

## DEFENSE NUCLEAR FACILITIES SAFETY BOARD

May 19, 1997

**MEMORANDUM FOR:** G. W. Cunningham, Technical Director

**COPIES:** Board Members  
S. Krahn

**FROM:** D. Winters

**SUBJECT:** Carlsbad Area Office (CAO) TRU Waste Characterization and Certification Audit of LANL Readiness to Ship TRU Waste to WIPP

This report documents observations made by Defense Nuclear Facilities Safety Board (Board) staff members D. Winters and D. Ralston during a May 12–16, 1997, trip to the Los Alamos National Laboratory (LANL) to observe a Characterization and Certification Audit conducted by the Department of Energy's (DOE's) Carlsbad Area Office (CAO). The primary objective of the trip was to determine whether the CAO audit process is of sufficient rigor to verify the adequacy of storage/generator site preparedness to ship transuranic (TRU) waste to the Waste Isolation Pilot Plant (WIPP) for disposal. The secondary objective was to ascertain whether LANL's preparedness to ship is adequate.

DOE plans to receive the first shipment of TRU waste for disposal at WIPP in May 1998. The Operational Readiness Reviews of the contractor, Westinghouse Waste Isolation Division (WID), and the DOE/CAO are expected in January and March 1998, respectively. The CAO is currently conducting "Characterization and Certification Audits" of those TRU storage/generator sites expected to provide the earliest waste shipments (i.e., Idaho National Engineering and Environmental Laboratory [INEEL], LANL, Rocky Flats Environmental Technology Site [RFETS]). A preliminary review of the current version of the WIPP Safety Analysis Report (SAR) (Rev.1, March 1997) indicates that, although there are no apparent significant safety risks to the public, *there are potential risks to individual site workers* from various postulated credible accidents resulting in the release of respirable TRU contamination. The significance of these accidents could be greater than analyzed in the SAR should the waste received at WIPP exceed the limits provided in the WIPP Waste Acceptance Criteria (WAC). Because WIPP relies primarily on storage/generator site documentation to establish waste package contents, it is imperative that both the CAO audit of the storage/generator site waste handling, packaging, and shipping process, and the site processes themselves, be rigorous enough to ensure that WIPP WAC limits will not be exceeded.

The Board's staff observed the DOE/CAO audit of the LANL TRU waste program from Tuesday, May 13 through Thursday, May 15, 1997. The staff observed technical and quality assurance oriented reviews of documents and interviews of LANL TRU waste program staff.

The scope and depth of the review appeared to be excellent and the audit staff to be competent, professional, and firm but courteous. Findings made were placed in several categories, including (from most to least significant) (1) Corrective Action Required (CAR), (2) Observations, (3) Recommendations, and (4) Concerns. With the audit more than 95 percent complete as of Thursday evening, the audit team had identified 13 CARs, 10 Observations, 12 Recommendations, and 6 Concerns. In addition, there were 11 findings corrected during the audit. None of the findings (either considered individually or as a group) seemed to be of such significance, or difficulty to correct, as to indicate that LANL's program was seriously flawed.

LANL TRU waste program staff appeared to be technically qualified (in some cases over-qualified), competent, and dedicated to performing their jobs well. Deficiencies discovered by the audit team involved mainly documentation quality and adherence to LANL procedures. That is, appropriate actions were found to have been taken but not fully documented to the level or rigor required under the applicable standards (e.g., NQA-1, various Environmental Protection Agency requirements).

The apparent quality and depth of the review gives the Board's staff confidence that the requirements of the WIPP WAC will be met for TRU wastes shipped to WIPP from LANL. In addition, because the core of the LANL audit team is being used to audit both INEEL and RFETS, the staff expects that the audits of those sites will ensure that TRU wastes to be shipped from them will also meet the WIPP WAC requirements.

The staff plans to review the final CAO LANL audit report to confirm the conclusions drawn in this trip report. A Board Site Representative is expected to observe portions of the DOE/CAO audit at RFETS, scheduled for June 2-6, 1997, to ascertain whether the conclusions drawn by the staff concerning the rigor of the audit observed at LANL will also prove valid for RFETS. Following subsequent review of the CAO report on the RFETS audit, a determination will be made as to the need for staff coverage of the CAO's INEEL audit in September. Concerns, if any, noted by the staff as a result of these further reviews will be brought to the attention of the Board.