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CERTIFIED MAIL
RETURN RECEIPT REQUESTED

January 8, 2001

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

Mr. Joe Epstein, General Manager
Westinghouse Waste Isolation Division
P.O. Box 2078
Carlsbad, New Mexico 88221-5608

RE: NMED COMMENTS ON LANL FINAL AUDIT REPORT, AUDIT A-00-16
WASTE ISOLATION PILOT PLANT
EPA I.D. NUMBER NM4890139088

Dear Dr. Triay and Mr. Epstein:

On November 3, 2000, NMED received the Final Audit Report of the Los Alamos National Laboratory (LANL), Audit Number A-00-16 (**Audit Report**), from the Department of Energy's Carlsbad Field Office (CBFO). CBFO and Westinghouse (**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 scope of this audit was to evaluate the adequacy, implementation, and effectiveness of the LANL waste characterization processes for retrievably stored contact-handled debris waste relative to the requirements of the WIPP Permit.

The Audit Report documentation submitted to NMED consisted of the following items:

- a narrative report
- completed copies of relevant Permit Attachment B6 checklists
- corrective action reports
- final LANL standard operating procedures
- objective evidence examined during the audit
- general information

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- acceptable knowledge
- headspace gas
- real time radiography
- visual examination

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). NMED observed the initial LANL audit on September 25 - 28, 2000, and specifically evaluated the Audit Report for compliance with the following permit requirements:

- Permit Condition II.C.2.a (*Requirement to Audit*) - the Permittees shall demonstrate to the Secretary that the generator/storage sites have implemented and comply with applicable requirements of the WAP by conducting an audit of the generator/storage sites as specified in Permit Attachment B, Section B-4b(1)(iii), and Permit Attachment B6 (Waste Isolation Pilot Plant Permittees' Audit and Surveillance Program), and as required by 20 NMAC 4.1.500 (incorporating 40 CFR §264.13).
- Permit Condition II.C.2.c (*Final audit report*) - the Permittees shall provide the Secretary a final audit report as specified in Permit Attachment B6. The final audit report shall include all information specified in Permit Attachment B6, Section B6-4, and: (i) A detailed description of all corrective actions and the resolution of any corrective action applicable to WAP requirements, including re-audits if required; (ii) documentation necessary for the Secretary to determine if the corrective action was resolved.

Attached are NMED's comments based upon observation of the LANL audit and review of the submitted information. NMED concludes that the Audit Report is incomplete in that it does not adequately address all elements examined during the audit. NMED has commented on several recurring issues in previous approval letters that have yet to be satisfactorily addressed. While these issues may not necessarily be the root cause of the report's incompleteness, they may play a significant role.

For example, NMED understands that the audit teams perform procedural adequacy reviews prior to site audits, but the results of these reviews are not shared with NMED. While NMED assumed the results were not shared because the auditors ensured the site rectified any procedural problems prior to audit, NMED has observed that some procedural changes are still required during audit. NMED believes it would be appropriate to share the results of this adequacy review with our staff prior to the audit.

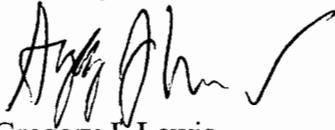
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Additionally, NMED has observed that audit team members vary in their use of the B6 checklist during site audits. Some auditors complete their checklists during the course of audit interviews, others complete them at the end of each day, while others appear to wait until after the conclusion of the site visit to complete them. Permit Attachment B6 (Section B6-4) requires auditors to use "approved audit checklists that include the checklists in Tables B6-1 to B6-6 for the summary category groups undergoing audit," and to complete the checklists during the audit. This differential use of the B6 checklist during the audits could have been the cause of apparent incompleteness of the B6 checklists presented in this Audit Report. NMED suggests that more rigorous use of the B6 checklist during audits may help mitigate the problem of incompleteness observed in the LANL Audit Report.

Because of this incompleteness, NMED is withholding approval of the Permittees' Final Audit Report for LANL Audit A-00-16 until the Permittees submit the additional information identified in the attached comments that demonstrate full implementation of WAP requirements. Please 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) 827-1758.

