Department of Energy
Carlsbad Field Office
P. O. Box 3090
Carlsbad, New Mexico 88221

April 25, 2003

ENTERED

APR 2003

Mr. James P. Bearzi, Chief
Hazardous Waste Bureau
State of New Mexico
Environmental Department
2905 Rodeo Park Drive East, Building 1
Santa Fe, New Mexico 87505-6303

RE: Response to NMED Comments on the Argonne National Laboratory – East /Central Characterization Project Final Audit Report, Audits A-02-03 and A-03-13 Waste Isolation Pilot Plant, EPA I.D. Number NM4890139088

Dear Mr. Bearzi:

The Carlsbad Field Office (CBFO) has received the New Mexico Environmental Department (NMED) comments on the final audit report for the audits conducted at the Argonne National Laboratory – East Site. The debris audit (A-02-03) was performed on September 9-13, 2002 and the subsequent homogeneous solids audit (A-03-13) was conducted on February 10-13, 2003.

CBFO has revised the final audit report, associated B6 checklists, and corrected documentation where warranted in accordance with your comments. The revised audit report and Attachments, B6 Checklists, and corrected objective evidence are also attached. The individual responses addressing each of the NMED comments are documented on Attachment 1.

If you have any questions or need additional information, please contact Ava Holland of my staff at (505) 234-7423.

Sincerely,

Inés Triay

Dr. Inés R. Triay,
Manager

Enclosure

030443

CBFO:QA:ALH:GS:03-1160:UFC 2300.00

cc w/o enclosure:

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ATTACHMENT 1
Response to

NMED COMMENTS ON THE ARGONNE NATIONAL LABORATORY-EAST/CENTRAL CHARACTERIZATION PROJECT (ANL-E/CCP) INITIAL CERTIFICATION AUDIT REPORT A-02-03 AND A-03-13

NMED's review indicated that this Audit Report showed less attention to detail than presented in previous Audit Reports and, unless remedied, this less rigorous approach to preparation could result in significant deficiencies in future Audit Reports. The body of the Audit Report appears to generally address the applicable elements. However, there are some omissions, errors, and inconsistencies including but not limited to the following items:

NMED Comment 1:
Please provide this and all future Audit Reports and B6 Checklists in electronic format (MS Word, WordPerfect, Adobe Acrobat, etc.). Obviously, CAR resolutions, objective evidence, etc., will continue to be available only in paper format. Providing information that is already available electronically will expedite review by readily allowing dissemination among NMED staff and contractors.

Response to Comment 1:
CBFO will provide electronic copies of this corrected final audit report, as well as, the corrected B6 Checklists. In the future, CBFO will ensure that electronic copies of all final audit reports and associated B6 checklists will be forwarded to NMED with transmittal of the final audit reports.

NMED Comment 2:
The information and objective evidence associated with CAR-02-O87 (Tab CAR 1) is generally repeated in Tab CAR 2, which deals with CAR-02-088; likewise, Tab CAR 2 (CAR-02-088) contains much repeated documentation associated with CAR-02-087. Tabs CAR 3 and CAR 4 also contained substantial duplicate information. The Permittees could exercise greater care in assembling only the relevant objective evidence associated with each CAR without duplicating large portions of draft procedures. etc. This would reduce the volume of the report and aid the reviewers in identifying relevant evidence documenting the closure of each CAR.

Response to Comment 2:
Both of the referenced CARs were associated with development of the AK documentation and the AK Summary report. As such, both sets of objective evidence were indeed related to closure of each of the CARs. NMED had previously requested duplication of objective evidence associated with each B6 checklist to facilitate the NMED reviewers located in different locations. CBFO will re-evaluate this practice and eliminate duplication of objective evidence when possible.

NMED Comment 3:
The manner in which DR/CT findings were excluded from the Audit Report is unacceptable. Despite the fact that the audit team identified numerous concerns during audit A-O2-03 regarding DR/CT (i.e., CAR-O2-092, one CDA, two observations, and one recommendation), descriptions of these concerns have been expunged from the Audit Report on the basis of the Permittees' decision to not request approval for this system from NMED.

NMED has repeatedly urged the Permittees to produce Audit Reports that accurately reflect all relevant findings identified during audit activities. There is nothing in Permit Attachment B6 (Waste Isolation Pilot Plant Permittees' Audit and Surveillance Program) generally, or in Section B6-4 (Audit Conduct) specifically, that limits the Audit Report to only those activities for which the Permittees request NMED approval. Section B6-4 says in relevant part:

> *"A formal final audit report will be provided to NMED which will include WAP related CAR resolution results and audit results that will include, as a minimum, sections describing the scope, purpose, summary of deficiencies, and observations in narrative format, completed audit checklists, audited procedures, and other applicable documents which provide evidence of W AP implementation."*

The Permittees must revise Sections 6 and 7 of the Audit Report to describe all CARs, CARs, CDAs, observations, and recommendations associated with DR/CT identified during Audit A-02-03, provide additional Tabs for the CAR and CDA, and update any other relevant sections in the Audit Report to reflect this information. The Permittees may qualify this additional information submittal with a statement indicating that approval for DR/CT is not requested.

