



November 5, 2003

***Re: Yucca Mountain – Recent Developments***

Dear Member of Congress:

As national environmental and public interest organizations, we are writing to you today to bring to your attention several issues regarding the proposed high-level nuclear waste repository at Yucca Mountain, Nevada, that have recently received new and renewed attention from concerned citizens and news media around the country. We believe these issues raise important questions regarding the wisdom of continuing with the project and cast doubt on the U.S. Department of Energy's ability to devise a plan to safely and permanently isolate high-level radioactive waste at Yucca Mountain and meet established timelines and cost estimates. Even the U.S. Nuclear Regulatory Commission's Edward McGaffigan has recently acknowledged that "it is almost a fact" that a repository will not open at Yucca Mountain by 2010 as the DOE has announced.[1]

Since 1987, Yucca Mountain has been the only site under consideration for a proposed high-level nuclear waste repository. In light of recent events and new evidence, we call on you in your capacity as a United States Congressperson to acknowledge the continuing problems with the Yucca Mountain repository and permanently lay to rest this deceptive and misguided plan.

The following issues, individually and collectively, serve to increase longstanding doubts about the Yucca Mountain repository project:

- **Current cask plan likely to cause leaks.** The U.S. Nuclear Waste Technical Review Board (NWTRB), a presidentially-appointed government panel established "to provide independent scientific and technical oversight of the U.S. program for management and disposal of high-level radioactive waste and spent nuclear fuel from civilian nuclear power plants,"[2] sent a letter on October 21, 2003, to Dr. Margaret Chu of the Office of Civilian Radioactive Waste Management describing its findings that the U.S. Department of Energy's proposed repository plan was likely to cause spent fuel canisters to corrode and leak.

The NWTRB's letter described two possible ways in which the canisters might leak. First, currently available data indicate that welded areas would be susceptible to "crevice corrosion" along welded areas of the containers even "at temperatures well below the peak waste-package surface temperatures expected in

the Department's proposed repository design.”[3] This means that the DOE will have to redesign the repository in order to drastically reduce internal temperatures, which is possible only if those containers are spaced further apart. This, in turn, may decrease the amount of waste able to be stored in the repository.

Second, the containers are susceptible to “general corrosion” over the entire surface of the container. General corrosion takes place due to high concentrations of salts in the rocks making up the Yucca Mountain repository which, when deposited as dust on the surface of the containers, draw moisture from the air to create “aggressive chemistries.” This is a process that is guaranteed to occur; the only question is at what rate. It is therefore unclear exactly how thick the walls of the containers must be so as to resist perforation for the duration of the hazard, making it impossible for the DOE to design canisters guaranteed not to leak.

It is important to note that the original Nuclear Waste Policy Act of 1982 mandated that the site's geology was intended to provide the bulk of the waste containment capability. In selecting Yucca Mountain, DOE instead must rely heavily on engineered barriers, which are afflicted with the above-mentioned vulnerabilities.

- **Tunnels inside repository may collapse; effects unknown.** Researchers with the Nuclear Regulatory Commission (NRC) recently informed the NRC's Advisory Committee on Nuclear Waste that tunnels leading inside Yucca Mountain to the repository location could degrade and fill with rubble within several hundred years of the repository's construction. Should such an event occur, it would make it extremely difficult, if not impossible, to reach the inside of the repository in the case of a leak or other emergency requiring access. While the materials stored in the repository will be lethally radioactive for hundreds of thousands of years, it is possible that access to the tunnels could be nearly non-existent within merely several hundred years.

The NRC scientists responsible for reaching this finding have questioned the DOE's methodology for determining the durability of the tunnels, calling it “unprecedented.”[4] There remain 23 unresolved issues relating to the physical durability of the repository.

- **DOE's former legal team had conflict of interest.** The U.S. Circuit Court of Appeals for the District of Columbia found last week that the DOE may not have considered a potential conflict of interest when it hired Chicago-based Winston & Strawn to help it prepare its Yucca Mountain license application for the NRC. The firm withdrew in 2001 after two years of work when conflict of interest allegations were made due to its having previously represented TRW Environmental Safety Services, the former main contractor for Yucca Mountain, and having been a registered lobbyist for the Nuclear Energy Institute (NEI), a leading nuclear industry group, from 1995 until 2001. Such connections lent at the very least the appearance of a pro-industry bias to the DOE's application

preparation process.

