

# Six Years On, Yucca Mountain Nuclear Repository Slowly Moves Forward

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Energy Department officials confirmed this week that they plan to submit an application in June to license the Yucca Mountain nuclear waste dump as the nation's first spent-nuclear fuel repository.

The move comes decades after the department first began studying the site, and six years after President Bush approved its development. The project has spent those years mired in lawsuits and beset by controversy over its safety and environmental effects.



"We're in a holding pattern," said Gayle Fisher, spokeswoman for the department's Office of Civilian Radioactive Waste Management, which manages the site. "Construction has stopped, and most of the site has been shut down."

Located in the Nevada desert about 90 miles northwest of Las Vegas, Yucca Mountain would be the only permanent nuclear waste storage facility in the United States. Right now, the 56,000 tons of that waste that already exist are temporarily stored at 126 sites across the nation. Each year, nuclear power plants generate approximately 2,000 more tons of waste.

Spent nuclear fuel rods contain highly radioactive elements that remain hazardous for many thousands of years. When removed from a reactor, the waste must first be cooled in a pool of water for months or years. Once cooled, the waste is moved to dry-storage bunkers made of concrete and steel. But these aboveground storage facilities are not designed to withstand weather and environmental factors for the thousands of years the waste will remain hazardous.

As far back as the 1950s, scientists recommended that nuclear waste be permanently stored in deep underground storage facilities. The Department of Energy began evaluating Yucca Mountain's suitability as a storage site in 1978, and in 2002 President Bush approved legislation to build the repository there.

But critics of the plan, including the state of Nevada, have mounted challenges ever since, filing a series of lawsuits against the federal government. Two grievances challenged the Department of Energy's guidelines and environmental

impact statement. Another claimed that the Nuclear Regulatory Commission illegally revised regulations to develop Yucca Mountain. The state also contested the Environmental Protection Agency's exposure standards for residents near Yucca Mountain, saying that the amount of exposure EPA deemed acceptable was unsafe.

In 2004, the U.S. Court of Appeals dismissed all of Nevada's cases except that against the EPA. The court said the agency's 10,000-year regulatory standard limit ran counter to recommendations from the National Academy of Science that found that the material could be hazardous much longer than that. The EPA revised their guideline, requiring the site to maintain low nuclear exposure limits up to 1 million years after Yucca Mountain is closed. Some critics believe this new rule will preclude the Yucca Mountain Project from ever opening.

Yucca Mountain's opponents in Congress have also stymied the project by cutting its funding. In 2008 Congress refused to fully fund the Energy Department's \$494.5 million budget request for Yucca Mountain, decreasing the amount to \$386.5 million. As a result, the Yucca Mountain Program laid off 900 employees.

"Yucca is a politically-charged issue," said Energy Department spokeswoman Angela Hill, "and as a result Congress has not appropriated at our request."

The department is looking at other possible funding, she said, including a pool of funds from the 1982 Nuclear Waste Policy Act that required all nuclear producers to pay for waste disposal. The Nuclear Waste Fund's current balance is approximately \$20 billion dollars. "Due to a complicated loophole, the Yucca Program does not have access to this fund," said Hill. The DOE has petitioned Congress to change the legislation granting the project access to the fund.

Sen. Harry Reid, D-Nev., is one of Yucca Mountain's most ardent opponents. Vowing that the repository "is never going to open," Reid was instrumental in the project's \$108 million budget cut. Reid writes on his Web site: "The Department of Energy has used science that is incomplete, unsound, and riddled with politics to sell this dead-end proposal, and Nevadans are not convinced."

As Yucca Mountain remains idle, the amount of nuclear waste in the United States continues to increase. In April, Frank Moussa, supervisor of the DOE's intergovernmental operations department, said at a public meeting that if and when Yucca Mountain opens, it will not be able to hold the total amount of nuclear waste in the United States.

Although Yucca Mountain could have the capacity to store 120,000 tons of waste, according to the 1982 Nuclear Waste Policy Act, the repository can store only 70,000 metric tons. The legislation would have to be amended in order to

expand the storage capability of Yucca. The DOE introduced legislation in 2006 requesting the statutory limit be lifted, and also plans to report to Congress on the need for a second repository later this year, according to Hill.

In the meantime, Nevada continues to battle the Yucca Mountain project. Bob Loux, Director of Nevada's Agency for Nuclear Projects, said, "The DOE is engineering this to be a repository site instead of looking at the science that proves Yucca should be disqualified as a nuclear storage site. It has obvious scientific and technical flaws that cannot be overcome."

"Our science is sound," responded Yucca spokesman Allen Benson. "Our tests are thorough and complete."

The Department of Energy plans to submit its licensing application to the Nuclear Regulatory Commission by June 30, 2008. The NRC will have three to four years to review the application for approval. Loux says Nevada is planning lawsuits against the licensing application and the accompanying environmental impact statement. If the NRC approves construction, Yucca Mountain's earliest opening date would be 2017.

---- By Katie Mulik, NewsHour with Jim Lehrer