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March 9, 2000

Don Hancock  
Southwest Research and Information Center  
P.O. Box 4524  
Albuquerque, New Mexico 87106

**Re: Comments on RFETS Final Audit Report A-00-08**

Dear Mr. Hancock:

On February 14, 2000, you submitted a four-page document containing comments on behalf of the Southwest Research and Information Center (SRIC) to the New Mexico Environment Department (NMED) regarding the Rocky Flats Environmental Technology Site (RFETS) Final Audit Report A-00-08 (**Audit Report**). This Audit Report was submitted by the Department of Energy's Carlsbad Area Office on January 28, 2000, as required by Permit Condition II.C.2.c of the WIPP Hazardous Waste Facility Permit issued by NMED on October 27, 1999. Under the Permit, the Permittees are prohibited from managing, storing, or disposing TRU mixed waste at WIPP from a generator/storage site until certain conditions have been met. Specifically, NMED must determine that the characterization requirements of the Permit have been implemented at a generator/storage site. One such condition is Permit Condition II.C.2.d, which requires NMED approval of the Permittees' final audit reports.

Your letter requested full consideration of your comments and specifically requested NMED to address two issues: (1) disposal of mixed waste in Panel 1, and (2) rejection of the Audit Report or allowance of additional time for SRIC and other members of the public to comment. The attachment to this letter constitutes NMED's response to your comments.

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NMED appreciates your comments and continued involvement with WIPP Permit issues. If you have any further questions regarding this matter, please contact me at (505) 827-1758.

Sincerely,



Gregory J. Lewis

Director

Water and Waste Management Division

Attachment

cc: James Bearzi, HRMB  
Susan McMichael, NMED OGC  
David Neleigh, EPA Region 6  
Mary Kruger, EPA ORIA  
Connie Walker, TechLaw  
File: Red WIPP '00

SRIC requests that you inform the Permittees that under the conditions of the Permit, no mixed wastes can be shipped to WIPP even if the Audit Report is approved, until Panel 2 is ready to receive wastes for disposal.

SRIC quoted Permit Condition IV.B.2.b (Specific prohibition), and then stated that because "... Panel 1 contains waste not characterized in accordance with the WAP... no mixed waste can be disposed in Panel 1 and all wastes - mixed and non-mixed - disposed at WIPP must meet the requirements of the WAP." SRIC then concluded that "... allowing DOE to dispose of mixed waste in Panel 1 is directly contradictory to the requirements of the Hazardous Waste Act (HWA) permit."

SRIC's concerns were raised during the WIPP permit proceedings, and again by the Secretary's Amended Order dated October 14, 1999. The Secretary's Final Order on the WIPP Permit issued on October 27, 1999, dealt squarely with this issue (Revision to Permit Condition IV.B.2.b, page 3). He stated:

"... Permit Applicants are concerned that they will not be able to dispose of additional waste in panel 1 after the HWA Permit becomes effective, because there is already waste in panel 1 not characterized in accordance with the WAP."

"These concerns are misplaced. The terms of the HWA Permit only apply after the permit becomes effective. The New Mexico Environment Department ("NMED") does not intend that the permit condition apply to the pre-permit period. See NMED Comments to Hearing Officer's Report at 13 - 15."

Therefore, NMED recognizes that Permit Condition IV.B.2.b applies to all waste (both mixed and non-mixed TRU) that was characterized and disposed of after the HWA Permit became effective on November 26, 1999. On the other hand, waste that was disposed of at WIPP before the HWA Permit became effective is governed under EPA's TRU Waste Site Approvals and under interim status standards at 20 NMAC 4.1.600 (incorporating 40 CFR Part 265).

