

Department of Energy
Carlsbad Field Office
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13 AUG 2003



Mr. Frank Marcinowski, Director
Radiation Protection Division
Office of Radiation and Indoor Air
U.S. Environmental Protection Agency
1200 Pennsylvania Avenue, NW
Washington, D.C. 20460

Subject: Response to EPA Regarding the Use of Container Overpacking at Savannah River Site and Argonne National Laboratory-East

Dear Mr. Marcinowski:

As you requested in your letter dated August 8, 2003, enclosed is an inventory of containers in overpacks (standard waste boxes and ten-drum overpacks) from the Savannah River Site (SRS) and Argonne National Laboratory-East (ANL-E) previously characterized using neutron nondestructive assay (NDA) systems at these sites (Enclosure 1). This inventory identifies overpacked containers that assayed below 100 nCi/g when considered individually. Your letter referred to the IPAN system at ANL-E. There is no IPAN system at ANL-E. The DOE has assumed you were referring to the Active Passive Neutron Examination and Assay (APNEA) system that is currently in use at ANL-E. In addition, to assist in your technical review of the IPAN system at SRS and APNEA system at ANL-E, I have included the technical documentation for these systems (Enclosures 2 and 3, respectively). This documentation is analogous to what your staff requested for the IQ3 review. Because of the large volume of this information, it has been provided to you and your staff on a compact disk (CD) enclosed with this letter. In addition, a complete paper copy has been provided to Ms. Betsy Forinash.

I am pleased that EPA reached the conclusion that assessing TRU alpha activity concentration on a payload container basis is an acceptable practice from a regulatory perspective. There are two issues identified in your letter with which DOE strongly disagrees. First, the EPA restriction on overpacking containers that assay with a TRU alpha activity concentration of less than 100 nCi/g using the neutron NDA systems at SRS and ANL-E is not technically justified. A lower limit of detection (LLD), which is below 100 nCi/g, has been determined for these systems as required by the Waste Isolation Pilot Plant (WIPP) Contact-Handled Waste Acceptance Criteria (CH-WAC). There is no technical reason that these systems cannot be used to measure waste containers at or above the LLD established for the system. The EPA's restriction of these systems to containers measuring greater than 100 nCi/g is arbitrary and not based on any technical issues. In addition, the regulations governing the approval process for waste shipment from waste generator sites for disposal at the WIPP specify that EPA determines compliance with the requirements for use of a "system of controls" at waste generator sites (Ref: 40 CFR 194.8(b)). The "system of controls" (i.e., the



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determination of LLDs and calibrated ranges) that the EPA approved for both the ANL-E and SRS NDA systems is identical, irrespective of whether the resulting measurements are above or below 100nCi/g. I request that EPA reconsider this restriction.

The second issue is that the use of overpacking to manage TRU alpha activity concentration was implemented without notification to the EPA. This management technique was discussed on numerous occasions with members of your staff. It has been the foundation of container management for the planned Advanced Mixed Waste Treatment Project (AMWTP) for several years, and this was known by EPA. As requested in your letter, the DOE will specifically notify the EPA of the use of this technique if and when it is applied at sites in the future.

If you have any questions or need additional information, please contact me at (505) 234-7300.

Sincerely,


Inés R. Triay
Manager

Enclosures

cc: w/enclosures
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