FFTF Decommissioning Work Halted Until Mid-March

Decommissioning work on the Fast Flux Test Facility was halted just days before the U.S. Department of Energy was to have begun draining the sodium coolant from the reactor, a move that would have permanently disabled the facility. On November 8, 2002, the DOE agreed to stop all planned work at the Hanford facility after Benton County (Washington) filed a temporary restraining order and complaint to reverse the shutdown decision. In an agreement between the county and the DOE reached a week later, the DOE extended the work stoppage at least until mid-March.

Benton County's complaint centers on what it considers the lack of a complete decommissioning plan and the disregarding of environmental regulations. The complaint is seen, however, as a ploy by FFTF supporters, who want to use the reactor for the private production of isotopes used in nuclear medicine procedures. The four-month delay officially gives both sides of the debate more time to prepare legal briefs, but it also gives supporters more time to win support for a plan to privately operate the reactor.

FFTF supporters have fought a mostly losing battle to keep the reactor viable for more than a decade. A record of decision was finally issued by the DOE in January 2001 to permanently shut down and decommission the reactor, which had been in a standby mode since 1992. The facility was originally designed to test breeder reactor fuel, but once the United States breeder program was halted with the cancellation of the Clinch River Breeder Reactor, FFTF no longer had a mission.

NRC Defers Rulemaking on Entombment

The U.S. Nuclear Regulatory Commission plans to delay a rulemaking on entombment for permanently shutdown reactors until completion of some research studies. One of these studies, by the Office of Nuclear Regulatory Research, on evaluating entombed structure performance over long periods of time, will not be ready until 2005.

Current options for nuclear utilities closing nuclear power plants include immediate dismantlement, Safstor (delayed dismantlement), or a combination of both. NRC regulations require decommissioning to be completed within 60 years of permanent shutdown.

The commission approved the staff's plan for developing an entombment rule last year. Under entombment, the NRC could allow radioactive contaminants to be sealed in concrete and stored as long as needed for the radioactivity to decay to a level permitting release. Some utilities have indicated that they would like to have entombment available as an option, although none has committed to using it.

New Studies Begin on Hanford Tank Waste Disposal

The U.S. Department of Energy has unveiled a new potential master plan for getting rid of Hanford's 53 million gallons of radioactive waste from 177 underground tanks. One likely approach would vitrify about 47 percent of the wastes, while exploring other ways to deal with the rest.

In early January, the DOE began an environmental impact study to firm up a master plan for treating and disposing of the Hanford tank wastes. The study, expected to take some two years, will look at the question of whether all 53 million gallons of the waste should be vitrified (as specified in the Tri-Party Agreement between the DOE, the U.S. Environmental Protection Agency, and the state of Washington). The DOE would prefer to vitrify about 25 million gallons, dispose of another 1.8 million gallons of low-activity waste, and look at three new ways—steam reforming, bulk vitrification, and cementation—to neutralize the remaining 26 million gallons.

Construction of a complex to start preliminary vitrification work in 2007 is currently under way. The complex was originally supposed to hold one high-level waste melter and three low-activity waste melters. But last year, Hanford figures showed that those four melters could vitrify only about 19 million gallons of the waste by the 2028 deadline. Consequently, the DOE decided to go with two HLW melters and two improved low-activity melters. That combination could vitrify 25 million gallons by 2028—14 million gallons of the low-activity waste, and all 11 million gallons of HLW.

International Updates

● Bulgaria reluctantly shut down its Kozloduy-1 and -2 nuclear power plants on December 31, as part of an agreement with the international community to close the units before the end of their design life (2004–05). The Soviet-designed first-generation VVER-440 reactors generated about 10 percent of Bulgaria's electricity. Without them, Bulgaria may have to cut its power exports by some 1 billion kilowatt-hours in 2003. The state-owned operator, Kozloduy Nuclear Power Plant Ltd., hopes to operate the units at zero power over a five-year period while it prepares a two-pronged plan for either updating the reactors or decommissioning them. Units 3 and 4 at the site continue to operate.

● France plans to open a repository for very low-level radioactive waste this summer, on schedule. The TFA (for the French acronym meaning "very low activity") Center at Morvilliers, adjoining the low- and medium-level waste disposal site at Soulaines, in the Aube departement east of Paris, is designed to hold 650 000 cubic meters (about 750 000 metric tons) of very low level radwaste, with some 70 percent of it coming from decommissioning nuclear industry facilities and the rest from smaller producers. It will contain primarily three types of radwaste: inert waste such as soil, gravel, and concrete; so-called "banal" materials from nuclear facilities, such as ventilation tubes and slightly contaminated piping; and waste resembling the so-called "special" waste from non-nuclear installations.

● Also in France, that country's closed low- and medium-level radioactive waste disposal center at La Manche officially entered a "surveillance phase" in mid-January with the publication of an amended license issued by the French ministers of ecology and industry. The license changes the center's status from an operating facility to a monitored disposal facility. According to Andra, the French nuclear waste agency, the Centre de Stockage de la Manche is the first waste facility in the world to be licensed to stop operation and begin long-term monitored status. La Manche contains some 527 000 cubic meters of radwaste. It began operation in 1969, and accepted its last waste package in 1994. The surveillance phase is expected to last some 300 years. ■