



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

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OFFICE OF
AIR AND RADIATION

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&

David C. Moody, PhD, Manager
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Dear Ms. Sellers and Dr. Moody:

This letter provides results of the U.S. Environmental Protection Agency's (EPA) inspection of October 16, 2007, at the Department of Energy (DOE) Idaho National Laboratory (INL). The EPA inspectors, Rajani Joglekar and Ed Felcorn, inspected certain elements of the Advanced Mixed Waste Treatment Project (AMWTP) and the Accelerated Retrieval Project (ARP) supported by the Central Characterization Project (CCP) at INL.

We conducted an unannounced inspection at AMWTP and ARP under the authority of 40 CFR 194.21(a)(1). The purpose of the AMWTP inspection was to verify that AMWTP continues to implement changes necessitated by the corrective actions to address disposal of an uncertified transuranic (TRU) waste container overpacked in a standard waste box (SWB) that occurred in June 2007. The purpose of the ARP inspection was to obtain waste volume information on several waste streams that were buried prior to 1970 and are now planned for disposal at Waste Isolation Pilot Plant (WIPP). The enclosure details the inspection process and results. This letter has been placed in the EPA docket (Air Docket No. A-98-49, II-A4-94) and will be posted on the EPA website at www.epa.gov/radiation/wipp.

Both DOE-Idaho staff and AMWTP personnel supported and cooperated with our inspectors and ensured that inspection needs, namely observing operational activities, were met and that all requested information was made available. We greatly appreciate their support and cooperation. We found that the corrective actions and the chain of custody process that AMWTP has implemented is technically adequate and addresses

See list on the back
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deficiencies that resulted in the overpacking and disposal of uncertified TRU waste container at WIPP in June 2007.

One of the corrective actions implemented to preclude recurrence of the June 2007 incident requires that the Central Characterization Project (CCP) assume responsibility for certain aspects of the chain of custody process. Currently, as required by its hazardous waste permit issued by the State of Idaho, AMWTP must electronically track all aspects of TRU waste drum movements from retrieval to disposal at WIPP including the chain of custody process that EPA evaluated in July 2007 and verified during this inspection. It is our understanding that the CCP's chain of custody process has a paper-based component and as a result we are concerned about the compatibility of the two systems which may potentially reduce the robustness of the electronic process that has now been established with the AMWTP. EPA plans to inspect and evaluate the process for adequacy as AMWTP and CCP further implement the changes in the chain of custody process.

Similarly, while ARP-CCP personnel made every effort to search for the information EPA requested, they had difficulties furnishing the information. As concluded in the enclosed ARP-CCP portions of the inspection report, EPA has identified this as a concern and request ARP-CCP to provide estimated volumes for TRU waste excavated from the pre-1970 buried waste designated as IN-ICP-002, IN-ICP-003, IN-ICP-004, and IN-ICP-005. We understand that since the March 2006 WIPP recertification, the Carlsbad Field Office (CBFO) has been obtaining waste inventory that provides the basis of the performance assessment from the TRU sites on an annual basis. During the inspection we learned that ARP-CCP personnel were not familiar with this activity and how the estimates were previously generated. This suggests that communication between the ARP-CCP personnel and those ARP staff supporting CBFO's waste inventory is ineffective and should be rectified by CBFO and the TRU sites. In addition, the information that was provided during the inspection appears to contradict information in CBFO's inventory documentation. Thus, we are interested in getting the information from the site and reconciling that with the performance assessment inventory information. EPA expects DOE (ARP) to provide the appropriate information within a month from receiving this letter.

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

Sincerely,

A handwritten signature in black ink, appearing to read "Juan Reyes", written over a horizontal line.

Juan Reyes, Director
Radiation Protection Division

Enclosure

Enclosure

EPA's October 16, 2007 Inspection Report

On October 16, 2007, under the authority of 40 CFR 194.21(a)(1), EPA inspected certain TRU waste activities of AMWTP and ARP-CCP at INL. The sections below discuss inspection purpose and results.

1.0 AMWTP Inspection:

1.1 Purpose:

The purpose of the unannounced inspection was as follows:

- Evaluate actions taken to complete Corrective Actions #7, #9 and #10 from CAR 28920
- Examine the tracking/segregation and payload assembly process at AMWTP
- Evaluate the interface between AMWTP's internal Waste Tracking System (WTS) and the WIPP Waste Information System (WWIS)
- Evaluate the DOE-Idaho (DOE-ID) oversight related interaction with AMWTP

As part of the inspection conducted under the 40 CFR 194.21(a)(1) authority, EPA wanted to review relevant objective evidence and verify that AMWTP continues to implement changes required by the corrective actions necessitated to address an erroneous shipment an uncertified waste container overpacked in an SWB.

