



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

DEC 19 2003

OFFICE OF
AIR AND RADIATION

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



Dear Dr. Triay:

The WIPP Land Withdrawal Act established limits for the amount of remote-handled (RH) transuranic (TRU) waste that can be emplaced in the Waste Isolation Pilot Plant (WIPP). In 1998, the Environmental Protection Agency's (EPA's) Certification Decision determined that the Department of Energy (DOE) met EPA's requirements to describe the expected inventory of RH waste intended for disposal at WIPP. We also determined that DOE accurately incorporated RH into the performance assessment calculations which showed the WIPP can safely contain both contact-handled and RH waste. At the time of EPA's decision, EPA stated that DOE could not emplace RH TRU waste from any waste generator site in the repository until it demonstrated that such waste can be adequately characterized (See 40 CFR 194, Appendix A, Condition 3). DOE is now requesting approval of the general framework to characterize RH waste – the first step toward the emplacement of RH TRU in the WIPP repository.

Preliminary Approval and Public Comment on a Framework for RH Waste Characterization

This letter responds to DOE's revised proposal of October 30, 2003, regarding characterization of RH TRU waste for disposal at WIPP. This revision of the Waste Characterization Program Implementation Plan (WCPIMP), along with the March 10, 2003, RH TRU Waste Characterization Plan, address the EPA's comments on previous versions. (See EPA Letters dated September 24, 2002 [Item II-B3-40], March 28, 2003 [Item II-B3-60], and August 1, 2003 [Item II-B3-54] in the EPA Air Docket A-98-49.)

The RH TRU Waste Characterization Plan provides an overview of the methods and corresponding characterization objectives for RH waste. The WCPIMP provides detail on the RH waste characterization processes and describes data collection and management. Based on our review of these documents, we have reached a preliminary conclusion that the RH Transuranic Waste Characterization Plan and the WCPIMP, Revision 0D, now provide an adequate framework for conducting RH waste characterization while giving RH sites the flexibility to develop site-specific programs for characterizing RH waste.

031223



With this letter EPA is notifying DOE and the public of our preliminary conclusion and our intent to approve DOE's RH TRU Waste Characterization Plan and Implementation Plan for the WIPP. This decision would not authorize any site to begin RH waste characterization or shipment to WIPP. Several additional approval steps are necessary for site-specific authorization of RH waste characterization and WIPP disposal.

Once DOE's plan for RH waste characterization receives final approval by EPA, any significant changes or revisions to the RH TRU Waste Characterization Plan and the WCPIP must be approved by EPA prior to implementation. As with the contact-handled Waste Acceptance Criteria document, EPA expects periodic changes to the RH WCPIP to occur based on program wide and site-specific experiences and conditions.

Future Approvals for Waste Generator Sites to Implement RH Waste Characterization

In order to obtain authorization to begin RH waste characterization at generator sites, DOE must submit site-specific plans to show the requirements in the Waste Characterization and Implementation Plan have been fully met. Enclosure 1 details the type of information EPA expects in these site-specific plans. EPA will review the site-specific plans and must approve these plans *before* RH waste characterization can begin at a given site. Please note that this is more stringent than the process followed for contact-handled waste characterization. EPA believes that this additional step is necessary because DOE has requested significant flexibility in implementing the RH program to accommodate highly specialized waste streams and site-specific information. Thus, RH waste characterization is unlikely to be standardized across the DOE complex and we expect significant numbers of site-specific procedures. Approval of site-specific plans by EPA would allow implementation of RH waste characterization measures, but would not authorize the site to ship RH waste for disposal at WIPP.

EPA will apply the procedures authorized by 40 CFR Part 194 when particular sites seek authorization for disposal at WIPP. Before allowing RH waste from any DOE site to be disposed at WIPP, EPA also will conduct an on-site inspection of waste characterization activities to evaluate the adequate implementation of site-specific RH waste characterization programs. The inspections will be conducted under our inspection authority at section 194.8 or 194.24, as appropriate. We will verify, through inspection, that site-specific RH programs are implemented in a technically adequate manner and generate appropriate data to demonstrate compliance with the waste characterization requirements at 40 CFR 194.24. We will also verify that the programs meet the Quality Assurance requirements at 40 CFR 194.22.

