



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, D.C. 20460



OFFICE OF
AIR AND RADIATION

Oct. 27, 2003

Dr. Inés Triay, Manager
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U.S. Department of Energy
P.O. Box 3090
Carlsbad, NM 88221-3090



Dear Dr. Triay:

I am writing in response to your letter dated October 15, 2003. In that letter, you discuss the significant condition adverse to quality (SCAQ) discovered recently at the Los Alamos National Laboratory. This finding, in the area of non-destructive assay for radionuclides, was discovered during the Carlsbad Field Office (CBFO) Audit A-03-27 of the transuranic (TRU) waste characterization and certification activities at LANL. Your letter describes the findings, states what actions have been taken by CBFO and the site to address the compliance problems, and also provides a plan that CBFO will pursue once LANL completes corrective actions to address the CBFO Corrective Action Report (CAR).

In summary, you confirm that LANL had incorrectly certified for disposal at WIPP a number of TRU waste drums that measured below the lower limit of detection of the non-destructive assay (NDA) equipment used – i.e., the High Efficiency Neutron Counter (HENC). Ninety-eight (98) drums affected by this condition have been disposed in the WIPP; of these, 43 drums also assayed below the established calibration range of the instrument. For each of the drums, LANL reported in the WWIS either invalid measured values or the lower-limit of detection of the HENC. These practices were in violation of LANL's own operating procedures as well as multiple provisions of the Waste Acceptance Criteria for Contact-Handled Waste (CH-WAC) approved by the Environmental Protection Agency (EPA). They also violate the requirements of the CBFO Quality Assurance Program Document.

Upon review of the information related to noncompliance at LANL, we concur with the CBFO's approach, namely:

- ▶ Immediate stoppage of LANL waste characterization, certification, and shipments to the WIPP for disposal until the conditions documented on the CAR 03-083 are successfully corrected by LANL.

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- ▶ Requiring LANL to devise a plan for resolving the Corrective Action Report issued by CBFO (CAR 03-083).
- ▶ Notifying EPA of the CAR in writing.
- ▶ Conducting, jointly with LANL, an investigation to ascertain:
 - the extent of violations of the CH-WAC during the characterization of 98 drums over a six week period spanning from August 15 to September 23, 2003;
 - the identification of affected drums; and
 - the physical location of affected drums already emplaced in the WIPP repository, and their impact on the repository performance and WIPP radiological inventory .
- ▶ Subjecting the site to a CBFO certification audit for portions of the LANL program regulated by EPA prior to allowing shipments of WIPP waste to resume.

In addition to meeting the above requirements imposed by CBFO prior to resuming WIPP waste shipments, LANL also will be subject to a waste characterization approval inspection by EPA under our authority at §194.8. We view the infractions at LANL as very serious and believe that a high level of scrutiny is warranted at the site. Thus, we will follow the full review and approval process for renewing waste characterization at LANL. The LANL must provide full site documentation, including any revised documents, related to TRU waste characterization for our review and placement in EPA's public docket. We will announce our inspection in the Federal Register. Our inspection will cover the full range of TRU waste characterization activities, with particular emphasis on the NDA systems, interpretation and implementation of the CH-WAC, and corrective actions that have been taken at the site.

During our inspection, we will also examine two additional issues raised by the data on TRU alpha activity concentration data provided for 98 drums (in Attachment 2 to the letter). First, we will verify that the reported TRU alpha concentrations reflect only TRU alpha radionuclides and not the total alpha radionuclides. Second, we will review why 11 of the 98 drums were overpacked in payload containers (standard waste boxes or ten drum overpacks) and whether the site followed appropriate load management procedures as described in our letter of August 8, 2003 on this issue.

Finally, your letter provides CBFO's assessment that the radiological materials in the 98 drums have a negligible impact on the radiological inventory of WIPP (0.0013% of the current total repository inventory of 347,600 curies). Further, your letter concludes that these drums should remain in the WIPP repository as their removal would expose WIPP workers to additional health and safety risks. We concur with CBFO's assessment that there is no reasonable basis to expect that these drums would adversely affect WIPP's long-term performance, and also agree that their retrieval could pose significant operational difficulties and lead to unnecessary worker exposures. For these reasons, LANL waste subject to the faulty practices and already emplaced in the WIPP disposal system shall not be retrieved.

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If you have any questions, please contact Rajani Joglekar at (202) 564-7734.

Sincerely,



Frank Marcinowski, Director
Radiation Protection Division

- cc: Lynn Smith, EM-1
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