1.2 Individuals Contacted:

The inspection was opened with a conference call at 8:30 MST. Following individuals participated in the in-brief and out-brief: DOE ID - Don Rasch, Talley Jenkins, Jerry Wells, and Jim Wolski; Paul Contreras, DOE ID, DOE CBFO -Casey Gadbury, Courtland Fesmire, J R Stroble, Norma Castaneda, Kenneth Licklitter, Martin Navarrete, and Dennis Miehl; ID DEQ - Craig Halverson and Bruce LaRue; and BBWI – Paul Divjak, Lee Sygitowicz, Scott Raisch, Doug Wale, Kiki Torres, Neil Brill, Clint Sisson, Jeff Mousseau, and Elvin Dumas.

1.3 Background:

In June 2007, AMWTP shipped an uncertified TRU waste container overpacked in a standard waste box (SWB) to WIPP for disposal and immediately upon finding the error voluntarily stopped TRU waste shipments to WIPP. DOE informed EPA of the incident and the stop shipment decision as part of the corrective action until the site and CBFO completed the investigation and the site implements appropriate corrective actions. In

early July 2007, EPA inspected AMWTP's implementation of corrective actions ranging from immediate to long-term to preclude recurrence. On July 16, 2007, EPA sent a letter to DOE concurring with DOE's decision to resume INL shipments to WIPP. EPA had not received objective evidence for some of the long-term corrective actions (completed since the EPA July inspection).

1.4 Discussion:

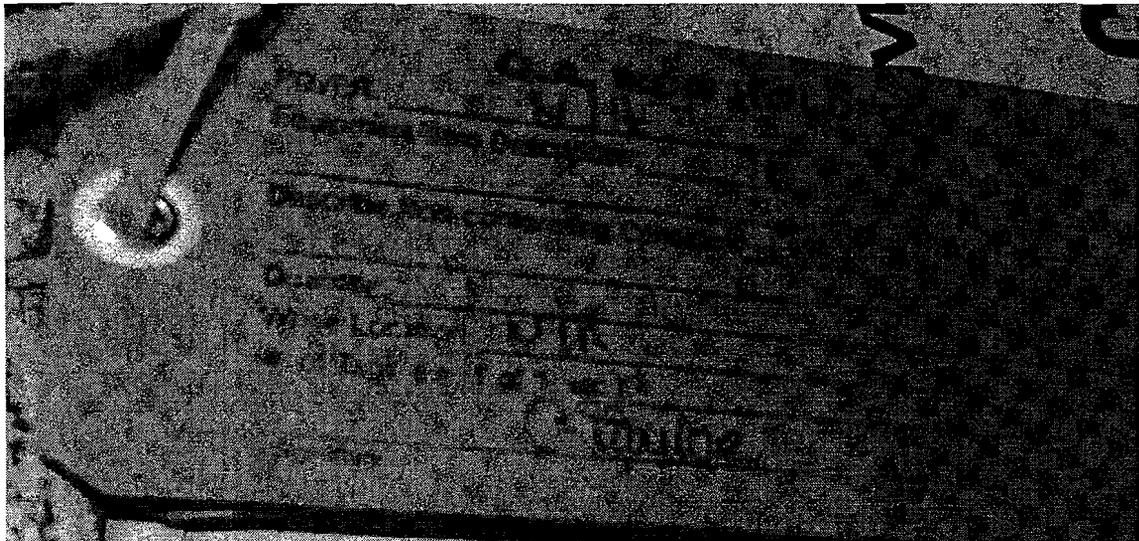
Below is the description of EPA's inspection results.

