



UNITED STATES
NUCLEAR REGULATORY COMMISSION

WASHINGTON, D.C. 20555-0001

October 4, 1994

Dr. Daniel E. Dreyfus, Director
Office of Civilian Radioactive Waste Management
U. S. Department of Energy
1000 Independence Avenue S.W.
Washington, DC 20585

SUBJECT: COMMENTS ON AUGUST 4, 1994, FEDERAL REGISTER NOTICE

Dear Dr. Dreyfus:

This letter provides the U.S. Nuclear Regulatory Commission staff comments on the recent Federal Register Notice (59 FR 39766, August 4, 1994) of the U.S. Department of Energy (DOE) regarding the process (the proposed program approach or PPA) which will be used for evaluating the suitability of the Yucca Mountain site for development as a repository for high-level radioactive waste and spent nuclear fuel. We have reviewed the Notice and related documents from the perspective of their potential impact upon the ability of the NRC to carry out its responsibilities. In particular, we have focused on any site recommendation that may be made by DOE under the Nuclear Waste Policy Act of 1982 (NWSA), as amended, and any license application that may be filed by DOE under 10 CFR Part 60, with respect to a potential repository at the Yucca Mountain site.

We recognize that the site suitability determination is a DOE management decision and, in and of itself, would not require NRC attention. However, it is also our understanding that the PPA is meant to be the basis for the entire repository program and, in particular, that it is intended to guide data collection for the site recommendation and licensing processes. NRC has specific statutory responsibilities with respect to each of these processes. Our comments have accordingly been prepared in the context of these responsibilities -- i.e., on how the PPA and DOE's process for making a site suitability determination will affect NRC's role as it relates to site recommendation and licensing.

We begin our comments by describing our understanding of the framework for a DOE decision on site recommendation which will follow the site suitability determination by two years, according to DOE's PPA. In particular, under Section 112 of the NWSA, DOE (with the concurrence of the Commission) issued general guidelines for the recommendation of sites for repositories. The DOE guidelines, which appear at 10 CFR Part 960, specify how the recommendation of a characterized site for the development of a repository is to be made -- namely, that "the candidate sites shall be compared with each other on the basis of the guidelines specified in subparts C and D according to the siting provisions specifying the basis for site evaluations in sec. 960.3-1-5." 10 CFR 960.3-2-4. Subsequent to issuance of the guidelines, an amendment to NWSA limited site characterization to a single site, Yucca Mountain. As a result, there are no longer other candidate sites to be compared. However, we

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understand DOE intends to continue to use the guidelines in evaluating the Yucca Mountain site in connection with any decision on site recommendation. In light of the foregoing, we have potential concerns about DOE's PPA, particularly the statement in the Notice that DOE "will not make specific evaluations of the favorable and potentially adverse conditions since these tests are primarily for use in comparing sites." Specifically, if DOE intends the statement to guide its evaluation of Yucca Mountain in connection with any decision on site recommendation, as opposed to site suitability, then we must question DOE's position on regulatory and policy grounds.

First, we question whether DOE's position can lead to a site recommendation decision that is consistent with the DOE guidelines as they are currently written. In particular, sec. 960.3-1-5 of the DOE guidelines declares that "evaluations of individual sites and comparisons between and among sites shall be based on" the guidelines (emphasis added). Thus, the guidelines apply even if there is just a single site to be evaluated. And, more specifically, sec. 960.3-1-5 provides, "an evaluation of compliance ... shall be made in the context of the collection of system elements and the evidence related to that guideline, considering on balance the favorable conditions and the potentially adverse conditions identified at a site." Since DOE has decided to "use the guidelines as they are currently written," we think DOE would be better served by an approach that more clearly reflects the need for an evaluation of Yucca Mountain in accordance with the guidelines that are currently in force.

Second, we question whether DOE's position can lead to the type of site recommendation decision that appears to be contemplated under the NWPA. Specifically, the Secretary of Energy is to provide "a comprehensive statement of the basis of such recommendation" to the President to approve the site for development of a repository, as provided in Section 114(a) of NWPA. We question how DOE intends to do so, unless the considerations set out in the DOE guidelines have been addressed.

In addition to the foregoing comments, we also have potential reservations about the implications of DOE's PPA, as described in the Notice and related documents, for the direction of DOE's site characterization program. The NWPA contemplates that during the characterization of the Yucca Mountain site, there will be a series of interactions between DOE and NRC, commencing with DOE's submission of a site characterization plan (SCP) and NRC's review and comment thereon. The plan, which was duly submitted by DOE and reviewed by NRC, lays out a program of investigation which is designed to provide information that may enable the Commission to determine, with reasonable assurance, that the proposed repository will protect public health and safety.

NRC has questions concerning two aspects of the DOE approach that may bear on that site characterization program. First, we must question the focus in DOE's PPA on assessments to "weigh whether a specific aspect or feature of the site is consistent with the ability of a repository to safely isolate waste." Our experience leads us to view performance as being so highly dependent upon the interrelationship of various site and design parameters that one can rarely, if ever, conclude that a specific aspect or feature in and of itself is satisfactory.

Second, we question whether DOE's position can lead to the type of site recommendation decision that appears to be contemplated under the NHPA. DOE has the authority to change its site characterization program from time to time. However, it is essential that any such changes be communicated to NRC in a timely fashion. Further, when the details of such plans are presented, DOE should expect that NRC may take exception to modifications that would reduce, without adequate justification, the investigations and evaluations that are called for under the site characterization plan.

We trust that DOE will give due consideration to the foregoing comments as it moves forward on the matters described in the Notice. After we have reviewed your Five Year Plan and the Yucca Mountain Technical Implementation Plans, we may need to reconsider our comments and to comment further in light of the additional detail provided in these documents. We would, of course, be pleased to meet with you and other interested parties if that would be helpful. If you have any questions, please contact me (301-415-7800) or Mr. Joseph J. Holonich, Chief, High-Level Waste and Uranium Recovery Projects Branch (301-415-6643).

Sincerely,
/s/

Robert M. Bernero, Director
Office of Nuclear Material Safety
and Safeguards

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