

September 17, 2002

Joseph D. Ziegler, Acting Assistant Manager
Office of Licensing and Regulatory Compliance
U.S. Department of Energy
Yucca Mountain Site Characterization Office
P.O. Box 364629
North Las Vegas, NV 89036-8629

SUBJECT: STRUCTURAL DEFORMATION AND SEISMICITY KEY TECHNICAL ISSUE
AGREEMENTS

Dear Mr. Ziegler:

During a Technical Exchange and Management Meeting held on October 11-12, 2000, the U.S. Nuclear Regulatory Commission (NRC) and the U.S. Department of Energy (DOE) reached agreement on a number of issues within the Structural Deformation and Seismicity (SDS) Key Technical Issue (KTI). By letter dated October 25, 2001, DOE provided information pertaining to SDS Agreements 1.02 and 2.03. The NRC staff has reviewed this information as it relates to these two agreements and the results of the staff's review are enclosed.

In summary, the NRC staff believes using the mean hazard results in the DOE analyses is appropriate and will monitor the implementation of this approach when it reviews future DOE documents. For example, these agreements were to be discussed in a DOE/NRC meeting on screening features, events, and processes for disruptive events (TSPA agreement 2.02, #78, J-25, and J-26) which has been postponed. The staff now believes that the agreements do not need to remain open to track the implementation of DOE's approach. Therefore, SDS Agreements 1.02 and 2.03 are complete. If you have any questions regarding this letter, please contact Mr. James Andersen of my staff. He can be reached at (301) 415-5717.

Sincerely,
/RA/

Janet Schlueter, Chief
High-Level Waste Branch
Division of Waste Management
Office of Nuclear Material Safety
and Safeguards

Enclosure: As stated
cc: See attached distribution list

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Letter to J. Ziegler from J. Schlueter dated September 17, 2002

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C. Meyers, Moapa Paiute Indian Tribe

V. Miller, Fort Independence Indian Tribe

A. Bacock, Big Pine Paiute Tribe of
the Owens Valley

R. Quintero, Inter-Tribal Council of Nevada
(Chairman, Walker River Paiute Tribe)

M. Bengochia, Bishop Paiute Indian Tribe

J. Egan, Egan & Associates, PLLC

J. Leeds, Las Vegas Indian Center

K. Tilges, Shundahai Network

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Citizen Alert

NRC Review of DOE Documents Pertaining to Key Technical Issue Agreements

The U.S. Nuclear Regulatory Commission (NRC) goal of issue resolution during the pre-licensing period is to assure that the U.S. Department of Energy (DOE) has assembled enough information on a given issue for NRC to accept a license application for review. Resolution by the NRC staff during pre-licensing does not prevent anyone from raising any issue for NRC consideration during the licensing proceedings. Also, and just as important, resolution by the NRC staff during pre-licensing does not prejudge what the NRC staff evaluation of that issue will be after its licensing review. Issues are resolved by the NRC staff during pre-licensing when the staff has no further questions or comments about how DOE is addressing an issue. Pertinent new information could raise new questions or comments on a previously resolved issue.

This enclosure addresses two NRC/DOE agreements made during the October 11-13, 2000, Structural Deformation and Seismicity (SDS) Technical Exchange and Management Meeting (see NRC letter dated October 27, 2000, which summarized the meeting). By letter dated October 25, 2001, DOE submitted information to address SDS Agreements 1.02 and 2.03. The information submitted in response to SDS Agreements 1.02 and 2.03 is discussed below:

1) Structural Deformation and Seismicity Agreements 1.02 and 2.03

Wording of the SDS Agreement 1.02: Consistent with proposed 10 CFR Part 63, the NRC believes the use of the mean is appropriate, however, DOE may use any statistic as long as it is consistent with site data and technically defensible. DOE will either provide technical justification for use of median values or another statistical measure, such as the mean, or will evaluate and implement an alternative approach. The DOE-proposed approach and its basis will be provided to NRC prior to September 2001. The approach will be implemented prior to any potential LA [license application].

Wording of the SDS Agreement 2.03: Consistent with proposed 10 CFR Part 63, the NRC believes the use of the mean is appropriate, however, DOE may use any statistic as long as it is consistent with site data and technically defensible. DOE will either provide technical justification for use of median values or another statistical measure, such as the mean, or will evaluate and implement an alternative approach. The DOE-proposed approach and its basis will be provided to NRC prior to September 2001. The approach will be implemented prior to any potential LA.

NRC Review: On October 25, 2001, DOE provided the following letter report as it pertains to this agreement: "Approach to Postclosure Seismic Analyses for a Potential Geologic Repository at Yucca Mountain, Nevada." In the letter report, DOE stated that it will use mean not median results in the probabilistic faulting and seismic hazard assessments. Using the mean value is consistent with the NRC approach to post-closure safety assessment. The NRC staff, therefore, believes that DOE's response to this issue is appropriate and that the agreement does not need to remain open to track the implementation of DOE's approach. The NRC will monitor the implementation of the approach when it reviews future DOE documents (such as the Seismic Design Inputs Analysis and Model Report and Seismic Topical Report #3).

ENCLOSURE

The NRC staff notes that Total System Performance Assessment and Integration (TSPA) Agreement 2.02 (Items 78, J-25, and J-26) reference either SDS Agreement 1.02 and/or 2.03. It is the NRC staff's understanding that these items will be addressed in separate DOE correspondence, therefore, the NRC staff has not addressed them in this enclosure.

Additional Information Needed: None

Status of Agreements:

SDS Agreement 1.02 is "Complete."

SDS Agreement 2.03 is "Complete."