*SRIC requests that NMED reject the Audit Report and require that RFETS and any other site have used at least one hazardous waste stream for any audit.*

SRIC's concerns were raised during the permit proceedings for the WIPP permit. As evidenced numerous times during the WIPP hearing through NMED testimony (e.g., New Mexico Environment Department's Direct Testimony Regarding Regulatory Process and Imposed Conditions, HRM 98-04(P)), the waste characterization requirements of the WAP under the Permit apply to mixed and non-mixed waste. Waste characterization is required to ensure that no waste is disposed of in a HWA-regulated unit that contains prohibited items under Permit Condition II.C.3 and further, to ensure that the environmental performance standards are met under 20 NMAC 4.1.500 (incorporating 40 CFR §264 Subpart X). The exact same waste characterization protocols must be applied to both waste categories, including acceptable knowledge (AK) hazardous waste assessments and hazardous waste confirmation using headspace gas analysis. Therefore, the type of waste assessed during audit (i.e., mixed vs. non-mixed) is not critical because the same procedures apply identically to both wastes.

The Permittees' auditors examined AK information used by RFETS to assess the hazardous nature of the non-mixed waste stream to determine whether: 1) adequate hazardous waste identification procedures were in place, and 2) these procedures were appropriately implemented at the site. Knowledge of RCRA hazardous waste code assignment, hazardous constituent identification, etc., is required regardless of whether the outcome of procedure implementation is a mixed or non-mixed waste designation, and the hazardous waste determination process and results were audited by the Permittees. Additionally, it should be pointed out that one of the waste streams examined during the AK portion of the audit (IDC 832) is a TRU-mixed waste, and the hazardous waste code assignment was assessed through examination of mandatory and supplemental information. With respect to AK confirmation using headspace gas, the same confirmation approach is used regardless of whether the waste is mixed or non-mixed; results of this confirmation could easily, for example, change the designation of a non-mixed waste to a mixed waste (e.g., TAB 13). It should also be pointed out that the Permittees checked the confirmation process for both a mixed and non-mixed example during the AK confirmation assessment.

Listed hazardous waste confirmation assessment is not accomplished through visual examination (VE) or radiography (RTR). Also, all containers are examined for presence of prohibited items regardless of their mixed/non-mixed nature. Further, any metals that may impart a hazardous waste code to a drum and identified by RTR and VE are assessed in accordance with the Permit (e.g., TAB 13). Therefore, because RTR/VE procedures are the same for both mixed and non-mixed containers, and the results of these analyses would be presented the same and would have the same results with respect to RCRA, the examination of either mixed or non-mixed containers during audit would be appropriate.

With respect to headspace gas, container sampling and sample analysis is the same for both mixed and non-mixed TRU waste. Any detections are compared to AK results in exactly the same fashion, and discrepancies are dealt with identically. In the case of RFETS, NMED representatives observed that site personnel openly showed and discussed the headspace gas

confirmation process, and identified containers/instances where headspace gas samples resulted in drum reassignment from non-mixed to mixed (e.g., TAB 13). Therefore, RFETS demonstrated that the headspace gas sampling process was equivalent regardless of waste type, and the headspace gas confirmation process was applied identically to waste regardless of its mixed or non-mixed designation.

SRIC requests additional time for public comment

SRIC or any other member of the public may submit comments on the Audit Report. As stated in NMED's Direct Testimony at the WIPP public hearing:

"New Mexico law mandates access to public records. Audit reports produced in response to permit conditions are public records. A member of the public is entitled to review the audit reports and submit written or oral comment to NMED." (Audit Requirement, p. 7)

However, neither NMED nor Permittees are required to provide public notice of the availability of an Audit Report, and there is no specified duration for a public comment period. NMED informed SRIC that their comments were welcome, and suggested a submittal date sufficiently early to ensure the comments could be considered in evaluating the Audit Report. Further, NMED has provided the public over thirty days to review and comment. No other member of the public has requested an opportunity to review or submit comments on the Audit Report.

The Audit Report is incomplete

1. No results of previous audits are included.

Attachment B6 of the Permit requires the Permittees to consider the following with respect to site self-audits and/or previous audits:

**Page B6-3, line 25+:** "Audits will be conducted at least annually [after initial audit performance] for each site involved in the waste characterization program. Both announced and unannounced audits will address the following:

- "Results of previous audits"

**Page B6-4, line 40+:** "RCRA-related CARs identified by the site during self-audits will be evaluated during the Permittees' audit and surveillance program and tracked in the Permittees' tracking systems."

