

Department of Energy
Washington, DC 20585

JUL 20 1989

Mr. B. J. Youngblood, Deputy Director
Division of High-Level Waste Management
U. S. Nuclear Regulatory Commission
Washington, D.C. 20555

Dear Mr. Youngblood:

On July 11, 1989, and July 17, 1989, information related to the probability of volcanic eruption at the Yucca Mountain Site was provided to me by John Linehan of your staff as an example of the type of assessment that will be discussed at the upcoming tectonics meeting and that need to be considered by DOE during site characterization. We are in agreement that the technical concerns raised are an appropriate topic for discussion at the upcoming tectonics meeting, and that these concerns should be addressed as early as appropriate during site characterization. The specific concerns raised by your staff have been provided to the Yucca Mountain Project Office, and will be provided to the key investigators for additional review and consideration in planning future work. However, as we have discussed in the past it would be most productive to proceed with site characterization so that the information necessary to resolve such comments can be gathered.


The study of volcanic processes in the southern Great Basin, and the probability of eruption at the Yucca Mountain site have been given high priority by the Department. These studies have been ongoing for a number of years, and will continue to receive emphasis as site characterization proceeds. While estimates for volcanic probabilities have been made, uncertainties currently exist primarily due to a lack of data which results in a wide range of possible alternatives and assumptions. The Site Characterization Plan reflects this by the current low confidence assigned to probability estimates (see for example Table 8.3.5.13-10). Similarly, no preferred hypothesis is indicated regarding the controls on volcanism (Table 8.3.1.8-7). While we believe that the existing data support the position that the probability of volcanism is low enough to meet all regulatory requirements, new data will be continually reviewed to determine if our position should change.

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We would also like to take this opportunity to apprise you of our schedule for the release of two study plans related to the topic of volcanism. These two plans are: Probability of a Volcanic Eruption Penetrating the Repository (8.3.1.8.1.1); and Characterization of Volcanic Features (8.3.1.8.5.1). Both plans are in the final stages of review and preparation and should be transmitted to the staff by October 30 1989, and September 30, 1989 respectively. It is our expectation that these study plans will address the NRC staff concerns on the topic of volcanism, and will provide a more detailed schedule for when activities will be completed.

If you have any questions regarding this matter, please contact me on FTS 896-6046.



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