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United States Government

Department of Energy

memorandum

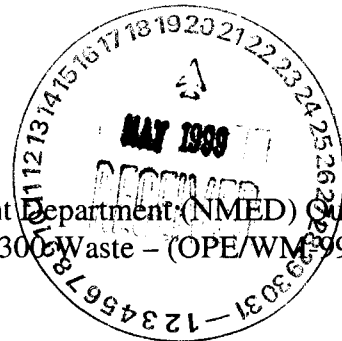
Carlsbad Area Office
Carlsbad, New Mexico 88220

DATE: May 19, 1999

REPLY TO: CAO:OWDO:BS 99-0930 (UFC 5822.00)

SUBJECT: INEEL Response to New Mexico Environment Department (NMED) Questions Regarding the Non-mixed Waste Determination for IDC 300 Waste - (OPE/WM 99-053)

TO: Peter Maggiore, Secretary, NMED



Please find attached the INEEL's response to New Mexico Environment Department (NMED) questions regarding the Non-mixed Waste Determination for IDC 300 Waste (Graphite Molds). Documents that support the response are enclosed except for attachments to the M. Wheeler letter to A. Rogers dated July 1, 1998. (Note: This letter is reference #3 of the Non-mixed Waste Determination Report). These attachments will be provided under separate correspondence.

The supporting documentation/materials are included as follows:

- (1) Response to NMED Comments Regarding the Non-Mixed Waste Determination for IDC 300 Waste (Graphite Molds).
- (2) M. Wheeler's letter to A. Rogers, Retrieval of Graphite Waste Characterization Documentation, MW-095-98, July 1, 1998. (Comment #1)
- (3) Backing Waste Reassessment Baseline Book, WASTE FORM 56 GRAPHITE, prepared for the Rocky Flats Environmental Technology Site by Rocky Mountain Remediation Services, L.L.C., November 21, 1996. (Comment #3)
- (4) Videotape copy of drum #024708. (Comment #5)
- (5) Videotape copy of drum #023733. (Comment #6)
- (6) Headspace Gas Data. (Comment #8)
- (7) TCLP Analysis data for VOC's, SVOC's and Metals. (Comment #10)

If you have any questions or concerns regarding this response, please call me at (505) 234-7300.

Ines R. Triay
Ines R. Triay, Ph.D.
Manager

Attachment

located in WIPP Library

INEEL IDC 300

990512



memorandum

Idaho Operations Office

Date: May 14, 1999

Subject: INEEL Response to New Mexico Environment Department (NMED) Questions Regarding the Non-mixed Waste Determination for IDC 300 Waste - (OPE/WM-99-053)

To: Robert A. Stroud, Jr.

Please find attached the INEEL's response to New Mexico Environment Department (NMED) questions regarding the Non-mixed Waste Determination for IDC 300 Waste (Graphite Molds). Documents that support the response are enclosed except for attachments to the M. Wheeler letter to A. Rogers dated July 1, 1998. (Note: This letter is reference #3 of the Non-mixed Waste Determination Report.) These attachments will be provided under separate correspondence.

The supporting documentation/materials are included as follows:

- 1) M. Wheeler letter to A. Rodgers, Retrieval of Graphite Waste Characterization Documentation, MW-095-98, July 1, 1998. (Comment #1)
- 2) Backlog Waste Reassessment Baseline Book, WASTE FORM 56 GRAPHITE, prepared for the Rocky Flats Environmental Technology Site by Rocky Mountain Remediation Services, L.L.C., November 21, 1996. (Comment #3)
- 3) Videotape copy of drum #027408. (Comment #5)
- 4) Videotape copy of drum # 023733. (Comment #6)
- 5) Headspace Gas Data. (Comment #8)
- 6) TCLP Analysis data for VOCs, SVOCs and Metals. (Comment #10)

If you have any questions or concerns regarding this response, please call Mr. Jerry Wells at (208) 526-5296.

Lori L. Fritz
 Lori L. Fritz, Director
 DOE-ID Waste Management Program

Attachment

Cc w/attachment, w/o supporting documentation:
 Paul Detwiler, DOE-HQ, GC-51

COPY

OFFICE	DOB UFO	DATE REC'D	ADDRESSEE
09702145	5822-00	MAY 17 1999	Stroud

Response to NMED Comments Regarding the
Non-Mixed Waste Determination for IDC 300 Waste (Graphite Molds)

On May 11, 1999, the New Mexico Environment Department (NMED) informally requested additional information about the waste that the Department of Energy (DOE) sent from the Idaho National Engineering and Environmental Laboratory (INEEL) to the Waste Isolation Pilot Plant (WIPP) in April 1999. DOE is providing this information in a spirit of cooperation: DOE believes that the information it provided on April 21, 1999, satisfies all applicable regulatory requirements and all of the requests contained in NMED's Compliance Order HRM-99-04 (CO). By providing this information DOE does not admit to any of the allegations in that order or waive any of its affirmative defenses to the order. NMED's requests and DOE's responses are summarized below.

