

Nevada: Yucca Mountain Nuclear Waste Repository stalled

Government altered data on environmental dangers

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Efforts by the US government to push forward with the creation of the Yucca Mountain Nuclear Waste Repository in the desert 90 miles outside of Las Vegas, Nevada, have stalled recently over accusations implicating the Department of Energy (DoE) and US Geological Survey (USGS) in efforts to hide the environmental dangers posed by the repository. Recently released evidence reveals systematic attempts to alter data damaging to the claims that the health and safety risks associated with storing 77,000 tons of spent nuclear fuel from commercial reactors and waste from a number of Defense Department programs at Yucca Mountain are minimal.

Allegations that a federal worker may have falsified documents relating to the project first surfaced on March 16. After announcing the news, the DoE and the Department of the Interior each launched investigations into the charges.

Drawing on evidence acquired as a result of these inquiries, on April 1, Nevada Congressman Jon Porter, a Republican, released a number of redacted e-mails showing that scientists working for the DoE and the USGS fabricated data, backdated reports, created parallel data files with different results, and rigged computer models used to predict water filtration and climate conditions at the Yucca Mountain facility. The correspondence also details the pressure and time constraints scientists were under to come up with findings that would move the Yucca project forward.

In one e-mail, a USGS employee writes, "I've made up the dates and names.... If they need more proof I will be happy to make up more stuff."

Other comments include: "Like you've said all along. YMP [Yucca Mountain Project] has now reached a point where they need to have certain items work no matter what."

Much of the justification for transforming Yucca Mountain into a nuclear waste repository rested on studies showing that climatic conditions at the site were such that the potentially corrosive effects of surface water on the

containers holding the waste posed no threat to the physical integrity of the facility. However, the recently released e-mails shed doubt on the data upon which these claims were made.

While efforts to establish the site have been in the works for almost 30 years, after the September 11 terror attacks the Bush administration stepped up pressure to get the facility built, insisting that the nation's nuclear waste—presently stored at 131 sites in 39 states—would be safer if it were stored at just one location.

Although the entire history of Yucca Mountain has been distinguished by the notable lack of any genuine public debate over the health, safety and environmental concerns surrounding the project, with the post-9/11 push by the White House to get the facility up and running, these issues were forced further into the background.

In the near absence of public debate, the DoE notified the state of Nevada in January 2002 that Yucca Mountain had been chosen as the future repository of the nation's nuclear waste because it had been scientifically determined that the site was suitable to function as the nation's waste repository.

According to the executive director of the Agency for Nuclear Projects in Nevada, Bob Loux, the state government has had longstanding concerns about the falsification of scientific evidence relating to Yucca Mountain.

In a recent article in the Las Vegas weekly *City Life*, Loux stated, "Nevada's oversight representatives have long suspected collusion and data manipulation on the part of the DoE and its contractors charged with evaluating the site and developing information for licensing.

"The way the DoE kept constantly changing the repository design and its performance models—everything from waste disposal package performance to predictions about climate change, hydrology, the potential for renewed volcanic activity and the like—made it obvious that the DoE was shopping for acceptable data and findings, throwing out things that didn't fit the conclusions officials were seeking,

and exerting tremendous pressure on scientists and others to toe the party line.”

The efforts to create a nuclear dump at Yucca Mountain have encountered a series of legal and scientific challenges over the course of many years.

Revelations about the possible falsification of documents came alongside a suit filed in federal court by the state of Nevada charging that the DoE’s proposed rail line to transport shipments of nuclear waste to Yucca Mountain violated the National Environmental Policy Act by not completing required environmental studies. Attorneys for the state of Nevada charged that the DoE was unable to justify as environmentally sound both its selection of the Caliente corridor, the route through which the waste is to be transported, or the plan to load railroad cars with nuclear waste casks designed to be used on trucks.

This is not the first time that concerns over the environmental risks posed by the waste repository have been raised. Potential dangers arise from the fact that Yucca Mountain either sits directly atop or near 33 known fault lines, the largest of which, the Ghost Dance Fault, runs directly through the proposed site.

According to a study commissioned by the state of Nevada and undertaken in 1997 by two University of Colorado at Boulder geophysicists, John Davies and Charles Archambeau, computer simulations have shown that an earthquake of a 5 or 6 magnitude could cause the water table to rise significantly and flood the site. This could, according to Davies, “cause a rapid corrosive breakdown of the containers and allow the plutonium to leak into the water table and the atmosphere.”

Given that the facility is expected to hold the waste for 10,000 years, the scientists believe that an earthquake of sufficient magnitude to affect the water table is possible in this time frame. Once the waste has been deposited at the site, there is currently no way for it to be removed.

In addition, analyses of the project have also pointed out that the Yucca site has a high degree of humidity, 98 to 99 percent, which increases the likelihood of corrosion of the waste canisters, irrespective of the possible flooding of the site due to an earthquake.

Over the past several years, the Yucca Mountain project has also encountered numerous legal obstacles, also relating to questions concerning the site’s environmental safety.

In July 2004, a ruling issued by a federal appellate court in Washington, DC, stated that the guidelines for radioactive emissions at Yucca Mountain set by the Environmental Protection Agency (EPA) violated federal law by not following a recommendation made by the National Academy of Sciences that the facility be able to limit radiation emissions for up to 300,000 years.

Until this ruling was handed down by the courts, the EPA had been operating with a safety standard of 10,000 years. Advocates of the repository admit that it will be impossible to meet the 300,000-year standard, while those who oppose the project claim that the currently proposed facility cannot even meet the 10,000-year benchmark.

The Yucca Mountain project was pushed through Congress over the opposition of the Nevada state government. On April 8, 2002, responding to the 60-day window granted to the state to raise objections to the final legislation establishing the waste site, Nevada Governor Kenny Guinn submitted a “Notice of Disapproval of the Proposed Yucca Mountain Project.”

Guinn wrote: “Nevada strongly opposes the designation of Yucca Mountain for nuclear waste disposal because the project is scientifically flawed, fails to conform to numerous laws, and the policy behind it is ever changing and nonsensical. The Department of Energy has so compromised this project through years of mismanagement that Congress should have no confidence in any representation made by the DoE about either its purpose or its safety.”

Guinn’s concerns have been supported by data collected by the federal government itself. On January 24, 2002, the Nuclear Waste Technical Review Board, created by Congress in 1987 to track the Yucca project and analyze studies by the DoE, told legislators on Capitol Hill that “gaps in data and basic understanding cause important uncertainties in the concepts and assumptions on which the DoE’s performance estimates are now based. Therefore, while no individual technical or scientific factor has been identified that would automatically eliminate Yucca Mountain from consideration at this point, the Board has limited confidence in current performance estimates generated by the DoE’s performance assessment model.”

Ignoring these concerns, the legislation finally establishing Yucca Mountain as the nation’s nuclear waste repository was passed with bipartisan support in both houses of Congress in the spring of 2002.

The recent revelations about the falsification of data relating to the site merely clarify the fact that the Yucca Mountain project rests upon the blatant disregard that the federal government has for the health, safety, and environmental concerns of ordinary people.



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