



Department of Energy  
Carlsbad Field Office  
P. O. Box 3090  
Carlsbad, New Mexico 88221  
**12 DEC 2003**



Ms. Sandra Martin  
New Mexico Environment Department  
Hazardous Waste Bureau  
2905 Rodeo Park Drive East, Building 1  
Santa Fe, NM 87505-6303

Subject: Response to Observer Inquiry from Audit A-03-05

Dear Ms. Martin:

In response to the Observer Inquiry associated with the Advanced Mixed Waste Treatment Project (AMWTP), Audit A-03-05 and a follow-up letter from the New Mexico Environment Department (NMED), dated December 9, 2003 (both enclosed), the Department of Energy (DOE) Carlsbad Field Office (CBFO) is submitting the following requested information for your review.

In the above-mentioned Observer Inquiry, NMED wrote:

"NMED observed that INEEL intends to use solid sampling data for the 3100 Cubic Meter program, and included Continuation sheets in the draft WSPF that addressed the hazardous waste code assignments for these waste. However, this discussion did not address whether the 3100 Cubic Meter samples had been selected with the entire First/Second stage sludge population considered, whether the 3100 Cubic Meter population itself had been randomly selected from the total First/Second stage sludge, etc. It is possible that these samples could be used for preliminary samples, but these preliminary samples can only be substituted for the "n" values if the following requirements in the Permit are met... Please provide additional supporting information and the status of your considerations in this regard as the request moves forward."

The sampling and analysis data used in the draft AMWTP waste stream profile form (WSPF) is based on sampling that was done for WSPF INW216.001. A population of 6,752 first and second stage sludge containers (generated from 1972 through 1989), that were in accessible above ground storage were randomly sorted. From the randomly sorted container population, seven were selected, sampled, and analyzed. -- The INEEL 3100 m<sup>3</sup> Program shipped most of the accessible container population. The draft AMWTP WSPF included the remaining 1,761 containers from the randomly sorted population, as well as the approximately 21,000 drums to be recovered.

The first solids sampling lot that the AMWTP plans to characterize is that 1,761 container set that 3100 m<sup>3</sup> did not ship. They were part of the population that was used in the random selection for this waste stream when it was characterized by the 3100 m<sup>3</sup> Program and therefore the criteria of B2-2 has been met to allow this data to be used as both preliminary samples and the required number of samples for the AMWTP waste stream.



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Lot two of this waste stream will be those drums that were generated from 1970 through 1989 that were not available for random selection (generally because they were in earthen berm storage). The lot one samples are representative of lot two because all of the containers in lots one and two are from the same treatment process, processed with the same procedures, and meet the definition of a single waste stream. The data used in lot one will apply to lot two and be used to confirm acceptable knowledge (AK) as stated in B2-2a. B2-2a allows "Upon collection and evaluation of the preliminary samples, or at any time after the preliminary samples have been analyzed, the generator/storage site may assign hazardous waste codes to a waste stream." AMWTP will use this provision to confirm the AK hazardous waste code assignment for lot two. That is, no further sampling will be necessary for lot two.

Lots three and up will consist of first and second stage sludge containers to be removed from earthen berm storage that were generated prior to 1970 and post-1970 containers whose metal identification tags have been lost. These containers will be characterized as newly generated waste. The AMWTP has stated that these subsequent lots from this waste stream will be randomly sampled and analyzed within the approved AMWTP transuranic waste characterization program.

The CBFO believes that this approach is consistent with the Permit language in B2-2a addressing preliminary mean and variance estimates for calculating the required number of samples for the waste stream. Clearly, the seven first and second stage sludge samples collected and analyzed under the INEEL 3100 m<sup>3</sup> certified program satisfy the required number of samples for lot one. These samples are also representative of lot two given that the Permit specifies, "at any time after the preliminary samples have been analyzed, the generator/storage site may assign hazardous waste codes to a waste stream. AMWTP does not intend to establish that the constituents for which hazardous waste codes have been previously assigned are below the regulatory threshold. Sampling and analysis will be conducted for lots three and up.