A. Actions taken to complete Corrective Actions #7, #9 and #10 from CAR 28920

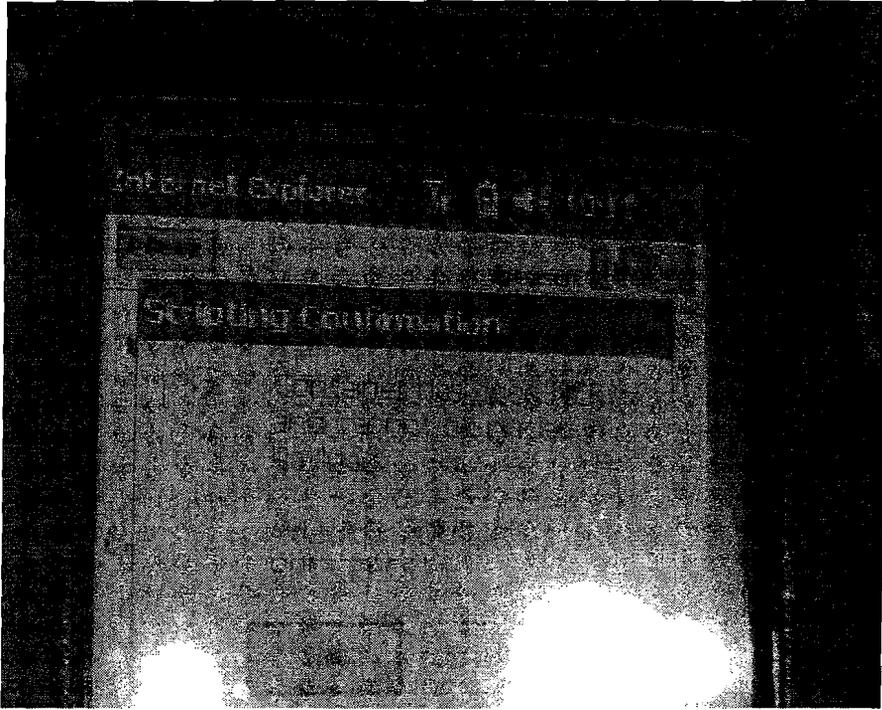
Elvin Dumas (AMWTP-QA) indicated that CAR 28920 is closed and provided documents that detail the process still underway at the site to preclude recurrence of the shipment of errant drum to WIPP. The documentation covers the period since the EPA inspection of July 2007. EPA evaluated the evidence provided and found it to be adequate. EPA requested the site provide updates to EPA as these actions are completed. Attachment A lists the AMWTP action items that address the CAR corrective actions #7, #9, and #10 completed since the EPA inspection.

B. Examine the tracking/segregation and payload assembly process at AMWTP

AMWTP personnel made available an OPS Tech (operations technician), Mr. Doug Pearson, to demonstrate the tracking and segregation of containers in building WMF-630. The EPA inspector requested Mr. Pearson barcode scan container #1020565. This container had an NCR (Non-Conformance Report) associated with it because it contained prohibited liquids. The NCR is shown below:

