

August 2, 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: IGNEOUS ACTIVITY AGREEMENT 2.12

Dear Mr. Ziegler:

During a Technical Exchange and Management Meeting held on June 21-22, 2001, the U.S. Nuclear Regulatory Commission (NRC) and the U.S. Department of Energy (DOE) reached agreement on a number of issues within the Igneous Activity (IA) Key Technical Issue (KTI). By letter dated June 13, 2002, DOE provided a methodology for obtaining the information necessary to determine a defensible relationship between the measurement of airborne particulate matter with a mass medium aerodynamic diameter less than or equal to 10 Microns (PM₁₀) measurements and total suspended particulate (TSP) concentrations. This information was provided to address Igneous Activity Agreement 2.12. In addition, in the letter DOE stated that the results of the analysis using the methodology described would be available for NRC review in early 2003. The NRC staff has reviewed this information, with respect to the agreement, and the results of the staff's review are enclosed.

In summary, the NRC staff believes that the information provided defines a defensible approach and considers that Igneous Activity Agreement 2.12 is complete. The NRC will review the DOE report describing the results of this analysis and, if the staff has any concerns after that review, it will raise them at that time. If there are any questions regarding this letter, please contact John S. Trapp at 301-415-8063 or by e-mail at jst@nrc.gov.

Sincerely,
/RA/

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

Attachment: NRC Review of DOE Letter Pertaining to Igneous
Activity Agreement 2.12
cc: See attached distribution list

Letter to J. Ziegler from J. Schlueter dated August 2, 2002

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A. Bacock, Big Pine Paiute Tribe of
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J. Egan, Egan & Associates, PLLC
J. Leeds, Las Vegas Indian Center
K. Tilges, Citizen Alert
J. Triechel, Nuclear Waste Task Force

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D. Eddy, Jr. Colorado River Indian Tribes
G. Runkle, DOE, Washington, DC
W. Briggs, Ross, Dixon & Bell
H. Jackson, Public Citizen

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NRC Review of DOE Letter Pertaining to Igneous Activity Agreement 2.12

The U.S. Nuclear Regulatory Commission (NRC) goal of issue resolution during this interim 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 one NRC/DOE agreement made during the Igneous Activity (IA) Technical Exchange and Management Meeting (see NRC letter dated June 29, 2001, which summarized the meeting) on June 21-22, 2001. By letter dated June 13, 2002, DOE submitted information to address IA Agreement 2.12. The information submitted for this agreement is discussed below.

1) Igneous Activity Agreement 2.12

Wording of the Agreement: Provide clarifying information on how PM₁₀ [10 micron] measurements have been extrapolated to TSP [total suspended particulate] concentrations. This should include consideration of the difference in behavior between PM₁₀ and TSP particulates under both static and disturbed conditions. DOE will provide clarifying information on how PM₁₀ measurements have been extrapolated to TSP concentrations. This will include consideration of the difference in behavior between PM₁₀ and TSP particulates under both static and disturbed conditions in a subsequent revision to the AMR [Analysis and Model Report] Input Parameter Values for External and Inhalation Radiation Exposure Analysis (ANL-MGR-MD-000001) or equivalent document. This will be available to the NRC in FY02.

NRC Review: The NRC staff has reviewed the letter report entitled "Particulate Inhalation," dated May 13, 2002, and has determined that while the letter report did not provide new, clarifying information on how PM₁₀ measurements have been extrapolated to TSP concentrations, it did (1) provide an acceptable approach for determining the relationship between TSP concentrations and PM₁₀ measurements and (2) recognized the sensitivity of the TSP:PM₁₀ to surface disturbing conditions. The NRC staff believes that the approach outlined in the letter report, if implemented, would provide the staff with sufficient information to conduct a licensing review in this area, should DOE submit a license application. Therefore, IA Agreement 2.12 is complete.

The NRC notes that DOE will be providing the results of analyses which use the approach described in the letter report for NRC review in early 2003. The staff will review this information to determine how the approach was implemented. If the NRC staff has any concerns after that review, it will raise them at that time.

Additional Information Needed: None at this time.

Status of Agreement: Igneous Activity Agreement 2.12 is complete.