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'85 APR -8 P2:11

April 5, 1985

U.S.Nuclear Regulatory Commision
Washington, D.C. 20555
Waste Management Division

I see by the Tri-City Herald that the NRC's opinion of the Environmental Assessment of a Repository at Hanford parallels mine (enclosed). I would appreciate it very much if you would send me a copy of your comments.

Sincerely

M.J.Szulinski

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Richland, WA 99352

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1304

March 19,1985

U.S. Department of Energy
Attention: Comments--EA
1000 Independence Avenue,S.W.
Washington, D.C. 20585

Following are my comments on the "DRAFT ENVIRONMENTAL ASSESSEMENT--HANFORD SITE". I had originally planned a more comprehensive "Peer Review", but did become overwhelmed. The document does contain a monumental work on the Pasco Basin.

1. Alternatives are not discussed adequately. Discussion should include the pros and cons of the various storage modes, geologic media, and waste forms. Also pertinent is the future value of spent fuel and Storage vs. Disposal.

2. The original criteria for site selection, when the sites were first established, should be discussed in relation to repository criteria and requirements.

3. Consideration of other "contaminated" government sites should be discussed, e.g. Oak Ridge, SRP, Los Almos, INEL, etc.

4. In considering existing government sites, e.g. Hanford, acceptance by the local population should not be weighted too highly, in consideration of the fact that the evaluation horizon is 1000 to 10,000 years. Evaluation based on local acceptance could be very misleading.

5. Operation and receipt for 28 years and retrievability for 84 years is discussed- (Section 5.1); plans for retrieval are not discussed. Expected temperature during 28 years of operation; or for retrieval at the end of 84 years are not given. (My opinion is that you have got a problem! Comment also applies to other sites). Retrieval, considering initial operation of the repository in a storage mode, could be the most important requirement.

6. Using "Decision Analysis" (an Ordinal Dominance Analysis!?!?) to rank sites ranging in numeric value from 0.088 to 0.860! (Table 2-5). It is disturbing that the expert geologist and engineers would need systems analysts to help them make up their minds. Finding that there is a variability of sites on the Hanford reservation, in close relation to each other, suggests that the basalt is not uniform, or that better sites, in basalt, may exist outside of the reservation.

7. It is not clear if the best site for any basalt, or the best site on the Hanford Reservation, was the siting objective.

8. The relation of the proposed repository to the disposition of Hanford Defence Waste is not discused.

9. The role of basalt in enhancing isolation is not discussed adequately. Why is basalt better than salt? Must the basalt be monolithic? If not how much fracturing or porosity is allowable? Geologic discussions appear to assume fracturing, but repository design appears to assume a dry work area. Will "Characterization" settle such an issue.

10. At the eight dry sites, burden of proof of integrity lies in postulating possible radionuclide transport mechanisms. At Hanford, with transport mechanism inherent in the repository system, integrity becomes a question of rate of transport.

11. Can any degree of "Characterization" successfully demonstrate that a basalt repository is feasible? Guidelines should be established for recognizing the end point of "characterization".

12. Based on a rather cursory review of all nine documents, it would appear that salt, probably the Paradox Basin, would provide the best repository. (It is likely that waste could be stored safely at all sites).

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