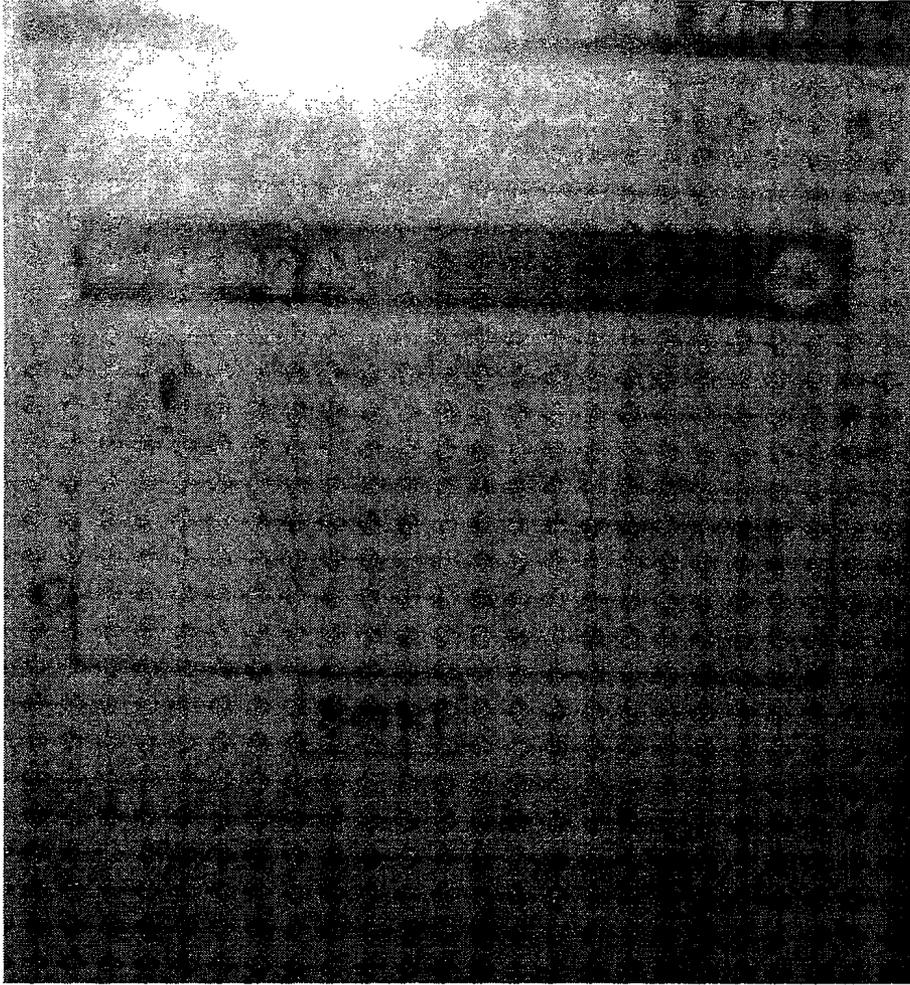


When the barcode for container 10020565 was scanned the display showed the following:



When this screen opens the ops tech must acknowledge the warning to clear the screen. Any attempt to move this container would be denied by the WTS (Waste Tracking System).

EPA then requested that a fully characterized but not WWIS certified container be moved to the payload assembly area of building WMF-630 using the barcode scanner and WTS interface. The following was displayed by the scanner:



"Scripting Alert: Send of (Container #) FAIL. Ops Certification row violation- container is not certified"

This is adequate to ensure that uncertified containers cannot be moved to an area where WIPP certified containers can be staged.

C. Evaluate the interface between AMWTP's internal Waste Tracking System (WTS) and the WIPP Waste Information System (WWIS)

EPA requested to meet with a TCO (Transportation Certification Officer) who gives final approval for the payload assembly interfacing with both the WTS and WWIS systems. TCO Randy Richmond was interviewed. Mr. Richmond described that the WWIS system provides a population of containers eligible for disposal at WIPP. From this population he selects containers based on waste stream, weights, and other transportation criteria. He then places move orders into the WTS (Waste Tracking System) that allows the containers to be moved to a special roped off and marked area in building WMF-630. The containers are moved by the OPS Tech after the barcode of the individual containers are scanned and the destination of the certified row is placed in the system, with the final check being that no system flags are displayed by the barcode scanner. Examples of the documentation for this process are Attachments B and C. EPA was satisfied that the WTS/WWIS interface and the associated review process was adequate.

As a result of the Item 10 under the heading Actions to Preclude Recurrence of CAR 28920, certain chain of custody activities will be taken over by the Central Characterization Project (CCP) in coming months. During discussion with AMWTP personnel it was apparent that the AMWTP's and CCP's chain of custody procedures differ. For example, AMWTP uses WTS, an internal electronic system that tracks CH TRU waste containers through the characterization processes up to and including loading direct loaded or overpacked containers that are loaded into TRUPAC IIs or half-pacs. AMWTP must maintain the WTS component as it is part of the AMWTP's hazardous waste permit issued by the Idaho Department of Environmental Quality. CCP uses a non-electronic (paper based) container management system. EPA is concerned that the CCP system may not be directly compatible with the WTS implemented by AMWTP thereby requiring extra steps that to interface with and integrate the AMWTP's waste container tracking and movement system when CCP takes over portions of AMWTP's existing chain of custody process. EPA, therefore, intends to inspect and evaluate the process for adequacy as AMWTP and CCP implements changes stemming from Item 10 under the heading Actions to Preclude Recurrence of CAR 28920.

D. Evaluate the DOE-ID oversight related interaction with AMWTP

EPA received from DOE-ID a listing of all weekly meetings held between the DOE-ID office staff and the AMWTP staff. (See Attachment D) Mr. Jim Wolski, a Facility Representative (FR) from the DOE-ID office to the AMWTP facility described the FR program and how it provides day-to-day operational oversight to the AMWTP facility. Mr. Wolski stated that there are three FRs at the AMWTP site. He stated that a minimum of 40% of their time is spent in the field observing operations. EPA was provided a listing of all FRs in the DOE complex and the DOE Standard for Facility Representatives (DOE-STD-1063-2006 of April 2006) which describes the FR program in detail. EPA was satisfied that the interface between the site and the DOE-ID office was adequate.

