



ENVIRONMENTAL EVALUATION GROUP

AN EQUAL OPPORTUNITY / AFFIRMATIVE ACTION EMPLOYER

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June 10, 1991

Joe Youngblood

Mr. Robert E. Browning
Director
U.S. Nuclear Regulatory Commission
Division of Waste Management
Mail Stop 623-SS
Washington, DC 20555

Dear Mr. Browning:

Please find enclosed a copy of the report entitled "An Assessment of the Flammability and Explosion Potential of Transuranic Waste" by Dr. Matthew Silva, June, 1991, EEG-48.

Evidence presented in the report strongly suggests that the Waste Isolation Pilot Plant Final Safety Analysis Report (WIPP FSAR) incorrectly identified the 1970 drum fire at the Idaho National Engineering Laboratory as the only spontaneous ignition in the U.S. Department of Energy's (DOE) operational history. Records from the DOE's Unusual Occurrence Reporting System indicate that discharge of static electricity, spontaneous ignition of pyrophoric materials, and reactions involving nitric acid have generated other fires, explosions, and incidents of drum overpressurization in mixed radioactive waste at DOE facilities. The report discusses the incidents that are relevant to the flammability and explosivity hazard of transuranic waste destined for emplacement in the WIPP. The WIPP FSAR, in accordance with DOE Order 5481.1B, may require significant modification to accommodate evidence of previously unconsidered fires and explosions.

Dr. Silva also examines the effectiveness of safeguards proposed by the DOE to mitigate potential problems and finds them to be inadequate. The evidence clearly indicates that fires and explosions, have occurred at several locations in the DOE complex because guidelines and procedures have been inadequate, improperly used, or not used at all. This suggests that future accidents of a similar nature might be anticipated, that workers need to be fully aware of the potential hazards of working with these materials, and that clear and consistent guidelines and procedures should be in place and enforced to assure maximum safety.

Sincerely,

Robert H. Neill
Robert H. Neill
Director

Enclosure
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on the address for you.*

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Providing an independent technical analysis of the Waste Isolation Pilot Plant (WIPP),
a federal transuranic nuclear waste repository.