1. NMED requested some pages from the reference *Retrieval of Graphite Waste Characterization Documentation* because they were illegible in the copy NMED received. The copy of this reference at INEEL is no more legible than NMED's copy. Personnel at the Rocky Flats Environmental Technology Site (RFETS) have attempted to provide a more legible copy. Unfortunately the attachments in the reference were placed on microfilm. New copies of the microfilm were no more legible than the original. Obtaining originals from the National Archives will take several weeks. Every effort will be made to provide NMED with a complete and legible copy as soon as possible.
2. NMED asked about a telephone conversation concerning solvent usage and graphite waste. INEEL personnel reviewed the information on this conversation. The following quotation addresses NMED's question about this conversation:

"Question: I know that carbon tetrachloride was used in the foundry areas. An old WSRIC book said that carbon tetrachloride was a constituent of the molds. Were solvents, either carbon tetrachloride or Freon, used on the graphite molds?"

Answer: Carbon tetrachloride and Freon were not used on graphite molds."

The answer supports the conclusion documented in the Waste Determination Report (Nonmixed Waste Determination for IDC 300 Waste (Graphite Molds), INEEL/EXT-98-01137). It is also consistent with reference 3 in the Waste Determination Report which states, "To the best of our knowledge, the IDC 300 graphite waste did not come into direct contact with RCRA-listed waste, and therefore, should not be characterized as a RCRA-listed waste."

3. NMED asked for the even-numbered pages of a reference entitled *Backlog Waste Reassessment Baseline Book*; these pages are attached. NMED also asked about the statement in this book concerning graphite molds used to cast beryllium and aluminum pieces. As this reference states, "Building 865 generates graphite molds in the beryllium, beryllium/aluminum alloy casting process." These molds are different from the ones in the IDC 300 waste shipped from INEEL to WIPP. The IDC 300 graphite mold waste, as discussed in the Waste Determination Report, was generated from Building 707. The waste from Building 865 is a different waste stream from the Building 707 waste streams, and INEEL has no mold waste from Building 865.

4. NMED asked about analytical data on the waste streams designated IDC 310 and IDC 312 documented in *Assessment Graphite Waste for Toxicity Characteristics Compounds*. These data do not apply to the IDC 300 waste shipped from INEEL to WIPP. Waste streams IDC 310 and IDC 312 are different graphite waste streams than the waste stream IDC 300. INEEL analyzed IDC 300 waste and definitively determined that the waste did not exhibit the characteristic of toxicity.

5. NMED asked about a "yellowish residue" observed during the visual examination of Drum 027408. Personnel performing the visual examination at Argonne National Laboratory-West (ANL-W) noted that some of the graphite pieces had a yellowish residue on the mold itself. INEEL personnel reviewed the tape and noted that there was a slight discoloration on some of the mold pieces and only on one side of the mold. This is most likely due to a combination of calcium fluoride or residual plutonium oxide and lighting. During review of the tape it was noted that the lighting used at ANL-W cast a yellowish light. To confirm this INEEL contacted RFETs metallurgical operators whom were directly involved with the casting operations. Below is a summary of this effort.

Calcium fluoride was applied to the surface of the graphite to facilitate release of the casted plutonium part. When applied the calcium fluoride was crème to light tan. After casting the coating was more whitish in color. During repackaging one of the operators has observed the coating from a dark brown to a tanish yellow color. Also Metallurgical operators at RFETS have noted that plutonium oxide residue coating some of the graphite was greenish yellow. The presence of either calcium fluoride or residual plutonium oxide in combination with the yellow lighting can account for the "yellowish residue".

6. The tape of drum 023733 provided to NMED ended in mid examination. INEEL personnel reviewed the original tape and it does cover the entire examination of the drum. A new copy with the entire examination is enclosed.

7. NMED asked why no corrosivity testing was done on this waste. When the Sampling and Analysis Plan was written, INEEL planned to test for corrosivity. However, prior to implementation, INEEL reviewed the guidance given in the EPA Policy Compendium (Reference 24 in the INEEL Determination Report). This guidance pointed out that there is no requirement to test solid waste streams for corrosivity under RCRA as it is implemented in New Mexico. TechLaw has recognized this as well, as evidenced by its comments:

“No mechanism for applying the RCRA characteristic of corrosivity to solid samples is currently promulgated. . . . Method 9045C is not presented in 40 CFR 261 Subpart C as a method to determine corrosivity.”

8. NMED asked about headspace gas data for four drums. Copies of the headspace gas data (including data on methanol, hydrogen, and methane) for all fifty drums are enclosed. To facilitate review of this data NMED is asked to note the drum numbers given on page 12 of their response. Drum number 001212723 doesn't exist. The drum number should be 001214723.
9. NMED requested that the “totals” analyses results be summarized and provided to them. There is no need for “totals” analyses when TCLP data are available. As pointed out by TechLaw, “Totals analysis are typically not used for hazardous waste determinations” The totals analysis was never intended by the INEEL to be used as part of the hazardous waste determination. This information was collected by INEEL for other purposes. Currently the data has not been independently validated or statistically reduced. However, NMED's representative has been provided the opportunity to review these data during the ongoing audit of INEEL.
10. NMED requested the raw data for the TCLP analytical results. Copies of the data for the TCLP analyses for VOCs, SVOCs, and metals are enclosed.