Sincerely,



Gregory J. Lewis
Director
Water and Waste Management Division

GJL:soz

Attachment

cc: James Bearzi, NMED HWB
John Kieling, NMED HWB
Steve Zappe, NMED HWB
Susan McMichael, NMED OGC
David Neleigh, EPA Region 6
Mary Kruger, EPA ORIA
Connie Walker, TechLaw
Don Hancock, SRIC
Joni Arends, CCNS
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**NMED COMMENTS ON THE
FINAL AUDIT REPORT OF THE
LOS ALAMOS NATIONAL LABORATORY (LANL)**

1. The B6 checklist (Tables B6-1, B6-3, B6-4, B6-5 and B6-6) contains numerous references to specific information provided as Tabs in the report. However, some of the information apparently referenced is not included. Further, the referenced, and in some cases included, information is sometimes not that which was reviewed during the audit. For example, the following inconsistencies were noted in information provided in Table B6-1:

- The checklist indicates that Tab GEN 4 contains data packages LA00-HGAS-015 and LA00-HGAS-016. However, only LA00-HGAS-015 is included. In addition, based on information available to the NMED observer, LA00-HGAS-016 was not reviewed during the actual audit.
- The checklist indicates that Tab GEN 5 contains RTR data packages LA00-RTR-006 and LA00-RTR-008. However, only LA00-RTR-006 is included and neither of the cited packages was reviewed during the audit. The RTR package reviewed during the audit, as made available to the NMED observer, was actually LA00-RTR-009.
- The checklist indicates that Tab GEN 6 contains VE data packages LA00-VE-004 and LA00-VE-005. Again, only LA00-VE-004 is included in the copy made available to the NMED observers. Further, VE data packages reviewed during the audit included LA00-VE-003 and LA00-VE-006, in addition to those listed above.

Also, there are confusing entries in the B6 checklists where the cited procedure, objective evidence and/or comments do not appear to be in agreement with the WAP requirement being evaluated. Three examples out of the numerous instances encountered are:

- For Item 28 on Table B6-1, reference to Tab CDA7 is included in the comments column. CDA7 relates to a revision to Procedure TWCP-QP-1.1-028, R.6. However, no reference to this procedure is included in those listed under Procedure Documented for this same Item. Further, the issues addressed in CDA7 do not appear to be directly addressed by Item 28.
- For Item 30, the topic covered is meeting Data Quality Objectives (**DQOs**) for five specific areas. The Location cited does not include the procedure that addresses evaluation of DQOs (Procedure TWCP-QP-1.1-024, R.4). In addition, the Objective Evidence citation refers to the Waste Stream Profile Form (Tab GEN 1) rather than the Draft Characterization Information Summary (Tab GEN 2) where the DQO information is actually provided.
- For Item 31, Procedures TWCP-QP-1.1-024, R.4 and TWCP-QP-1.1-010, R.9 are not cited despite being directly applicable and included in the comments discussion for Tab CDA6.

It appears that careful review and potential revision of the B6 checklist is required to accurately cite those documents included in each Tab of the report and the documentation used as objective evidence to support the audit conclusions, and to address any entries that do not appear to match WAP/B6 checklist requirements.

2. The Audit Report Acceptable Knowledge (AK) Checklist is not sufficiently specific as it does not provide commentary or examples of implementation in some instances, and in other instances inaccurately or inadequately sites examples of implementation. As a result, the AK checklist does not adequately demonstrate that the AK auditor examined each of the required checklist elements in sufficient detail, even though the NMED observer noted that many of the elements in question were examined during the audit. Examples of specific deficiencies include, but are not limited to, the following items:

