

A.J. Eggenberger, Chairman
Joseph F. Bader
John E. Mansfield

DEFENSE NUCLEAR FACILITIES SAFETY BOARD

625 Indiana Avenue, NW, Suite 700 Washington, D.C. 20004-2901
(202) 694-7000



January 30, 2006

Dr. Arjun Makhijani
Institute for Energy and Environmental Research
6935 Laurel Avenue, Suite 201
Takoma Park, MD 20912

Dear Dr. Makhijani,

Thank you for forwarding the report of the Institute for Energy and Environmental Research (IEER) titled *Weapons Plutonium in Los Alamos Soil and Waste: Environmental, Health, and Security Implications* to the Defense Nuclear Facilities Safety Board (Board). The Board considers the safe execution of the Department of Energy (DOE) program to retrieve legacy transuranic wastes, characterize them, and dispose of them in the geologic repository at the Waste Isolation Pilot Plant (WIPP) a high-priority risk reduction activity that requires continued emphasis.

The IEER's report raises three primary safety concerns related to legacy plutonium in wastes at Los Alamos National Laboratory (LANL). These concerns arise because of discrepancies among several DOE databases and estimates of the quantity of plutonium in wastes at LANL. The three concerns are as follows: (1) more plutonium may have been shipped to WIPP than DOE records indicate; (2) legacy wastes buried at LANL may contain more plutonium than estimated by DOE; and (3) a significant amount of plutonium may have been diverted for hostile purposes. The third concern is beyond the Board's statutory authority. The Board notes that this concern has been brought to DOE's attention by correspondence from IEER addressed directly to DOE Headquarters and its field elements.

Regarding the first concern, the Board has followed closely the operational safety aspects of transuranic waste activities at both LANL and WIPP. However, the audit and certification activities of DOE's Carlsbad Field Office under the regulatory oversight of the Environmental Protection Agency and the New Mexico Environment Department are not duplicated by the Board. The Board agrees that problems with characterization of transuranic waste at LANL have been identified (e.g., in the February 2005 audit report by the DOE Inspector General titled *Transuranic Waste Management at Los Alamos National Laboratory*). These problems were identified because of the high level of external scrutiny focused on the transuranic waste disposal program and the extensive characterization and documentation required to certify wastes for disposal at WIPP.

Regarding the second concern, the Board agrees that there is uncertainty in DOE's estimates of the quantity of radionuclides contained in legacy wastes buried at LANL. This uncertainty is an important consideration in the planning for further waste retrieval and in any analysis of the permanent disposal of wastes in situ. DOE documents acknowledge this uncertainty (e.g., the June 2000 report of DOE's Office of Environmental Management titled *Buried Transuranic-Contaminated Waste Information for U.S. Department of Energy Facilities*), and indicate that DOE will consider uncertainty in planning future activities involving buried waste at LANL.

The Board appreciates your interest in and concern for the health and safety of workers and the public stemming from operations at LANL.

Sincerely,

A handwritten signature in black ink, appearing to read "A. J. Eggenberger". The signature is written in a cursive style with a large, stylized "E".

A. J. Eggenberger
Chairman