**Page B6-5, line 13+:** "As part of the planning process for subsequent [annual] audits and surveillances, past deficiencies will be reviewed and the previous deficient activity or process is subject to reassessment."

The Permit clearly requires the Permittees to consider the results of previous audits during the annual audit (i.e., they must consider results of initial site audits and subsequent annual audits in

each annual audit). However, since the intent of the Permittees' audits is to assess site compliance with the Final WAP, and the Final WAP was not effective until November 26, 1999, consideration of audit results prior to Final WAP issuance would not provide information on Final WAP compliance.

2. No results of self-audits were included.

The Audit Report includes TABs (e.g., 19 and 20) which show that the Permittees did examine self-audits or self-assessments as part of the initial audit. Complete audit results are not included, but the intent of the TABs is to show that the Permittees did fulfill the requirement that "RCRA-related CARs identified by the site during self-audits will be evaluated during the Permittees' audit and surveillance program and tracked in the Permittees' tracking systems."

3. The history of RFETS procedural violations related to WIPP wastes is not included.

NMED agrees that the referenced occurrence report was not addressed in the Audit Report. The Occurrence Report Number RFO-KHLL-WSTMGTOPS-1999-0021 states that the violation was due to "... using forms with procedural steps checked off as being completed prior to the actual completion of the operations." However, the occurrence took place on November 9, 1999, prior to the effective date of the Permit. Additionally, the "Pipe Overpack Component disabling operations for... WIPP shipments" is not specifically regulated under the Permit. Shipping requirements are under the purview of the Department of Energy, Nuclear Regulatory Commission and the Department of Transportation. Except for specifying allowable types of containers in Permit Condition III.C.1, the Permit does not address shipping requirements. Further, pipe overpack refers to shipment of pyrochemical salt waste, which was not subject to audit (S3000 Summary Waste Category Group). Therefore, post-permit shipment of this waste would not occur before NMED review/approval of the associated Audit Report.

Permit Attachment B6, pages B6-14, 15, 27, 30, 62, 63, 64, 67, 68, 69, 73, 74 and 75, presents some of the checklist elements pertinent to previous WAP violations or unresolved discrepancies. Every pertinent violation that could be governed by the Permit WAP requirements was addressed on audit, and will always be addressed on audit because the Permittees are required to address Permit-regulated items. NMED expects that an internal self-audit or self-assessment would take place if any additional WAP-related RFETS occurrence reports were issued, and the results of these self-audits or assessments would be included in the RFETS annual audit(s).

4. No indication of the number of containers included in the S5000 debris waste group is included.

The Permit does not explicitly require that the total volume of the audited Summary Waste Category Group be provided during audit. The Permit does require that waste stream volumes be reported on the Waste Stream Profile Form, which was reflected in the AK Summary in the case of RFETS, and this information was available for review during the RFETS audit (see TAB 7). Also, the Permit requires that volumes received be included in the biennial report:

B-4b(2)(viii) Reporting

The Permittees will provide a biennial report in accordance with 20 NMAC 4.1.500 (incorporating 40 CFR §264.75) to NMED that includes information on actual volume and waste descriptions received for disposal during the time period covered by the report.

TAB 7 includes a portion of the AK Waste Stream Summaries Document which indicates that, thus far, the site has identified at least 5,023 cubic meters of debris waste from the RF002.01 waste stream (current and projected volume). Although the entire AK Waste Stream Summaries Document was not included as an attachment to the Audit Report, the entire Document was available during the audit and indicated that approximately 9,800 cubic meters of debris waste will be generated by RFETS (mixed and non-mixed, current and projected volumes). Therefore, the waste stream audited (RF002.01) represents over half of the current/projected debris waste (both mixed and non-mixed) at RFETS as represented in the AK Waste Stream Summaries Document, Rev.6. (Note that the quantity of waste is expected to vary as site clean-up activities progress, and the actual volumes presented in the AK Waste Stream Summaries Document could likewise vary).