If you have questions, please contact Mr. Kerry Watson at (505) 234-7357.

Sincerely,

  
Dr. Inés R. Triay  
Manager

Enclosure

Ms. Sandra Martin

-3-

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cc: w/enclosure  
K. Watson, CBFO  
J. Wells, DOE-ID  
S. Holmes, NMED  
S. Zappe, NMED  
CBFO M&RC



BILL RICHARDSON  
GOVERNOR

State of New Mexico  
**ENVIRONMENT DEPARTMENT**

Hazardous Waste Bureau  
2905 Rodeo Park Drive East, Building 1  
Santa Fe, New Mexico 87505-6303  
Telephone (505) 428-2500  
Fax (505) 428-2567  
www.nmenv.state.nm.us



RON CURRY  
SECRETARY

DERRITH WATCHMAN-MOORE  
DEPUTY SECRETARY

CERTIFIED MAIL - RETURN RECEIPT REQUESTED

December 9, 2003

COPY

Dr. Inés Triay, Manager  
Carlsbad Field Office  
Department of Energy  
P.O. Box 3090  
Carlsbad, New Mexico 88221-3090

Dr. Steven Warren, President  
Washington TRU Solutions LLC  
P.O. Box 2078  
Carlsbad, New Mexico 88221-5608

**RE: NMED COMMENTS ON THE ADVANCED MIXED WASTE TREATMENT PROJECT FINAL  
AUDIT REPORT, AUDIT A-03-05  
WASTE ISOLATION PILOT PLANT  
EPA I.D. NUMBER NM4890139088**

Dear Drs. Triay and Warren:

On November 13, 2003, NMED received the Final Audit Report of the Advanced Mixed Waste Treatment Project (AMWTP) Audit Number A-03-05 (Audit Report), from the Department of Energy's Carlsbad Field Office (CBFO). CBFO and Washington TRU Solutions LLC (the Permittees) were required to submit this Audit Report under the Waste Isolation Pilot Plant (WIPP) Hazardous Waste Facility Permit as specified in Permit Condition II.C.2.c. The intended scope of this initial certification audit was to ensure the adequacy, implementation, and effectiveness of specific AMWTP waste characterization processes for retrievably stored and newly generated debris, and retrievably stored homogeneous solids, contact-handled waste relative to the requirements of the WIPP Permit. The Audit Report further clarified that approval of debris waste would only be sought after a future audit was performed to evaluate visual examination to confirm radiography and headspace gas sampling and analysis for this Summary Category Group, and that analysis of homogeneous solid samples was contingent on approval of the analytical laboratory program at the Idaho National Engineering and Environmental Laboratory sought during audit A-03-15. The Audit Report consisted of the following items:

- A narrative report
- Completed copies of relevant Permit Attachment B6 checklists

- Final AMWTP standard operating procedures (hardcopy only)
- Corrective action reports and items corrected during the audit
- Objective evidence examined during the audit
  - General information
  - Solids and soils/gravel sampling
  - Acceptable knowledge
  - Headspace gas
  - Real time radiography
  - Visual examination

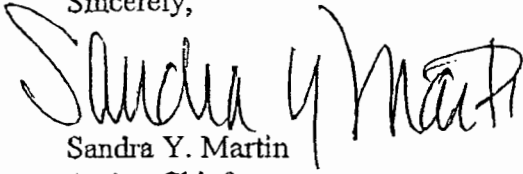
NMED representatives observed the initial AMWTP audit on August 18 – 22, 2003 and the follow-up verification visit on October 15 – 16, 2003. NMED has examined the Audit Report for evidence of compliance with the requirements of Permit Conditions II.C.2 (Audit and Surveillance Program) and II.C.1 (Waste Analysis Plan [WAP]). The Audit Report indicates that during the initial audit there were six WAP-related conditions adverse to quality requiring the issuance of three CBFO corrective action reports; three deficiencies requiring only remedial actions that were corrected during the audit; seven observations identifying conditions that, if not controlled, could result in conditions adverse to quality; and five recommendations identifying opportunities for improvement. During the follow-up verification visit, the Audit Report states that the conditions adverse to quality were reevaluated and found to be acceptable. Attached are NMED's general comments based upon observation of the AMWTP audit and review of the Audit Report. These are provided to guide future audit report preparation and to assist the Permittees in understanding NMED's concerns.

