

**STATEMENT OF ROBERT R. LOUX
EXECUTIVE DIRECTOR
STATE OF NEVADA
AGENCY FOR
NUCLEAR PROJECTS**

**BEFORE THE
SUBCOMMITTEE ON FEDERAL WORKFORCE
AND AGENCY ORGANIZATION**

**OF THE
U.S. HOUSE OF REPRESENTATIVES COMMITTEE
ON GOVERNMENT REFORM**



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Mr. Chairman and members of the subcommittee, my name is Robert Loux. I am the executive director of the Nevada Governor's Office Agency for Nuclear Projects. In that capacity, I have been closely involved with the U.S. Department of Energy's (DOE) Yucca Mountain program for over two decades. I appreciate the opportunity to testify today on a matter of critical importance to the State of Nevada and, indeed, the nation.

As Congress crafted the original Nuclear Waste Policy Act in the early 1980s, one fundamental and universally accepted principle permeated the basic fabric of the bill that was ultimately signed into law by President Reagan on January 7th, 1983, namely that public confidence in the integrity of siting, licensing, constructing and operating a high-level nuclear waste repository was absolutely essential if such a controversial and negatively perceived project was ever to be successful.

Mr. Chairman, it is difficult to imagine a situation more damaging and more subversive to that fundamental principle than Secretary of Energy Bodman's recent disclosure that scientific data may have been fabricated in the course of DOE's site characterization activities. Yet for those of us who have been intimately involved with the Yucca Mountain program for many years, the admission by DOE that its scientists may have falsified crucial site suitability information is not especially surprising. DOE's scientists and researchers have been under tremendous pressure almost from the beginning to report findings supporting DOE's predetermined conclusions about the Yucca Mountain site, even though the data coming out of DOE's own site characterization studies was painting a vastly different picture of Yucca Mountain's waste isolation capabilities (or lack thereof) than DOE envisioned.

The fact is, Mr. Chairman, DOE has been practicing 'advocacy science' at Yucca Mountain since the inception of the repository program. The question, "Is Yucca Mountain suitable and safe?" hasn't been asked around DOE for a long time. Instead, the

message emanating from DOE higher-ups – at least since 1987 and possibly before that – has been, “Whatever it takes, make the site work – or at least make it appear to work.”

Nevada’s Yucca Mountain oversight representatives have long suspected collusion and data manipulation on the part of DOE and its contractors charged with evaluating the site and developing information for licensing. The way DOE kept constantly changing the repository design and its performance models – everything from waste disposal package performance to predictions about climate change, hydrology, groundwater travel times, the potential for renewed volcanic activity, and the like – made it obvious that DOE was shopping for acceptable data and findings, throwing out things that didn’t fit the conclusions they were seeking, and exerting tremendous pressure on scientists and others to toe the party line.

As early as the late 1980s DOE was desperate to counter data developed by State of Nevada scientists showing fast water pathways or “fracture flow” through the Mountain, a condition that could and should have disqualified the site. The emails detailing falsified documents and data that are the subject of Secretary Bodman’s recent admission appear to be directly related to this troublesome problem, even though work by the Los Alamos National Laboratory later confirmed the State’s findings.

In the late 1980s and early 1990s DOE sought to suppress information indicating a repository at Yucca Mountain would emit so much radioactive Carbon 14 gas that it would not be able to meet EPA’s Carbon 14 release limits. When the information finally came out despite DOE’s efforts to hide it, DOE prevailed on Congress to exempt Yucca Mountain from radiation release standards altogether, even though these same standards were seen as acceptable for DOE’s Waste Isolation Pilot Plant facility, a repository for transuranic waste in New Mexico.

In some respects, the crippling impact these charges of data fabrication are having on the Yucca Mountain program is directly related to another DOE obfuscation strategy. Had DOE retained the original site screening criteria that addressed individual technical areas of repository performance spelled out in the original NWPA (such as hydrology, seismic activities, geophysics, etc.), the fabrication of data regarding any one of these criteria, while still damning, might not be as serious as the situation faced by the program today. That is because, in 2002, DOE summarily abandoned the original, criteria-based Yucca Mountain site screening guidelines and substituted an amorphous performance assessment approach, whereby data on all of the various technical areas is integrated into a single computer model, which then uses the data (together with a whole array of assumptions and expert judgments that substitute for hard data) as inputs to calculate how Yucca Mountain performs with respect to the amount of radiation exposures that can be expected for people living a certain distance from the facility at given points in time.