The decision sends the case back to the U.S. District Court, which may determine the contract should have been awarded to another law firm. LeBoeuf, Lamb, Green and MacRae, a firm that prepared a bid for the work and lost, filed the lawsuit. If successful, the firm could receive the contract and may have to review all of Winston & Strawn's work, an involved process that could take until well past the DOE's self-imposed deadline of December 2004 for submission of a license application. According to Joe Egan, an attorney representing the State of Nevada, the decision is a "blow-out victory" for the state. The decision echoes the findings of the DOE's own Inspector General two years ago.[5]

- **Nuclear waste transport controversy highlighted on *60 Minutes*.** On October 26, CBS's *60 Minutes* aired a special report on the controversy surrounding transportation of high-level radioactive waste to Yucca Mountain. This once again brought the issue of transporting nuclear materials thousands of miles across the country into a national spotlight. The transportation issue is one that will affect tens of millions of people; the proposed routes pass through 45 states and the District of Columbia, traveling within half a mile of the homes of 11 million people and within several miles of 50 million. In order to transport all the waste to Yucca Mountain, there would need to be tens of thousands of shipments over the course of at least twenty-four years, meaning several shipments would likely pass by these people's homes every day for years on end; this is a long time to put citizens at risk in case of an accident or attack, and is an unacceptable burden on the nation's populace.
- **Yucca Mountain lawsuit reclassified as "complex."** At the end of September, a series of lawsuits brought by consumer and environmental groups (including Public Citizen and NIRS) as well as the State of Nevada against the U.S. Environmental Protection Agency (EPA), DOE, and NRC were reclassified as "complex," allowing substantially more time for oral arguments. The hearings, originally set for October 3 of this year, were rescheduled for January 14, 2004. The cases will be heard before the U.S. Court of Appeals for the District of Columbia, and charge that the EPA, DOE, and NRC acted improperly in changing standards for radioactive contamination of drinking water in order to allow the Yucca Mountain project to proceed.

The reclassification is an indication that the court sees these cases as important, with many substantive issues likely to be raised. The decisions could deal a severe blow to the Yucca Mountain project, and it would be inappropriate and irresponsible to make any increases in the project's funding or changes in funding practices pending their resolution.

- **Air Force concerned Yucca repository will limit training at Nellis Air Force Base.** According to a report in the *Las Vegas Review-Journal* today, the U.S. Air Force has mounted a new campaign, starting with a letter to leaders of the House and Senate Armed Services committees, charging that the Yucca Mountain

repository would affect its training abilities and “will negatively impact our readiness activities.” Nellis Air Force Base and the surrounding air space, the Air Force argues, is critical to our military’s ability to train officers in using existing military technologies as well as testing newer ones.

The issues raised above are just several of the most recent problems with Yucca Mountain to gain national attention. We believe that they, along with the numerous other problems surrounding the repository, strongly indicate the need to abandon the project altogether and search for a more sound alternative. We ask you to keep this in mind during the upcoming vote on the Energy and Water Appropriations Bill, in which hundreds of millions of dollars in funding for the Yucca Mountain project are proposed. We would be happy to discuss the above-mentioned concerns with you further. Please contact Brendan Hoffman with Public Citizen at (202) 454-5130 or Kevin Kamps with NIRS at (202) 328-0002 ext. 14.

Sincerely,

Wenonah Hauter  
Director, Energy Program  
Public Citizen

Michael Mariotte  
Executive Director  
Nuclear Information and Resource Service

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[1] Steve Tetreault, “Official Doubts 2010 Opening for Nuclear Waste Dump,” *Las Vegas Review-Journal*; October 24, 2003; [http://www.reviewjournal.com/lvrj\\_home/2003/Oct-24-Fri-2003/news/22439984.html](http://www.reviewjournal.com/lvrj_home/2003/Oct-24-Fri-2003/news/22439984.html).

[2] U.S. Nuclear Waste Technical Review Board website, <http://www.nwtrb.gov/>; accessed November 3, 2003.

[3] Nuclear Waste Technical Review Board letter to Dr. Margaret Chu, October 21, 2003; <http://www.nwtrb.gov/corr/mlc014016.pdf>.

[4] Goodluck Ofoegbu, written presentation to the NRC’s Advisory Committee on Nuclear Waste; October 22, 2003; [http://www.reviewjournal.com/lvrj\\_home/2003/Oct-23-Thu-2003/news/22429986.html](http://www.reviewjournal.com/lvrj_home/2003/Oct-23-Thu-2003/news/22429986.html).

[5] *Review of Alleged Conflicts of Interest Involving a Legal Services Contract for the Yucca Mountain Project*, November 2001; <http://www.ig.doe.gov/pdf/invrpt.pdf>.

