



OFFICE OF THE GOVERNOR
AGENCY FOR NUCLEAR PROJECTS

1761 E. College Parkway, Suite 118

Carson City, Nevada 89706

Telephone: (775) 687-3744 • Fax: (775) 687-5277

E-mail: nwpo@nuc.state.nv.us

April 14, 2006

Senator Pete V. Domenici, Chairman
U.S. Senate
Senate Energy and Natural Resources Committee
328 Hart Office Building
Washington DC 20510

Dear Mr. Chairman:

Recent public discussions between the Energy Department's scientists and the Nuclear Regulatory Commission's (NRC) Advisory Committee on Nuclear Waste (ACNW) have undercut the Department of Energy's (DOE) assurances, in advance of Congress's July 2002 vote, regarding the suitability of the Yucca Mountain site. At issue is the ability of the site's natural system around Yucca Mountain to protect the surrounding population from the radioactive waste. DOE's scientists now admit that despite the claim of twenty years of study they have little understanding of the natural system.

The Department of Energy has given the site's adverse characteristics short shrift because the Department's strategy was, and still is, to rely almost entirely on the waste package alone to meet NRC license requirements. But knowing that is not what Congress intended in the 1982 Nuclear Waste Policy Act, DOE has up to now pretended that Yucca Mountain has passed a thorough site evaluation.

On February 14, 2002, Secretary Spencer Abraham presented his conclusion regarding site suitability and left the impression that the main barrier against radioactive spread was the natural system and that the engineering barriers were an add-on:

"After months of study based on scientific and technical research unique in its scope and depth, and after reviewing the result of a public review process that went well beyond the requirements of law, I reached the conclusions that technically and scientifically the Yucca Mountain site is fully suitable . . .

“As part of the scientific investigation of Yucca Mountain, some of the world’s preeminent scientists have examined every aspect of the natural process and conducted equally exhausting analysis into the benefit of adding engineered barriers to the design, that will further protect the health and safety of the public and add to the successful performance of the mountain.” (With my emphasis.)

Contrast these statements with those of DOE’s scientists at a March 23, 2006 meeting of the NRC’s Advisory Committee on Nuclear Waste on the Yucca Mountain Science and Technology Program. Yvonne Tsang, of the Lawrence Berkeley Laboratory said:

“ . . . if we have understanding of the natural system, then we can go in and say the natural system itself also is a good barrier . . . I think it behooves us to really look at the natural system . . . So we want to demonstrate a natural system can make large contributions to the repository performance . . .”

Mr. Bo Bodvarsson, one of DOE’s leading experts on the performance of the surrounding natural system said:

“The real emphasis of the test areas, . . . Yvonne alluded to, is really to demonstrate that the Yucca Mountain site is a real good site for disposal of nuclear waste . . .”

This work should have been done in advance of the Secretary’s site suitability determination. It can have little credibility now that the Department has committed itself to the site.

The inadequacy of DOE’s investigations of the Yucca Mountain geology and other aspects of the natural system is also evident from the March 6, 2006 letter to DOE from the Nuclear Waste Technical Review Board. In its understated style the Board said it was “concerned that the methods used by the DOE in its Total System Performance Assessment (TSPA) do not properly represent the natural correlations of some specific parameters.” The TSPA is the overall computer simulation calculation of a repository’s performance at Yucca Mountain. The Board gave specific examples involving movement of water that didn’t make scientific sense.

Altogether, it is clear that in 2002 DOE gave the public and Congress assurances about the suitability of the Yucca Mountain site when it did not have the scientific information on the Mountain and its environment to back them up. And despite the constant refrain about having studied the site for twenty years and basing its decision on sound science, DOE still does not have such information and – as is evident from its scientists’ statements at the March 23 ACNW meeting – is now trying to patch up its arguments, after the fact. Energy Secretary Bodman acknowledged as much during his April 12 visit to the site:

"I understand what the term sound science means personally and we will get an answer to that question. I do not have it now but this is part of the process."
(Again, with my emphasis)

It is hard to find a clearer example of the cart before the horse. As Congress is taking up the administration's proposed legislation on Yucca Mountain, this is a time to stop and rethink the project, not to plunge ahead.

Sincerely,

A handwritten signature in black ink, appearing to read "Robert R. Loux". The signature is fluid and cursive, with a large, sweeping flourish at the end.

Robert R. Loux
Executive Director

RRL:njc

cc: Governor Kenny Guinn
Nevada Congressional Delegation
Energy Secretary Samuel Bodman