the Commission when processing the license application. “Governor Nelson, either directly or through his subordinates, influenced the process in order to fulfill a campaign promise which

required that the license be denied without regard to the technical merits," Judge Kopf wrote. "Frankly, I cannot conceive of a stronger case of bad faith in the performance of a contract."

As part of its damages determination, the Court found that US Ecology contributed more than \$6 million to the Commission in the form of work intended to achieve a license. Adding simple interest from the time of the company's equity contributions to the time of the ruling, the Court identified total US Ecology damages of more than \$12 million.

Nebraska counsel immediately filed a motion to stay the judgment pending appeal.

Six Utilities Quit Private Fuel Storage Consortium

Probably as part of a quid pro quo with Utah senators who voted in favor of the Yucca Mountain repository this summer, six of the eight utilities that had formed Private

Fuel Storage LLC, a consortium working to build a spent fuel storage site on a Utah Indian reservation, have backed out of the consortium. According to a July letter, the following utilities "will commit no further funds to construction of the facility past the licensing phase so long as the Yucca Mountain is approved by the Congress and the repository development proceeds in a timely fashion:" American Electric Power Co., Entergy Corp., FirstEnergy Nuclear Operating Co., FPL Group, Southern California Edison Co., and Southern Nuclear Operating Co.

The only remaining members of the consortium are Genoa Fuel Tech, a subsidiary of Dairyland Power Cooperative, which owns the shutdown LaCrosse BWR, and Xcel Energy Inc., which operates three nuclear power reactors in Minnesota. Xcel has the greatest need for an offsite storage facility, since it is prohibited by state law from adding any new storage casks to its onsite facility at the Prairie Island plant, and expects the plant to need additional storage capacity in 2007. Yucca Mountain is not expected to begin operations until 2010 at the earliest. ■