1.5 Conclusion:

Based on the information obtained and evaluation of the implemented procedures, EPA concludes that AMWTP's current operational activities will ensure that only fully characterized and certified TRU waste containers (direct loaded and overpacked) will be shipped to WIPP for disposal are for WIPP disposal.

As discussed under Section 1.4.C above, EPA wants to be informed and intends to inspect, evaluate, and verify procedure(s) implemented when CCP takes over from AMWTP certain of the chain of custody components as required by Item 10 under the heading Actions to Preclude Recurrence of CAR 28920.

2.0 ARP-CCP Inspection

2.1 Purpose:

The purpose of the inspection was to obtain information about the TRU waste belonging to four waste streams (IN-ICP-002, IN-ICP-003, IN-ICP-004, and IN-ICP-005) from pre-1970 buried waste at INL. These waste streams were included in the 2004 Compliance Recertification Application documentation as potential TRU waste for which detailed characterization data were lacking at that time. They were included in the subsequent Performance Assessment (PA) calculations required by EPA for the WIPP recertification. The intent of the inspection was to understand TRU waste volume estimates used in the TRU waste inventory for the WIPP performance assessment required to support the CRA II due to EPA March 2009. The Central Characterization Project (CCP) supports ARP's TRU waste characterization activities at INL. EPA expected ARP-CCP to gather more recent information about the projected volumes of TRU waste from these waste streams as part of the acceptable knowledge process.

2.2 Individuals Contacted:

EPA staff met with Paul Contreras (208-526-5699, contreph@id.doe.gov), Manager, DOE INL Accelerated Retrieval Project, and Tom Johnsen (208-533-0559, 208-351-8357, Thomas.johnsen@icp.doe.gov), and Brent Burton (208-526-8695, 208-520-0420, Brent.Burton@icp.doe.gov), INL Contractor staff, to gather information on buried waste being excavated as part of the Accelerated Retrieval Project (ARP) activity. Also present at the meeting were Chuck Ljungberg, DOE Idaho and Bruce LaRue, Idaho Department of Environmental Quality.

2.3 Background:

The Idaho Cleanup Project (ICP) is responsible for cleanup of waste from the subsurface disposal area and the Advanced Retrieval Project (ARP) identifies, retrieves, and prepares targeted waste for characterization and shipment to the WIPP. The Central Characterization Project (CCP) is responsible for characterization of waste excavated from ARP and AMWTP is responsible for its disposal at WIPP. In November 2005, EPA approved CCP's waste characterization program for the TRU component of the excavated waste from Pit 4 (ARP I) and Pit 6 (ARP II). Since 2005 the waste from these two pits has been disposed of at WIPP. TRU waste from ARP areas other than ARP I and ARP II will require EPA approval for disposal at WIPP.

2.4 Discussion:

Below are the highlights of the discussion:

- Since 2004, these waste streams have been regrouped and classified into three summary category groups (SCGs), namely, IN-ICP-002 (inorganic solids) and IN-ICP-003 (organic solids) as homogenous solids (S3000), IN-ICP-004 (graphite)

and IN-ICP-005 (filters) as debris (S5000), and soils/gravel (S4000). The categorization of roasted oxides into one of these SCGs is remains to be done. [The SCGs are the waste categories different waste streams are grouped into when characterizing TRU waste for the disposal at WIPP.]

- A new baseline plan (available for public comment) for the CERCLA/Superfund Cleanup activity at INL estimates that the area requiring excavation will be approximately 4.8 acres as opposed to the original estimate of the ARP targeted area of 2.8 acres. Currently waste covered under the ARP is being excavated as TRU waste for WIPP disposal. The ARP activity is expected to be completed around 2012.
- According to the current estimates more than 90% of the excavated waste is anticipated to be TRU with the remaining waste classified as low-level waste or mixed TRU waste.
- ARP will begin excavating waste from Pits 3 and 6 followed by Pits 1 and 2. ARP-CCP expects that next Spring characterization of the newly excavated waste from these pits will begin.

2.5 Conclusion:

During the EPA inspection ARP-CCP was not able to provide sufficient information specific to the main issue. Therefore, DOE (ARP) needs to provide the following information to EPA to resolve the concern.

- Provide the process used for regrouping the four waste streams into broad SCGs.
- Provide the new volume estimates for TRU, mixed TRU and low-level waste (LLW) per pit as shown in the Attachment E diagram and for each SCG.
- Explain the basis for determining if the waste is TRU or LLW when developing TRU waste volume estimates and compiling acceptable knowledge for these waste streams.