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Regulatory Publications Branch
Division of Freedom of Information and
Publications Services
Office of Administration
U.S. Nuclear Regulatory Commission
Washington, D.C. 20555

Re: Notice of Availability and Solicitation of Comments -- "NRC Staff Site Characterization Analysis of the Department of Energy's Site Characterization Plan, Yucca Mountain Site, Nevada." NUREG-1347 (54 Fed. Reg. 38,758).

Dear Sir:

On January 30, 1989, the NRC announced in the Federal Register that it had received for review and comment the Department of Energy's (DOE's) Site Characterization Plan (SCP) for the Yucca Mountain Site in southern Nevada. This site is being considered for a permanent high-level radioactive waste geologic repository. The NRC indicated that its review would culminate with the issuance of a Site Characterization Analysis (SCA) pertinent to the SCP. The announcement also indicated that, when the SCA was issued, a notice of its availability and request for public comment would be published in the Federal Register.

On September 20, 1989, the SCA was published and submitted for public comment. These comments are submitted in response to the above-referenced notices by the Edison Electric Institute/Utility Nuclear Waste and Transportation Program (EEI/UWASTE). EEI is the association of the Nation's investor owned electric utilities; its members generate approximately 75% of all the electricity in the nation. EEI/UWASTE is a group of electric utilities with nuclear energy programs that seeks to ensure radioactive waste management and disposal, and nuclear materials transportation systems are maintained or developed in a safe, environmentally sound, publicly acceptable, cost effective, and timely

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Reg. Pub. Branch
U.S. NRC
December 19, 1989
Page 2

manner. EEI/UWASTE is the lead organization for utility oversight of the DOE Civilian High-Level Radioactive Waste Program. EEI/UWASTE have followed the development of the SCP closely.¹

Last July the NRC Staff issued its SCA, completing an approximately 6-month review of the SCP. In reviewing the SCA, EEI/UWASTE have not developed separate responses to each of the individual objections², comments, and questions contained therein. Rather, we have utilized the SCA as a framework within which to develop certain perspectives on the repository program itself. As a result, some of the comments which follow, while addressed primarily to the SCA, are also pertinent to the SCP and DOE's characterization activities. Accordingly, we are also furnishing a copy of these comments to the Department.

At the outset, EEI/UWASTE join with the NRC Staff in its observation that the SCP represents a notable improvement over the CDSCP [See, e.g., SCA, p. 2-1.] The number of NRC "objections" has been reduced from five in the CDSCP, to two in the SCP. Of the 162 comments and questions raised by the NRC Staff regarding the CDSCP, 103 have been satisfactorily resolved on the basis of information in the SCP. Of the remaining 59, many were partially resolved. Clearly, the SCP represents a material improvement in DOE's site characterization program.

¹ Early last year, DOE issued a Consultation Draft Site Characterization Plan (CDSCP). EEI and the Utility Nuclear Waste Management Group (a predecessor of EEI/UWASTE) reviewed the CDSCP and, in August 1988, submitted comments. In December 1988, DOE issued the Site Characterization Plan. EEI/UWASTE reviewed that document, and submitted comments to the Department on June 1, 1989.

² In the lexicon of the SCA, "objections" constitute the most serious category of NRC Staff concerns with respect to the SCP. More specifically, an "objection" is a matter of such immediate seriousness to a particular area of the site characterization program that the NRC recommends DOE not commence work in that area until the concern is satisfactorily resolved.

The two objections identified in the SCA involve: (1) the need to implement a baselined quality assurance (QA) program before beginning site characterization; and (2) the need for DOE to demonstrate the adequacy of both the exploratory shaft facility (ESF) design, and the ESF design control process. EEI/UWASTE are in basic agreement with both objections as expressed by the NRC. Further, we are in particular agreement with the NRC concerning the propriety of the approach developed for addressing the QA concern. As stated in Mr. Bernero's July 31, 1989 letter to Mr. Rousso, Acting Director of the Office of Civilian Radioactive Waste Management, in transmitting the SCA:

[A]s you are aware, NRC and DOE have agreed on a step-by-step approach for solution of this concern. Several of the agreed upon steps necessary to resolve this concern have already taken place. Once the agreed upon steps have been satisfactorily accomplished, for each of the participants involved in a given area, the NRC has no QA-related concern with DOE proceeding with that area of its site characterization program while it continues to complete the steps needed for other areas of the site characterization program.