Following the inspection, EPA will issue a site-specific decision on RH waste characterization just as we currently do for contact handled waste programs. This decision will notify DOE of the waste streams and processes that are approved for characterizing RH waste for disposal at WIPP. EPA will make the site-specific RH waste characterization plans and inspection reports available in EPA's WIPP dockets and on our website.

Based on our on-going discussions with DOE concerning performance assessment activities related to WIPP recertification, DOE is revising estimates of the RH inventory, and the updated information will be incorporated in the new performance assessment. We believe that this is an appropriate mechanism for evaluating such information and we will review DOE's RH inventory estimates and their impact on the performance assessment as part of our recertification analysis.

Opportunity for Public Comment

As stated above, we are seeking public comment on our preliminary decision to approve DOE's framework for RH waste characterization – namely the RH TRU Waste Characterization Plan and RH WCPIP (Revision 0D) – with its implementation at generator sites subject to certain requirements. This letter and related documents are available from EPA's Air Docket A-98-49 or on our website at <http://www.epa.gov/radiation/wipp>. In addition, we will mail relevant materials to key stakeholders. EPA is seeking public comment until January 30, 2004. Based on public comments, we may request further information or revise our proposed approach to oversee and approve implementation of RH waste characterization at DOE waste generator sites. Following the consideration of comments and any additional information, we will issue another letter stating our final decision regarding DOE's RH TRU Waste Characterization Plan and Implementation Plan.

Comments concerning our proposed approval may be sent to EPA via email (lee.raymond@epa.gov) or via regular mail to: Ray Lee, U.S. Environmental Protection Agency, 1200 Pennsylvania Avenue, NW, Mail Code 6608J, Washington, DC 20460. Comments (as Word or WordPerfect documents) may also be submitted by fax (202-343-2305). Comments must be postmarked by January 30, 2004.

If you have questions regarding our comments, please contact Rajani Joglekar at (202) 343-9462.

Sincerely,



Frank Marcinowski, Director
Radiation Protection Division

cc:

Lynne Smith, DOE HQ
Matthew Silva, EEG
Steve Zappe, NMED
EPA Docket

Additional Documentation Required by EPA for RH Site Approval

DOE waste generator sites with remote-handled waste are expected to fully implement the approved version of the WCPIP through site-specific plans. In addition, these site-specific plans should:

- ▶ Ensure that site-specific Certification Plans document the full RH waste characterization process, including modeling and measurement activities and combinations thereof, as well as any measurement data collection activities performed to acquire data prior to, as part of, or in lieu of acceptable knowledge (AK) qualification. RH sites must prepare related documentation (such as Confirmatory Testing Plans, Sampling Plans, or other site-specific documents) when characterization data are obtained using procedures less comprehensive (i.e., nondestructive assay and nondestructive evaluation by radiography and/or visual examination of all TRU waste containers) than those required for CH waste. Waste generator sites should follow the procedures contained in the CH-required waste characterization program if the approved WCPIP does not address them. These documents must be provided and *approved* by EPA prior to their implementation at a site. Implementation of RH characterization activities prior to EPA approval – such as pilot or demonstration programs – may lead to collection of characterization data that ultimately cannot be accepted by EPA.
- ▶ Develop and justify quality assurance objectives (QAOs) that are not specified in the WCPIP: dose to curie (DTC) modeling and destructive analysis. When developing and documenting outstanding QAOs, RH sites should follow EPA QA/G-5M for guidance. EPA will assess the appropriateness of these QAOs during the pre-audit process of site-specific document review and approval or during audits.
- ▶ Specify the lower limits of detection (LLD) for destructive assay (DA) comparable to those for nondestructive assay (NDA). EPA will evaluate the technical appropriateness of DA LLD on a site-specific basis.
- ▶ Ensure that the samples are obtained using approved techniques, and second, ensure that the sample sizes and types, adequately represent AK for confirmation. Failure to take these steps may result in the disqualification of data.
- ▶ Include when needed, procedure(s) for overpacking of waste containers for load management purposes. EPA addressed the issue of overpacking CH waste containers in ten drum overpacks (meeting the definition of a payload container for WIPP disposal) for load management in a letter dated August 8, 2003 available in the EPA Air Docket.