- The audit team recognized that the AK percent accuracy was not covered on the DQO review form, and this was remedied during the audit (see Tab CDA6). However, simply adding a checklist line on the DQO form does not fully address the issue. Other generator sites prepare an AK accuracy report or summary sheet that specifically addresses all drums used to calculate waste matrix code and hazardous waste code changes, so that an actual percent value for accuracy is achieved. AK accuracy (Attachment B3, Section B3-9) must be reported as the “degree of agreement between an observed sample result and the true value,” and must include “the percentage of waste containers which require reassignment to a new waste matrix code and/or designation of different hazardous waste codes based on the reevaluation of acceptable knowledge and sampling and analysis data.” Tab CDA6 does not indicate that this level of detail in the AK accuracy calculation needed to be documented. NMED assumes that the AK auditor reviewed this type of information, and that it should have been included as evidence on the AK checklist.
- The Permit (Attachment B, page B-2) defines a waste stream “as waste material generated from a single process or from an activity that is similar in material, physical form, and hazardous constituents.” Clearly, both the TA-55-19 and TA-55-20 wastes include several process activities that can be traced to the drum level, and justification for combining several processes into mixed/non mixed streams is not included in AK documentation referenced in the Audit Report and the AK checklist. This information must be included to ensure that the AK auditor agreed with the waste stream designation.
- The AK checklist does not document whether the AK auditor examined the completeness of the AK Summary Form (Tab AK1, Attachment 1), which is included in the Characterization Information Summary and provided to WIPP with the Waste Stream Profile Form (WSPF). For example, the AK Summary Form does not appear to be complete with respect to all information obtained through the acceptable knowledge process (e.g., hazardous waste codes assigned, etc.), and the AK Summary Form does not

include discussion of AK-cited references on the WSPF. This presents a somewhat incomplete AK picture, and should be rectified.

- The AK Summary Form addresses two separate waste streams, and a separate form must be prepared for each waste stream. The AK Summary Report combines these two waste streams, and it is unclear whether the AK auditor checked to be sure that individual waste streams would be represented on the appropriate forms.
- The AK auditor should have cited examples of supplemental information obtained and used by the generator site as objective evidence. The AK Summary Report is the “roll up” from all information sources, both required and supplemental, and is therefore inappropriate as an example of supplemental information. If supplemental information examined by the AK auditor is classified, the auditor should have cited the reference number and included a brief summary discussion of pertinent information examined in the document.
- The Audit checklist is incomplete with respect to Examples of Implementation for some checklist elements. For example, the checklist should have cited specific examples of AK data inconsistency resolution and confirmation (e.g., reference Tab AK2, etc.), changes to waste matrix codes, discrepancy resolution, assignment of hazardous waste codes, etc. If examples were not available, the checklist should have so indicated. As written, it does not appear that the AK auditor specifically examined each element of the checklist, instead deferring to a general reference to AK1, the AK Summary Report. If the information is classified, the auditor should have so indicated and should have provided a summary of the information examined.
- AK information is intended to provide an accurate, detailed accounting of waste characterization information pertaining to each waste stream. Although LANL has a significant body of AK information, these data were apparently inappropriately or inadequately assembled and assessed, as evident by the significant number of errors in AK documentation and the appropriate issuance of a corrective action report (CAR) by CBFO. These errors ranged from typographical errors and incomplete road mapping (which impacts traceability) to incomplete inclusion/justification of hazardous waste codes, which resulted in corrective actions that included hazardous waste code reassignment, reassignment of drums to different waste streams, etc. Therefore, it is unclear why the Audit Report states on page 14 that “investigation of the impacts on data identified no impact on past data,” when the CAR report states on page 1 of 8 (addendum) of Response to CAO-CAR-00-036 (Tab CAR2) that “the reviews have identified the need to change applicable EPA Hazardous Waste Numbers for specific waste streams and may also require movement of payload containers to different waste streams.” While this has not impacted shipment of waste to WIPP under the permit because these waste streams have yet to be certified, these issues certainly have the

potential to impact past data. These conflicting conclusions need to be reconciled with more detailed information on the AK checklist.

