



WM DOCKET CONTROL
CENTER

'84 OCT 15 P1:12

NUCLEAR WASTE PROJECT OFFICE

OFFICE OF THE GOVERNOR

Capitol Complex
Carson City, Nevada 89710
(702) 885-3744

WM Record File

102.3
108.2

WM Project 11

Docket No.

PDR ☒

LPDR ☒

October 10, 1984

Distribution:

REB JOB	CR WKerr
MSB HM	DRM 3Cepkin
(Return to WM, 623-SS)	JSS KStablein Cz

Mr. Robert E. Browning, Director
Waste Management Division
Office of Nuclear Material Safety & Safeguard
U. S. Nuclear Regulatory Commission
Washington, D.C. 20555

Logsdon

Dear Mr. Browning:

The State of Nevada has performed a comprehensive review of the NRC's "Draft Generic Technical Position on Licensing Assessment Methodology for High-Level Waste Geologic Repositories", dated July, 1984. In general, the NRC has developed a fairly complete, rather rigorous approach to evaluating a license application. The Draft outlines a stringent set of criteria for the site characterization plans. We support NRC's requirement that DOE designate subsystem performance requirements early on, as well as demonstration plans for each subsystem performance. Likewise, we support NRC's requirement that DOE provide early demonstration of its intent to consider coupled effects of various physical and chemical processes.

However, there are two major weaknesses in this draft technical position:

1. It is not clear how NRC will interact with states and tribes in the licensing process.
2. It is not clear how the evolving EPA standards will impact the technical position methodology and the licensing process.

The Nuclear Waste Policy Act of 1982 provides a unique position for states and tribes in the review and licensing of high-level waste repositories. That position is one of an active participant in all processes and proceedings. We believe that position places state and tribes above "other parties" with respect to licensing activities. This problem is partially addressed on page 7 in that review by states and tribes is mentioned in regard to scenario selection and petitions to the Atomic Safety and Licensing Board (ASLB). What is missing is an explanation of how NRC will treat state/tribal concerns and how NRC staff and ASLB will consider state/tribal issues which may differ from issues of the NRC. For example, there are no provisions for states or tribes to petition NRC regarding

8411080576 841010
PDR WASTE
WM-11

PDR

10238438

792

possible differences in opinion, or for the need to change the relative emphasis of certain issues. States and tribes need to feel NRC recognizes this position in the process, not just as outside reviewers or observers. Additionally, states and tribes should have ample opportunity to convince the NRC of the severity of particular issues, rather than simply have the opportunity to testify before the ASLB.

It is clear from a review of the Draft the problems associated with defining a methodology for licensing assessment based upon draft EPA standards. Throughout the Draft, NRC staff notes that because of the complexity and uncertainties surrounding the issues, and the long lead times involved, DOE should at an early date develop the models, codes, scenarios, etc. necessary to assess whether each proposed site can adequately meet EPA standards. NRC must do the same in order to be able to independently assess the adequacy of any site and DOE's license application. The states and tribes should do much the same process themselves. However, all parties are at the present time shooting at a moving target, not knowing what the final EPA standards will be, and what DOE must characterize for.

A somewhat related criticism of this draft is that the technical position is based upon EPA standard working draft #4. Yet the groundwater protection provision described in detail in working draft #4 has been ignored. It is critical to the state/tribes to know how the groundwater protection requirements will be implemented if a major source of groundwater is present at a proposed site. The technical position only addresses releases to the accessible environment. If a major groundwater source is present, the draft EPA standard requires an additional performance assessment be made within the boundary of the accessible environment.

Relating to more specific comments on the Draft, on page 5-6 [Section 1.2.2.1(1)] the statement is made that systems, structures, and components important to safety "may" be subject to additional design requirements and a quality assurance program. It seems to Nevada that "may" should be replaced with "should" and that such systems, structures, and components will be subject to the most rigorous design and quality assurance requirements possible.

On page 7 (Section 1.2.2.2), recognizing the lack of final EPA standards, the draft technical position recognizes that the license application "must quantify to the extent practicable with the full range of uncertainties that exist in assessments of performance". The State fully supports this position. If any quantification standard is practicable or, more importantly, possible, it should be required for licensing.

Page 8 (Section 1.2.3) describes the decision process insofar as current NRC practice. The State is uncertain whether those same procedures will necessarily apply to a repository licensing proceeding. We have suggested in the past that specific procedures be developed for a unique repository licensing process; we continue to advocate that position.

On page 9 (Section 1.2.3) the Draft indicated NRC staff "and other interested parties who have standing in the process" would present independent positions to the ASLB. As discussed earlier in these comments, the Act grants to the states and tribes a formal role in any licensing proceeding with the same rights as the applicant and the NRC staff. This role should be recognized and acknowledged by the NRC.

At the bottom of page 10 (Section 3.1.1) and elsewhere in the Draft, reference is made to performance of the "engineered system". The State is particularly sensitive to the concept of engineered barrier systems and would caution the staff to avoid over reliance on an engineered barrier system to meet repository performance objectives.

On page 11 and again on page 17 the state/tribes should be included in any review of methods and results utilized by DOE to identify key performance parameters and any models and codes used for performance assessment calculations.

On page 18 (Section 3.3.1) the Draft states that "An accident which produced an off-site dose of 500 mrem/yr will be limiting in determining what is important to safety." If the context of this discussion is operational safety, why is the limiting dose "off-site" and not "on-site". On-site safety is important also.

On page 22 Nevada fully supports the last two statements on the page. They are correct and appropriate.

Page 23 (Section 3.3.5) discusses the possibility that coupling of scenarios could cause synergistic effects. Text further states that scenarios will be assessed as to their effect on the performance objectives of 10 CFR 60, then grouped as to consequence and associated risk. Does the type of analysis proposed here allow for coupled scenarios? Can synergistic effects be accounted for in this analysis? This discussion needs expansion. Furthermore on page 23, "degrees of intensity" may be permitted for scenario identification, but NRC may not necessarily allow this for probability or consequence assessments. NRC should explain why degrees of intensity are not permitted in probability or consequence analysis. If the problem is related to the mathematics of probability/theory, then it should be explained. At a minimum, this section should be

Mr. Robert Browning
October 10, 1984

Page Four

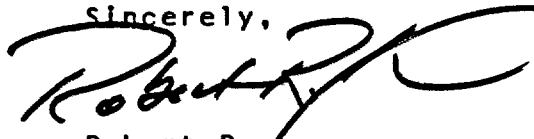
rewritten in terms understandable by the general public.

Figure 1 (HLW Decision Process) should be changed to include another box above Staff labeled State/Tribe with arrows directed to Staff and ASLB, as with Applicant. This change would properly recognize the formal role of states and tribes in the decision process.

Figure 3 (General Process for Licensing Assessments) is a flow chart and, therefore, should have arrows signifying direction of flow. Also, it is not clear from the figure whether NRC intends to formulate conceptual models, perform scenario analyses and apply mathematical models in selected technical areas or all technical areas, or simply review DOE analyses in some areas. Text on page 12 should be amplified to better explain NRC intent.

We hope that these comments are useful to the NRC. Please do not hesitate to call if additional clarification is required.

Sincerely,

A handwritten signature in black ink, appearing to read "Robert R. Loux", with a stylized flourish at the end.

Robert R. Loux
Director

RRL:sk