Because of the nature of the performance assessment approach, falsified or fabricated data unavoidably infects the entire Yucca Mountain database and renders any analysis of site performance not only suspect, but, in this case, essentially useless. It may

be that the entire twenty-plus year project database is so infected and compromised that it may have to be completely replaced before work can proceed with any confidence.

If, as many suspect, the fabrication and falsification of data is not just an isolated occurrence, but a more pervasive and systemic problem, it may turn out to be more prudent to simply cancel the Yucca Mountain project rather than suffer the crushing blow such a situation would deliver to the credibility of DOE and the scientific organizations and companies that would be implicated. Such a revelation of widespread scientific fraud at Yucca Mountain would irreparably damage the federal government's credibility in any renewed search for a future repository.

Mr. Chairman, it is imperative that steps be taken to immediately address crucial questions that must be answered before any further work is permitted on the Yucca Mountain program:

- How pervasive is the falsification of data and the manipulation of information? Are the recent disclosures merely, as many suspect, only the tip of the iceberg?
- What was DOE's role in fudging data? Is it reasonable – or even believable – to think that the USGS scientists blithely did this on their own, or were they acting on instructions from DOE managers?
- Is it reasonable to assume that this is an isolated instance implicating only one DOE contractor, USGS, or is there evidence of a broader, program-wide effort to coerce contract scientists to manipulate information to fit predetermined conclusions?

As disturbing as Secretary Bodman's revelation is, I am convinced that the emails uncovered in the course of sifting through materials required for NRC's licensing support network are but the tip of a very large iceberg, and that Yucca Mountain, like the Titanic, is on a collision course that must ultimately cause this irreparably damaged project to sink under its own increasingly disreputable weight. DOE is not acting like an innocent party in this matter. If this were just an isolated instance involving minor quality assurance or paperwork irregularities, one would have expected DOE to have immediately released the emails and other materials and made the implicated scientists available very quickly to clear the air. Instead, DOE is refusing to release any information, circling the wagons in full damage control mode.

Only a full scale investigation by a body with absolutely no ties to and no history of involvement with DOE or USGS can answer these questions. Even those within DOE recognize that the Department's history of investigating itself is suspect. Testifying recently before the House Energy and Commerce Committee on DOE security matters, the Department's director of the Office of Security and Safety Performance Assurance acknowledged that , "This department [DOE] spends a lot of time checking on itself with almost no results." What can we expect of DOE's current investigation of the data falsification matter when DOE refuses to grant public access to pertinent evidence?

The conclusion is obvious and unavoidable: No investigation by – or any statements or assertions coming from – DOE in this matter can have any credibility whatsoever.

Nevada Attorney General Brian Sandoval and senators Harry Reid and John Ensign have rightly called for the Department of Justice and/or the FBI to immediately step in and secure all of DOE's written and electronic files, least incriminating evidence disappear now that this scandal has come to light. A full and complete investigation is the only way to get to the bottom of this extremely serious matter and attempt to impart confidence and credibility to the high-level radioactive waste management program.

When combined with the recent ruling by the District of Columbia federal appeals court vacating the unlawful radiation health protection standards for Yucca Mountain, DOE's woefully inadequate approach to NRC licensing, persistent budget problems facing the project, massive cost escalations, ongoing and pervasive management problems, and indications that congressional and nuclear industry support for the project may be waning, disclosures about fraudulent science at Yucca Mountain may very well be the last straw in a litany of disastrous events requiring a complete and total overhaul of the nation's spent nuclear fuel and high-level waste policy.

Lest members of Congress and others think this is just an issue that affects the State of Nevada, it is important to recognize the serious consequences to the country as a whole if fraudulent science is tolerated in the Yucca Mountain program or its extent covered up. Forty-four states, hundreds of major metropolitan areas, and thousands of cities and communities around the nation will be affected by tens of thousands of shipments of spent nuclear fuel and high-level radioactive waste if Yucca Mountain is permitted to go forward. How much confidence will the people and public officials in those states and communities have in DOE's, the Administration's, and even Congress' assurances about the safety of such shipments with the mushroom cloud of fraudulent science hanging over the program?

Thank you again for the opportunity to address the committee on this extremely important matter.