- During the audit, as observed by NMED contractor personnel, discussions took place between the auditors and LANL staff concerning the confirmation and subsequent AK document revision using the actual analytical results for hazardous constituents. At the time of the audit, it appeared to have been determined that procedural revisions were necessary to ensure that adequate communication, review, and confirmation of AK prior to shipment of waste would be performed. As presented in the Audit Report text and checklist, the only revision made even related to this issue was a minor modification to Procedure TWCP-QP-1.1-024, R.4, inserting a requirement to determine AK percent accuracy (see first bullet in this comment). This revision does not address the concern identified during the audit. Determining the percent accuracy in no way ensures that adequate confirmation will be performed or that revisions to AK documentation shall take place. In addition, failure to address this issue renders inaccurate the conclusions drawn in the Audit Report text indicating the absence of unresolved issues or Corrective Action needs.

The need to communicate, confirm, and revise, as necessary, the AK for a given waste stream based on actual analytical results for hazardous constituents must be addressed within LANL procedures in order to demonstrate compliance with the WAP. The Audit Report and B6 checklist must be revised to document both the deficiency and the resolution.

3. The Radiography checklist references Tab RTR 14 for information pertaining to RTR training, but Tab RTR 14 does not include much information pertinent to the specific items in the checklist elements. The comments column should more specifically address the checklist elements, indicating specific courses examined, information in these courses, etc., which support the checklist elements.

4. The Radiography checklist asks specific questions that are not addressed in the Item Reviewed column or Comments column. For example, the checklist (#253) asks whether the test drum was divided into layers with varying densities, or whether different test drums were examined; it also asks whether the test drum was representative of site waste matrix codes. However, the Item Reviewed portion of the checklist does not specifically address these checklist requirements, instead indicating that the auditor “confirmed proper contents” of the drum and viewed test drum videos. The checklist should clearly specify whether a single drum with multiple layers/densities was examined, or whether several drums were used, and whether the test drum was representative of site waste matrix codes and included all required elements.

5. The Visual Examination checklist (#286 – 293) states that miscertification rate calculations are not in the scope of the audit, but it is unclear why implementation of at least some aspects of

miscertification were not in the scope of the audit. If the site is determining its site-specific miscertification rate for the Summary Waste Category Group, then the initial miscertification rate of 11% should apply until this rate is established. The auditor should better explain circumstances surrounding why this is outside the scope of the audit. Additionally, if miscertification rate was in the process of being calculated, then a “mock” calculation should have been examined to ensure that the site knows how to perform miscertification rate calculations in their entirety. Without this information, it is difficult to agree that the site has fully demonstrated the ability to address miscertification rate calculations. Further, the site shipped non-hazardous waste to WIPP for much of 1999, and was required to calculate miscertification rates by EPA throughout this shipping period; therefore, examples of implementation, though outside of the specified mixed waste stream, should have been available for review by the auditor and the checklist should reflect this Auditor review activity.

6. NMED observers noted that the HSG Method Detection Limit was obtained in a manner different than the permit intended. Los Alamos based their approach on a CAO clarification, but the clarification was inaccurate and did not adequately reflect permit requirements. The checklist and/or audit report should address this observation in the appropriate location, including how the Auditor examined and assessed this situation.

7. In several instances, checklists indicate that an item is “not applicable,” but does not explain why the checklist element is not applicable. The reader might attempt to presume why elements are not applicable, but the checklists should specifically address why elements are so designated.

8. Although the Audit Report states that a CAR is a concern that is not addressed or corrected during the Audit, the Audit Report should specify in greater detail the criteria for designating CARs, observations, and recommendations. NMED has consistently made this comment (RFETS Approval, March 9, 2000; Hanford Approval, June 15, 2000; INEEL Approval, July 17, 2000), but the Permittees have failed to incorporate this recommendation.

9. The B6 checklist indicates throughout that repackaged waste was not within the scope of the audit. However, NMED observers reviewed information pertaining to repackaged waste during the audit, as did audit team members. In addition, the checklist contains specific references to procedures pertaining to repackaged waste, immediately following statements that repackaged waste is not within the scope (See Item 30 on Table B6-1 for one example).

Based on the available information, the status of repackaged waste under this audit is unclear. If repackaged waste has been determined to be outside the scope of the audit by the audit team after completion of the audit, the Audit Report and B6 checklist must be reviewed and revised to provide a full justification for this finding, as well as clear explanations and references in each section of the checklist where repackaged waste is addressed.