



**OFFICE OF THE GOVERNOR
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Congressman Joe Barton, Chairman
House Energy & Commerce Committee
2109 Rayburn Building
Washington DC 20515

The Honorable Pete V. Domenici, Chairman
Senate Energy & Natural Resources Committee
328 Hart Senate Office Building
Washington DC 20510-3101

Dear Chairmen Barton & Domenici:

I write to underline the message in the attached June 14, 2006 letter from the Nuclear Waste Technical Review Board (the Board) to the Department of Energy (DOE) on the proposed single canister system for transport, aging, and disposal (TAD). The Board letter, which reflects the discussion with DOE at the Board's May 9 meeting, lays out a number of the serious problems the TAD concept would have to overcome. However the Board's polite language does not fully convey the preliminary and confused status of the TAD concept that emerged from the searching questions the Board put to DOE.

At this point DOE doesn't really have a plan for making this work. It just has an idea, a superficially attractive one, but also one whose logistical implications the Department has not thought through. As Board Member Abkowitz observed, "there is no free lunch here." The apparent spent fuel handling simplifications for DOE come at the price of substantially increased complexity and work at the reactor sites, both for the owners and for the Nuclear Regulatory Commission (NRC). And on closer examination, even the touted simplifications for DOE may well disappear. We think it is essential that Congress understand this state of affairs.

There will, among other things, be an increased need for surface "aging" capacity. This is another way of saying interim storage of spent fuel. If the nuclear generators don't meet the Yucca Mountain design basis 11.8 kilowatt per package, DOE will have to "age" the fuel until it

cools down, possibly for decades. To lay the legal groundwork this DOE is trying to find a loophole in the National Waste Policy Act's prohibition on interim storage in Nevada.

The switch to the proposed canisters will stretch out DOE's delayed schedule even further. At the reactor sites spent fuel is continually being put into NRC-approved dry casks. It is evident that industry does not intend to repackage spent fuel that has been put into dry casks. Why would they since DOE has committed to taking it anyhow? In fact, industry may not find it economic to ever use the canisters at all. As the Board wrote in its June 14 letter:

. . . there is considerable risk to DOE, utilities, and cask vendors in moving forward with design and fabrication of TAD canisters without knowing whether they will be approved by the Nuclear Regulatory Commission (NRC) for disposal in a repository at Yucca Mountain.

At this point DOE has no idea what fraction of the spent fuel would arrive in canisters. In the absence of foresight on this point it cannot design adequate surface facilities for spent fuel handling at Yucca Mountain. As Board Member Abkowitz put it in the meeting:

. . . it's very difficult to sit here and understand how a surface facility can be designed, and what kind of emplacement strategy is sensible, without knowing whether you can really put 90 percent, or 80 percent, or 70 percent, or whatever the number is.

So, it strikes me that you have a very serious chicken and egg problem here, and I have a very difficult time understanding how a license application and a TSPA can be submitted without resolving a number of these issues.

The Department representatives weren't saying much about the tight interaction between the surface facilities at the site and canister design, except to repeat their hope that industry will "work with us."

Complicating the picture further is the obvious fact that the NRC will not license the canister for underground disposal until the whole facility is licensed. Why then would industry commit to an expensive canister whose approval by NRC is not assured? The chicken and egg characterization is very apt.

It emerged at the Board meeting that DOE intended to submit a license application to NRC on the basis of canister performance criteria alone, without an actual mechanical design. (Of course, DOE doesn't yet even have the criteria.) In our view, without the detailed canister geometry, such an application would not permit adequate analysis of issues such as localized corrosion rates. We intend to urge strenuously that NRC not accept an application that does not reference an actual canister design.

Perhaps the most disturbing aspect of the proposed canister scheme is that to simplify the Yucca Mountain surface facilities DOE casually tosses aside major responsibilities for canister safety. DOE intends to move the complex tasks of canister loading, drying, filling with inert gas, and welding shut to the 70 or 80 reactor sites. Whatever is done will have to be done by the reactor owners and overseen by the NRC, at considerably greater effort and expense than heretofore projected. DOE washes its hands of any reactor site activities.

Meanwhile, even though DOE doesn't know just where it is going or how it will get there, it expects everyone to fall in line with DOE's goal. DOE's approach here, as so often in the past, is to get going and "we can adjust the process as we move forward." It is extraordinary how after twenty years work at Yucca Mountain, DOE is still lurching from one idea to another, each time counting on "fast tracking" the project. History, including DOE's own history, shows that fast tracking complex, first-of-a-kind projects is a prescription for failure.

Sincerely,

Robert R. Loux
Executive Director

RRL:njc

Attachment

cc: Nevada Congressional Delegation
Dr. Dale Klein, Chairman – NRC
Edward F. Sproat III, Director – OCRWM
B. John Garrick, Ph.D., P.E., Chairman – NWTRB