NMED submitted an Observer Inquiry (attached) during the AMWTP audit questioning the applicability of solid sampling data collected by the previous contractor from the 3100 m<sup>3</sup> project to the entire population of the Rocky Flats first and second stage sludge waste stream. NMED was assured during the audit and follow-up verification visit that this issue was being examined and resolved by CBFO and AMWTP staff. However, NMED has not received a response to this Observer Inquiry, a specific sampling plan or protocol to address this issue has not yet been produced, and this issue was not mentioned anywhere in the Audit Report. It was NMED's understanding during the audit that approval of the waste characterization program for homogeneous solids would be limited to only those waste containers included in the original 3100 m<sup>3</sup> sampling "pool", pending receipt, review, and approval of a sampling protocol specific to the remainder of the waste that was not originally considered in the 3100 m<sup>3</sup> randomly sampled population. The Audit Report must address this critical issue before approval by NMED can be considered.

NMED concludes that the Audit Report is incomplete in that it does not adequately address all elements examined during the audit. Because of this incompleteness, NMED is withholding approval of the Permittees' Final Audit Report for AMWTP Audit A-03-05 until the Permittees submit the additional information identified in the paragraph above and in the attached comments that demonstrate full implementation of all relevant permit requirements. Indicate revisions to any text in the Audit Report and checklists with redline/strikeout annotation.

If you have any questions regarding this matter, please contact me at (505) 428-2512.

Sincerely,



Sandra Y. Martin  
Acting Chief  
Hazardous Waste Bureau

SYM:soz

Attachment

cc: Charles Lundstrom, NMED WWMD  
Steve Zappe, NMED HWB  
Tracy Hughes, NMED OGC  
C Steven Allred, ID DEQ  
Kathleen Trever, INEEL Oversight  
Laurie King, EPA Region 6  
Betsy Forinash, EPA ORIA  
Connie Walker, Trinity Engineering  
Matthew Silva, EEG  
Don Hancock, SRIC  
Joni Arends, CCNS  
Lindsay Lovejoy, NMAGO  
File: Red WIPP '03

## Observer Inquiry

NMED observed that INEEL intends to use solid sampling data for the 3100 Cubic Meter program, and included Continuation sheets in the draft WSPF that addressed the hazardous waste code assignments for these wastes. However, this discussion did not address whether the 3100 Cubic Meter samples had been selected with the entire First/Second stage sludge population considered, whether the 3100 Cubic Meter population itself had been randomly selected from the total First/Second stage sludge, etc. It is possible that these samples could be used for preliminary samples, but these preliminary samples can only be substituted for the "n" values if the following requirements in the Permit are met:

### B2-2 Approach for Statistically Selecting Retrievably Stored Waste Containers for Totals Analysis

*The calculated total number of required waste containers will then be randomly sampled and analyzed. Waste container samples from the preliminary mean and variance estimates may be counted as part of the total number of calculated required samples if and only if:*

*XThere is documented evidence that the waste containers for the preliminary estimate samples were selected in the same random manner as is chosen for the required samples.*

*XThere is documented evidence that the method of sample collection in the preliminary estimate samples were identical to the methodology to be employed for the required samples.*

*XThere is documented evidence that the method of sample analysis in the preliminary estimate samples were identical to the analytical methodology employed for the required samples.*

*XThere is documented evidence that the validation of the sample analyses in the preliminary estimate samples were comparable to the validation employed for the required samples. In addition, the validated samples results shall indicate that all sample results were valid according to the analytical methodology.*

Please provide additional supporting information and the status of your considerations in this regard as the request moves forward.