[SCA, p. x] This approach is both technically sound and procedurally efficient. It provides for the methodical resolution of QA concerns while, at the same time, avoiding unnecessary delays in the site characterization process.

Aside from the two objections, the basic theme of the SCA is the importance of DOE site characterization program integration. Different aspects of program integration are discussed in each of the four comments identified in Mr. Bernero's letter to Mr. Rousso as being "particularly important" and "requiring DOE management attention." [See SCA, pp. x-xii.]

However, the SCA also shows evidence of fragmented NRC reviews. For instance, there is no indication of NRC sensitivity to trade-offs between data acquisition on the one hand; and (a) the loss of waste isolation capability, and (b) cost and schedule impacts, on the other. One example of this can be seen in the SCA's discussion of investigations pertaining to the Calico Hills unit of nonwelded tuff.³ The SCA is critical of the

³ This is the rock underlying the Topopah Spring welded unit which encompasses the repository horizon.

characterization effort presented in the SCP as possibly being inadequate, but fails to indicate how more extensive characterization activities might be performed while -- at the same time -- minimizing the possibility of lowering the waste isolation capability of the Calico Hills unit. [See e.g., SCA, p. 2-2.] In other words, the SCA fails to recognize that, although the acquisition of data is important, it is not something that can be unconstrained in quantity and scope. Further, it should be intuitively obvious that, if this project is to ever be completed, the adequacy, as apposed to the completeness, of the information must be the deciding factor in all circumstances.

It may be that the lack of integration reflected in both the SCP and SCA results from of the absence of a strategy sufficient to force the focus of characterization activities on essential elements. The basic responsibility for such a strategy, of course, resides with DOE. It is important, however, that the NRC encourage and facilitate the development of such a strategy through an integrated SCP review process reflecting the relative importance of, and priority among, separate site characterization activities.

Finally, the SCA emphasizes the significance of performance assessments during the site characterization process. In particular, the NRC Staff has stressed the need for full system performance assessments, together with subsystem performance assessments, in order to provide an early and ongoing evaluation (a) of whether any of the potentially adverse conditions (see 10 C.F.R. Section 60.122) significantly affect the ability of the site to meet 10 C.F.R. Part 60 performance objectives; and (b) of whether data being gathered is adequate to make such a determination. [See, e.g. SCP, pp. xi, 4-4 to -7.] In commenting on the SCP, EEI/UWASTE stressed the importance of identifying and addressing basic site suitability issues early in the characterization program. We urged that DOE begin developing a process for evaluating site suitability -- on a real time basis -- as site investigation proceeds. EEI/UWASTE believe that performance assessments are almost certain to be of fundamental importance to the site suitability evaluation process, and support the emphasis given to them in the SCA.

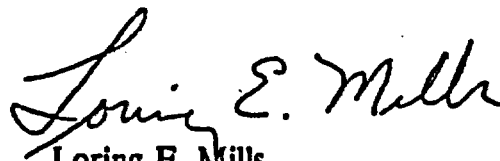
Within this context, it should be emphasized, however, that "full system performance assessments" should not mean detailed, complex assessments requiring a near-complete suite of data. Rather, "full system performance assessments" should mean taking into account the performance of all barriers to waste release, not only those presented by

Reg. Pub. Branch
U.S. NRC
December 19, 1989
Page 5

subsystems. Such performance assessments may well, of course, become, over time, more detailed and complex as characterization proceeds. But, initially, such assessments will, almost certainly, be of a scoping variety.

EEI/UWASTE hope these views are helpful. If you have any questions or require additional information, please feel free to call me or my staff.

Sincerely,



Loring E. Mills
Vice President,
Nuclear Activities

LEM/cji

cc: Mr. Samuel Rousso,
Acting Director, OCRWM