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

JAN 12 2007

OFFICE OF
AIR AND RADIATION

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

Dear Dr. Moody:

This letter provides the results of the U.S. Environmental Protection Agency's (EPA) baseline inspection of the remote-handled (RH) transuranic (TRU) waste characterization program implemented by the Central Characterization Project (CCP) at the Idaho National Laboratory (INL) (Inspection Number EPA-INL-RH-CCP-06.06-08).

In June and August 2006, EPA conducted a baseline inspection of INL-CCP's RH TRU waste characterization program to assess the characterization of RH TRU waste in accordance with EPA regulations (40 CFR 194.8(b)(3), 40 CFR 194.8(c) and 40 CFR 194.24). During the inspection, EPA assessed the technical adequacy of the characterization performed through acceptable knowledge, dose-to-curie, and visual examination. EPA's inspection team identified one finding and six concerns in the areas of visual examination and acceptable knowledge. The Department of Energy's (DOE) Carlsbad Field Office (CBFO) adequately responded to EPA's findings and concerns and there are no open issues resulting from this inspection.

In accordance with 40 CFR 194.8, EPA issued a *Federal Register* notice on November 8, 2006, announcing EPA's proposed approval of the RH TRU waste characterization program at INL-CCP. This *Federal Register* notice also opened a 45-day public comment period on our proposed approval and announced the availability of the inspection report (Air Docket No: A-98-49; II-A4-69). EPA received one set of public comments on the proposed INL-CCP inspection report. Both Section 9 and attachment C of the enclosed inspection report, include the public comments and EPA's responses.

Although this letter and inspection report establish a baseline for the RH TRU waste characterization program at INL-CCP, this approval does not authorize DOE to dispose of RH TRU waste from INL-CCP at the Waste Isolation Pilot Plant (WIPP). As stated in the enclosed inspection report, the waste tracking system known as the WIPP Waste Information System

(WWIS) was not operational for RH waste at the time of EPA's baseline inspection. EPA's baseline approval designates the initiation of the WWIS for RH waste as a Tier 1 change and therefore requires EPA approval prior to implementation.

As a result of comments submitted by DOE on the proposed baseline approval, EPA is also evaluating a modified visual examination procedure as a Tier 1 change and DOE's request for Tier 1 change addressing real-time radiography (RTR) to the INL-CCP waste characterization program. The results of these INL-CCP Tier 1 evaluations will be communicated to DOE under separate correspondence and will be posted on the EPA website at www.epa.gov/radiation/wipp

Approval Summary

EPA approves the disposal of retrievably-stored, RH TRU, debris waste, as characterized by INL-CCP, according to the conditions and limitations specified by this letter and inspection report. This letter and the final inspection report have been placed in the EPA docket (Air Docket No. A-98-49, II-A4-72) and posted on the EPA website at www.epa.gov/radiation/wipp.

EPA approves the following RH TRU waste characterization processes and equipment at INL-CCP:

(1) The AK process for RH retrievably-stored TRU debris in one waste stream, designated by INL as INL Waste Stream No. ID-ANLE-S5000, Lots 1 through 20, which are defined by CCP as a debris waste stream in CCP-AK-INL-500, Revision 3

(2) The radiological characterization process using dose-to-curie (DTC) and modeling-derived scaling factors for assigning radionuclide values to one RH waste stream for which the scaling factors are applicable, as described in CCP-AK-INL-501, Revision 1

(3) The VE of audio/video media process used for a total of nineteen (19) retrievably-stored RH debris waste drums included in three batch data reports (BDRs) – BDR Nos. RHINLVE60001, RHINLVE60002, and RHINLVE60003

As required by 40 CFR 194.8, any changes to these waste characterization activities from the date of the baseline inspection must be reported to, and, if applicable, approved by EPA, according to the enclosed table.

Changes to the approved waste characterization program that are designated in the enclosed table as Tier 1 must be reported to EPA prior to implementation. DOE may implement Tier 2 changes prior to EPA approval; however, DOE must provide periodic reports of these

changes to EPA. The attached inspection report provides additional details on the types of activities that are considered Tier 1 and Tier 2.

If you have any questions, please contact Rajani Joglekar at (202) 343-9462 or Ed Feltcorn at (202) 343-9422.

Sincerely,

Juan Reyes, Director
Radiation Protection Division

Enclosures

cc: Electronic Distribution
Frank Marcinowski, DOE HQ
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Table 1. Tiering of RH TRU WC Processes Implemented by INL-CCP (Based on June 12–16 Baseline and August 9 & 29, 2006, Follow-Up Inspections)

RH WC Process Elements	INL-CCP RH WC Process - T1 Changes	INL-CCP RH WC Process - T2 Changes*
Acceptable Knowledge (AK)	Modification of the approved waste stream ID-ANLE-S5000 to include additional containers, i.e., K Cell or other debris wastes; AK (1) and AK (5) Any new waste streams not approved under this baseline; AK (1) and AK (7) Substantive modification(s)*** that have the potential to affect the characterization process: CCP-AK-INL-500, CCP-AK-INL-501, or CCP-AK-INL-502; AK (6) and AK (7) Load management for any RH waste stream; AK (16)	Notification to EPA when updates to CCP-INL-AK-500, CCP-INL-AK-501, and CCP-INL-AK-502 are approved by CBFO; AK (4) Notification to EPA when changes to AK documentation as a result of WCPIP revisions** have been made (e.g., CRR); AK (7) and AK (9) Notification to EPA when a Correlation or Surrogate Summary Form is completed for each of the RH containers in this waste stream identified as CH based upon measured dose rates that present NDA results for assayed containers; AK (10), AK (14) and RC (8.2.2) Notification to EPA once waste stream data package for debris waste stream, and any modifications to the WSPF including the CRR and AK Summary are completed; AK (14) Notification to EPA that the final DTC determination is complete for RH containers numbers 728 through 737, as identified in AK Reference P030; all other AK accuracy reports prepared annually at a minimum; AK (15)
Radiological Characterization, including Dose-to-Curie (DTC)	Application of new scaling factors for isotopic determination other than those documented in CCP-AK-INL-501; RC (8.2.2 and 8.2.3) Use of any alternate radiological characterization procedure other than DTC with established scaling factors as documented in CCP-TP-504 or substantive modification of the DTC procedure***; RC (8.2.2 and 8.2.3) Any new waste stream not approved under this baseline or addition of containers to Waste Stream ID-ANLE-S5000 that requires changing the established radionuclide scaling factors; RC (8.2.3)	Revisions of CCP-AK-INL-501or CCP-TP-504 that require CBFO approval; RC (8.2.2 and 8.2.3)
Visual Examination of audio/video media (VE)	Implementation of VE following this baseline approval; if INL-CCP decides to use VE in the future, EPA approval is necessary	None
Real-Time Radiography (RTR)	Any use of RTR requires EPA approval	None
WIPP Waste Information System (WWIS)	Any use of WWIS requires EPA approval prior to RH waste disposal	None

* Upon receiving EPA approval, INL-CCP will report all T2 changes to EPA every three months.

** Excluding changes that are editorial in nature or are required to address administrative concerns.

*** *Substantive modification* refers to a change with the potential to affect INL-CCP's RH WC process, e.g., the use of an inherently different type of measurement instrument or the use of the high-range probe as described in CCP-TP-504.