



UNITED STATES  
**NUCLEAR REGULATORY COMMISSION**  
 WASHINGTON, D.C. 20555-0001

December 22, 1994

Mr. Ronald A. Milner, Associate Director  
 Office of Program Management  
 and Integration  
 Office of civilian Radioactive  
 Waste Management  
 U.S. Department of Energy, RW 30  
 1000 Independence Avenue  
 Washington, DC 20585

SUBJECT: REVIEW OF STUDY PLAN 8.3.1.17.3.3 "GROUND MOTION FROM REGIONAL  
 EARTHQUAKES AND UNDERGROUND NUCLEAR EXPLOSIONS," REVISION. 0.

Dear Mr. Milner:

The Nuclear Regulatory Commission staff has reviewed the above-mentioned study plan. This review was conducted under the guidance provided in the "Review Plan for NRC staff Review of DOE Study Plan, Revision 2," issued March 10, 1993.

The review plan requires that the review determine whether the subject study plan conforms to the "1993 DOE/NRC Level of Detail Agreement and Review Process for Study Plans." Our review of this study plan indicates that its contents are reasonably consistent, as appropriate for the activities, tests, and analyses described, with the agreement. The review plan also requires the identification of any objections to performing the work in this study plan; no objections to the activities described in the study plan have been identified.

As indicated in the study plan, this portion of the study plan refers to the second activity, development of empirical models for underground nuclear explosion ground motion. It would have been more cohesive if the ground motion from regional earthquakes had been addressed at the same time, since the end product of the study plan is to predict ground motion at Yucca Mountain.

The staff does not have any major comments on this half of the study plan which deals mainly with ground motion from underground nuclear explosions (UNE). Comments/ questions may arise on this study plan after reviewing the other half of the study plan which deals with ground motion from regional earthquakes.

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The review was conducted by A. K. Ibrahim. If you have any questions regarding this review, please contact Dr. Ibrahim on 301-415-6651.

Sincerely,

Michael J. Bell, Chief  
Engineering and Geosciences Branch  
Division of Waste Management  
Office of Nuclear Material Safety  
and Safeguards

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