

Dr. Wesley C. Patrick President August 14, 1995
 Center for Nuclear Waste Regulatory Analyses
 Southwest Research Institute
 6220 Culebra Road, Bldg. 189
 San Antonio, TX 78228-0510

SUBJECT: REVIEW TEAM ON THE POTENTIAL FOR A NUCLEAR EXPLOSION IN A HIGH-LEVEL WASTE REPOSITORY

Dear Dr. Patrick:

In April of this year, I requested technical support from the Center for Nuclear Waste Regulatory Analyses (CNWRA) for the establishment of a Nuclear Regulatory Commission/CNWRA team to review various reports written by scientists at Los Alamos National Laboratory (LANL), as well as related reports from other sources, which discuss the potential for, and consequences of, criticality of fissile materials in a high-level waste geologic repository. The review team was led by Dr. Michael J. Bell, Chief of the Engineering and Geosciences Branch, Division of Waste Management (DWM), and included the following members of your staff:

William Murphy Mark Jarzempa Peter Lichtner

The review team focused primarily on the paper written by Drs. C. D. Bowman and F. Venneri of LANL, entitled "Underground Supercriticality from Plutonium and Other Fissile Material." As a result of the review, the team developed a set of comments which are being forwarded to the U.S. Department of Energy (DOE) for their consideration in further addressing criticality control issues related to the repository program.

I would like to take this opportunity to express our appreciation to, and acknowledge the substantive efforts of, the review team members. The team's review was comprehensive, thorough, and of very high quality. Additionally, the product of the review reflects the interest, enthusiasm, commitment of time, and broad-based technical expertise demonstrated by the team members, and DWM expects that DOE will find the aforementioned comments useful.

Sincerely,

John T. Greeves, Director
 Division of Waste Management
 Office of Nuclear Material
 and Safeguards

cc: W. Murphy
 M. Jarzempa
 P. Lichtner

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Sincerely,

John T. Greeves, Director
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 Office of Nuclear Material
 and Safeguards

cc: W. Murphy
 M. Jarzempa
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Distribution for letter to W. Patrick/CNWRA dated: August 14, 1995

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