The Permit does not require that the audit examine examples of implementation for waste streams in an entire population of the Summary Waste Category Group being audited. This would require that characterization of each and every waste stream in the entire Summary Waste Category Group be accomplished prior to audit, or that numerous audits be conducted. The purpose of the WIPP audit is for the Permittees to demonstrate compliance with WAP requirements (and by the audit report approval process, convince NMED of that compliance) by determining that a) sites develop adequate procedures to characterize waste in accordance with the WAP, and b) sites effectively implement these procedures as shown by examples of implementation. Upon annual re-audit, wastes from additional waste streams or waste stream lots will be available for audit, and shall be examined.

5. The Attachment B6 checklist, Table B6-5 #260, comment page 124) states: "No RTR operators have been disqualified." Such a statement must be clarified and supported with actual data.

Item 260 states, in part: "Does the documented training program ensure that if performance is determined to be unsatisfactory (the misidentification of a prohibited item or a score of <80% on the comprehensive exam), unsatisfactory performance results in disqualification?" Training records and qualification information were examined as part of the audit as indicated, for example, by TABs 39 through 45. The Permit requires all radiography operators to be trained following Permit requirements, as specified in Permit Attachment B1, Section B1-3b. These TABs showed that RTR operators underwent additional training to meet WAP requirements, and demonstrated adequate training was achieved at the time of the audit. Since only RTR information obtained after Permit issuance is currently acceptable to the Permittees, and all operators had to be re-trained to meet Permit requirements and were audited to these requirements during the December audit, the Permit does not require the Permittees to examine RTR operator training months or years past, prior to Permit issuance. The statement on the Permittees' checklist "No requalifications required yet" could have been elaborated to explain the dates of training and why no RTR operators have yet been disqualified. A positive statement that 'operators are qualified'

might have been less likely to raise concern but, while awkward, the Audit Report language adequately conveys the conclusion that no significant deficiencies were found.

6. No Certified Waste Stream Profile Form is included.

The Permit requires the Permittees' auditors to examine an example of implementation to ensure that the site knows how to implement WAP procedures. It does not explicitly require that the Waste Stream Profile Form (WSPF) be filled out entirely for a given waste stream prior to audit. The WSPF is filled out when a waste stream is sufficiently characterized, as determined by the Site Project Manager (SPM), and at the time of the audit, the SPM had not determined that a sufficient number of drums had been characterized in accordance with the WAP to adequately complete certain elements of the WSPF (e.g., headspace gas information). However, the Permittees' auditors queried each aspect of WSPF completion, and examined and discussed all technical elements of the form, including attachments, with appropriate RFETS personnel. Further, the Permit requires that the Permittees send the actual completed WSPF to NMED prior to waste shipment. If NMED notes deficiencies with respect to the WSPF (e.g., inadequate calculation of headspace gas UCL<sub>90</sub>, etc.), NMED could immediately note this as a Permit violation. To summarize, the Permit does not mandate that the example of implementation with respect to a waste stream profile form be a completed, finalized WSPF; the Permit requires that the example of implementation be sufficient to demonstrate that the site can adequately implement WAP procedures. Also, there are sufficient checks and balances in the characterization program which would allow NMED intervention at numerous steps, to identify errors or issues with respect to the "actual" WSPF.

Sloppiness of the Audit Report

NMED agrees that numerous typos, misreferences, etc., are apparent in the Audit Report. Additionally, NMED believes that the report could be improved to include more comprehensive/accurate procedural references, additional TAB references or to include more TABs, and to discuss audit events and results more comprehensively and in greater detail. However, one must also examine the tremendous amount of detail and information included in the report, and balance this against errors and omissions that SRIC believes "undermines its credibility." While NMED agrees that improvements in report quality could be made, the report presents a comprehensive, well documented portrayal of actual audit events and results.