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JOHN LaFORGE
PO BOX 649
LUCK, WI 54853EIS OFFICE,
U.S. Department of Energy,
Office of Civilian Radioactive Waste Management
1551 Hillshire Drive
Las Vegas, NV 89134
1-800-967-0739

To the EIS OFFICE:

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The proposed dump site, on Western Shoshone land, no longer meets original requirements established for deep geologic disposal of high level radioactive waste. The geology of Yucca Mountain cannot prevent the waste's radiation from leaking.

Federal Environmental Protection Agency's standards now in place hope to limit the waste's release of radiation to levels that will cause no more than 1,000 cancer deaths over 10,000 years. Increased cancer incidence has not been estimated. Whether or not the EPA's technically callous requirements can be met is a matter of strenuous scientific debate and judicial investigation.

According to various studies and reports the Yucca Mountain nuclear waste plan is ill conceived, ill-managed and can no longer be defended on scientific grounds.

In a 1998 study, the DOE itself acknowledged that the proposed site is a fractured, leaky mountain plagued by earthquakes, and that its untested waste containers have limited viability. As Mary Olson of Nuclear Information and Resource Service Southeast says, "Yucca Mountain is a sieve."¹

The DOE's proposed transport routes — from 72 U.S. reactor sites to the proposed dump — would take the deadly wastes through 100 cities major cities. At least 138 million Americans would be exposed to the risk of dangerous levels of radiation and inevitable truck and train crashes. U.S. Dept. of Transportation and Nuclear Regulator Commission (NRC) regulations allow these containers at their surface to emit 100 millirems per hour — equal to the allowable public dose for an entire year. One-meter away, tied in traffic, people in their cars would get the equivalent of one X-ray in an hour.²

The Yucca Mountain plan does not begin to address the nuclear waste problem. It merely transfers the risk of radiation accidents and leaks to Nevada and to communities located along transport routes.

An August 1999 DOE report declared that leaving the waste at reactor sites, is just as safe as moving it to Yucca Mountain, as long as the waste is repackaged every 100 years.³

According to epidemiologist Dr. Rosalie Bertell, the waste must be repackaged every 20 years to ensure that it does not spread into the biosphere. Given the uncertainties about Yucca Mt. and the enormous risks of moving it, it makes much more sense to leave the waste at the power reactors while developing a better alternative. Independent scientists suggest on-site, aboveground and monitored storage.

Yucca Mountain's suitability as a long-term dump site has been challenged many times. A list of seven scientific reasons to disqualify the site follows. Any one of these major problems should have already disqualified the site.

1. In August 1999, evidence that the inside of the mountain is periodically flooded with water came in the form of Zircon crystals found deep inside. "Crystals do not form without complete immersion in water," said Jerry Szymaniaki, a former DOE geologist whose suggestion that deep water rises and falls inside Yucca Mt. was discarded by the DOE.⁴ "That would mean hot underground water has invaded the mountain and might again in the time when radioactive waste would still be extremely dangerous. The results would be catastrophic."⁵

2. In March 1998, the Yucca Mt. site was found to be subject to earthquakes or lava flows every 1,000 years — 10 times more frequently than earlier estimated — according to a California Institute of Technology study. The finding means that radiation dispersal from the Yucca Mt. site is much more likely during the proposed 10,000-year lifetime of the dump — not to mention the 250,000-year-long radioactive hazard period.⁶

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3. In June 1997, DOE researchers announced that rain water has seeped from the top of Yucca Mt. 800 feet into the repository in a mere 40 years (as dated by chlorine-36). Government scientists had earlier claimed that rainwater would take hundreds or thousands of years to reach the waste caverns. Federal guidelines have long required that the existence of fast-flowing water would disqualify the site.⁷

4. In March 1995, physicists at Los Alamos National Laboratory dropped a bomb on the Yucca plan by charging that the wastes might erupt in a nuclear explosion, scattering radioactivity to the winds or into ground water or both.⁸ Dr. Charles Bowman and Dr. Francesco Venneri noted that serious dangers will arise thousands of years from now after the steel waste containers dissolved and plutonium slowly begins to disperse into surrounding rock. "We think there's a generic problem with putting fissile materials underground," Dr. Bowman said.⁹ So serious a dispute so late in the planning process might cripple the plan or even kill it, the New York Times reported.

5. In July 1990, the National Research Council said the DOE's plan for Yucca Mt. is "bound to fail" because it is "a scientific impossibility" to build an underground nuclear waste repository that will be safe for 10,000 years.¹⁰

6. In 1989, sixteen geologists at the U.S. Geologic Survey bluntly charged that the DOE was using stop-work orders to prevent the discovery of problems that would doom the repository.¹¹ The government geologists reported that, "There is no facility for trial and error, for genuine research, for innovation, or for creativity."¹² Even the U.S. NRC complained then that work at Yucca Mt. seemed designed mostly to get the repository built rather than to determine if the site is suitable.¹³

7. In 1983, the National Academy of Sciences noted that the chemical characteristics of the water at Yucca Mt. are such that the wastes would dissolve more easily than at most other places.¹⁴

While plutonium-239 in the reactor waste is radioactive and deadly for essentially the rest of time, New York Times' science writer Matthew Wald has lately been understating the duration of its toxicity. "The waste...is the most concentrated and dangerous, and some of it remains radioactive for millions of years," Wald reported 19 years ago.¹⁵ In February 1989, Wald wrote, "Though the wastes that would go into the site would be hazardous for millions of years, predictions are limited to 10,000 years."¹⁶ However, in 1997 Wald reported, "The wastes would be dangerously radioactive for hundreds of thousands of years and would most likely reach humans through water flowing underground through the wastes and eventually reaching the surface through springs or wells."¹⁷

Department of Energy scientists know that the steel canisters will dissolve long before the waste's radiation hazards are gone. Current canister designs envision a mere 10,000-year life span for the dump. Because of the million-year cancer danger of the wastes, "testing of the whole project is impossible." The largest radiation exposures will not occur until hundreds of thousands of years into the future, so, according to Dr. R. Darryl Banks, biophysicist at World Resources Institute in Washington, "testing of components would require a time machine."¹⁸

There are better alternatives than Yucca Mountain. Leaving the waste where it is will allow time to give other plans the consideration they deserve.]

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10. The Milwaukee Journal-Sentinel, July 19, 1999
11. The New York Times, Jan. 17, 1989
12. The New York Times, Feb. 12, 1989
13. The New York Times, Jan. 17, 1989
14. The New York Times, Jan. 17, 1989
15. The New York Times, Jan. 17, 1989
16. The New York Times, Feb. 12, 1989
17. The New York Times, June 20, 1997
18. The New York Times, Aug. 2, 1995