

November 29, 1999

Secretary
United States Nuclear Regulatory Commission
Washington, DC 20555-0001
Attention: Rulemakings and Adjudications Staff

99 DEC-2 P2:51

Subject: Comments on Proposed 10CFR Part 63

On November 18, 1999, I had the opportunity as a private individual to appear before the Advisory Committee on Nuclear Waste in a public meeting. There I gave my personal thoughts on current rulemaking activities at the Nuclear Regulatory Commission (NRC), on 10CFR Part 63, and at the Environmental Protection Agency (EPA), on 40CFR Part 197. My remarks were an extension of my comments that I filed in May of this year on the proposed Part 63. This letter too is submitted to clarify or support the remarks I made in those few minutes I had before the Committee. The further comments in this letter are in response to questions I received during and after my appearance. I request that you consider this letter too as further public comment on the proposed Part 63.

In that appearance I tried to make two points: (1) it is essential that NRC and EPA resolve the differences between the two proposed standards, and (2) the decision process spelled out in Part 63 should be recalibrated. That recalibration, with careful explanation, is needed to make clear content and objectives of the phased applications and decisions from Viability Assessment through Permanent Closure of the repository. There is now a great demand for the current DOE reports, especially the TSPA-VA, to provide a high level of assurance of the final acceptability of the Yucca Mt. repository. This demand is not based on requirements of findings found in the statutes or the regulations. Rather, it is an expectation that the DOE should not even propose the site for application, to the President, unless there is unequivocal "proof" that Yucca Mt. is an acceptable site. Of course, there is not now, and never will be such "proof". I stated my opinion that the recalibration of the decision process needed was within the present statutes, sufficiently possible in the Part 63 rulemaking. The following analysis is offered as the basis of that opinion as well as a clarification of the recalibration I propose.

The Nuclear Waste Policy Act, at Sec. 2(25), states "The term 'storage' means retention of high-level waste, spent fuel, or transuranic waste with the intent to recover such waste or fuel for subsequent use, processing, or disposal." Sec. 122 of the Act states; "Notwithstanding any other provision of this subtitle, any repository constructed on a site approved under this subtitle shall be designed and constructed to permit the retrieval of any spent nuclear fuel placed in such a repository, during an appropriate period of operation of the facility, for any reason pertaining to the public health and safety, or the environment, or for the purpose of permitting recovery of economically valuable contents of such spent fuel. The Secretary shall specify the appropriate period of retrievability with respect to any repository at the time of design of such repository, and such aspect of such repository shall be subject to approval or disapproval by the Commission as part of the construction authorization process under subsections (b) through (d) of Section 114." It is evident, given the definition of "storage" in Sec. 2, that Subtitle C-Monitored

Retrievable Storage of the Act applies to facilities separate from the repository itself. One might use the shorthand expression, MRS (Monitored Retrievable Storage), for spent fuel placed in the repository or in surface staging areas, but it would be more correct to coin a new acronym, perhaps MRE (Monitored Retrievable Emplacement), to follow Sec. 122 of the Act. Receipt and emplacement of that spent fuel must be approved as part of the repository licensing process.

Section 121 (b) of the Act requires NRC to promulgate criteria for approving or disapproving (i) applications for authorization to construct repositories; (ii) applications for licenses to receive and possess spent nuclear fuel and high-level radioactive waste in such repositories; and (iii) applications for closure and decommissioning of such repositories. The NRC has already promulgated such criteria in Part 60, with corresponding criteria in the proposed Part 63. The NRC proposes some substantial changes in Part 63.21 (from Part 60.21) to be consistent with the proposed technical criteria of Subpart E of Part 63 that are somewhat different than the corresponding sections of Part 60. Part 63.21 proposes the criteria called for by Section 121 (b) of the Act, defining the body of information that must be furnished and considered to approve or disapprove the applications. The essential track of the decision process remains the same as it was for Part 60. The review of the site characterization activities remains informal, with NRC commenting, raising questions, or even raising objections to serious deviations from the expected content and quality of the application. The formal NRC review process begins with the DOE application for construction authorization (CA); and continues with amendments for changes, or for the major amendments to license the receipt of waste (that can be called an operating license, OL), and later to decommission the repository (that can be called site closure, SC).

The series of decisions for a high-level waste repository such as the Yucca Mt. candidate could easily extend over many years, even many decades. Ten years have already elapsed since the NRC sent DOE its objections, questions and comments on the Site Characterization Plan for Yucca Mt. After several years for the review of the application, if the CA is granted, actual construction of the large repository could extend over many years. Part 63.41, like Part 60.41 before, implicitly recognizes the long span of construction by stating; "Construction may be deemed to be substantially complete for the purposes of this paragraph if the construction of: (1) Surface and interconnecting structures, systems, and components; and (2) Any underground storage space required for initial operation, are substantially complete." The statutes and the regulations have long recognized the possibility of phased development and decisions.

The "reasonable assurance" required for the CA decision would undoubtedly be conditioned on confirmatory results from full construction of all the galleries and the underground monitoring and testing enabled thereby. However, one can easily envision underground construction of one, suitably separable part of the repository, to the extent that a sound application for the OL could be submitted based on this newer level of "reasonable assurance", and the certain operating safety and retrievability of the waste to be authorized for emplacement. The "reasonable assurance" basis for this partial

authorization would also be conditioned on confirmatory results from the balance of the underground construction and the monitoring and testing.

The recalibrated decision process can be summarized as follows:

- VA: DOE renders programmatic judgement on expectations for proceeding to an application. NRC, assuming no objections, provides the preliminary comments on analysis and waste form as required by Section 114 (a)(E) of the Act.
- CA: NRC finds there is reasonable assurance that the types and amounts of radioactive materials described in the application can be received, possessed, and disposed of... The conditions of CA are imposed per Part 63.32. There is no doubt that waste handling, processing, and emplacement with retrievability can meet the safety and safeguards requirements of this part.
- OL: NRC finds there is reasonable assurance that the types and amounts of radioactive materials described in the application, as amended, can be received, possessed, and disposed of... The level of assurance is enhanced by the information gained since granting the CA. If construction of the entire repository is not yet complete, conditions may be continued or newly applied. Waste receipt, handling, processing, and emplacement are authorized under the imposed conditions and Part 63.43.
- SC: NRC finds there is reasonable assurance that the types and amounts of radioactive materials described in the application, as amended, can be received, possessed, and disposed of... The level of assurance is enhanced by the information gained since granting the OL and completing construction. If the Secretary has chosen such a schedule, and NRC approves, the SC action may be phased just as the OL action.

The phased decision process, or recalibrated decision process recommended here is not novel; the statute and the regulations have long recognized the phased nature of the decision process. It is important that the NRC, in the promulgation of Part 63, clearly enunciates the phased nature of the decision process. Settlement of the dispute with EPA can and should be pursued in parallel with the promulgation of Part 63.

I hope that these comments are useful.

Sincerely,



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