Response to Comment 3:
CBFO has revised the appropriate sections of the final audit report and included the findings related to the DR/CT system identified during the debris audit.

NMED Comment 4:
As Noted in the cover letter, the published scope for either of the ANL-E/CCP audits did not include RTR. As a result, the administrative record regarding the audits at ANL-E is incomplete in this matter. Develop and implement a formal procedure for notifying regulators when the scope of an audit changes, particularly when it involves adding or substituting a technical activity. Also, revise Section 2.1 of the Audit Report to indicate that DR/CT was originally in the scope of A-O3-13 but was subsequently removed.

Response to Comment 4:
The list of technical activities to be audited described in Section 2.1 for each of the audits does address that the DR/CT was removed from service between the debris and solids audit. CBFO has revised Section 2.1 and provided further clarification that the DR/CT was indeed removed from service and the conventional RTR system was substituted and evaluated as the NDE method being certified. CBFO makes every attempt to notify NMED of changes in audit scope in a timely manner, but must retain the flexibility to adjust audit scope during an audit. CBFO does not believe the audit procedure requires revision to address this issue.

NMED Comment 5:
It is unclear how the Pemrittees expect NMED to evaluate and approve waste characterization activities for S3000 homogeneous solid wastes as presented in the Audit Report. For example, Section 5.2.1 states, "Although the processes were Verified, the demonstration of AK confirmation, DQOs reconciliation, preparation of a WSPF, and the transmittal of data to WIPP for the S3000 homogeneous solid waste will be verified at a later date." Similarly, Section 5.2.2 states. "S3000 sampling operations (e.g.. specific container selection, sample collection. sample chain-of-custody, analytical laboratory sample analysis) will be evaluated at a later date and no S3000 waste will be shipped to WIPP until successful implementation and CBFO verification of these activities has occurred." Similar statements are found in the transmittal letter for the Audit Report. Please clarify whether these activities will be evaluated in a future audit and if the Permittees will submit additional objective evidence prior to seeking NMED approval for homogeneous solid waste characterization activities. As it stands now, the audit report does not support approval for homogeneous waste characterization because critical elements of the characterization program were not audited.

Response to Comment 5:
The audit report is clear that S3000 waste cannot be shipped from ANL-E. This limitation was placed upon the ANL-E/CCP because they had not developed and implemented a solids sampling and analysis process. The characterization processes that would be effective for use on homogeneous solid waste streams were demonstrated, as well as, the AK documentation process. The report is clear that because of the lack of a solids sampling and analysis process, there are certain final characterization functions, i.e. sampling design, reconciliation of DQOs, AK confirmation, etc, related to solids that will have to be reviewed at a future certification audit. The majority of the processes that would accomplish these activities are common for the debris waste stream and were indeed evaluated. The CBFO fully intends to perform a certification audit, with regulator involvement, when the ANL-E/CCP program develops and implements a solids sampling and analysis process. This will include submittal of a final audit report to NMED.

NMED Comment 6:
Procedures CCP-AK-ANLE-00l, Rev. 7 (CCP AK Summary Report for ANL-E Contact Handled TRU Waste, Facility Maintenance and Laboratory Operations) and CCP-PO-00l, Rev. 5 (CCP Transuranic Waste Characterization Quality Assurance Project Plan [QAPjP] were not included in the CD "Hot Burn". Although the AK Summary report is included in Tab AK 1; the QAPjP is not included in the Audit Report. This is inconsistent with the B6 Checklists, which frequently cite these documents.

Response to Comment 6:
Both documents have been added to a CD "Hot Burn" and provided with the revised audit report and B6 checklists. In addition, the QAPjP has been added to Attachments 5 and 6.

NMED Comment 7:
Tables 5, 6. and 7 of the procedure CCP-AK-ANLE-OO1, Rev. 7 (pages 73 through 79 of 88 pages) of the objective evidence of CAR 2 of the Audit Report have some problems in it. These tables were constructed as guidelines of possible waste codes in the evaluation of code assignment, as well as prohibited items recognition. Some of the chemicals listed in the table (Acetone, Methanol, Xylene, Benzene, Toluene, Toluene-d8, Ethyl ether, and Nitrobenzene) should also have identified D001as a possible RCRA code. In addition, the codes of U002 for Acetone, U019 for Benzene, U117 for Ethyl either, U169 for Nitrobenzene, and U220 for Toluene and Toluene-d8 should have been added to the tables. The tables are incomplete and a concern during the audit should have been written.

Response to Comment 7:
CBFO issued CARs that addressed deficiencies with the AK Summary Report and the AK documentation processes. The CARs identified inconsistencies in the implementing procedure, the final developed summary report, and pointed out a lack of understanding of the AK development processes. The AK issues were indeed resolved and the process and the documentation was deemed to be adequate, satisfactorily implemented, and effective. NMED representatives were involved in the final resolution of all the AK related issues and agreed that the corrective actions had been completed. The ANL-E AK process and implementing procedures will ensure that the NMED's concern about the assignment of the possible hazardous constituents will be satisfactorily implemented.

NMED Comment 8:
A document in Tab GEN33 (a "Memo To File" from Tom Krause, dated 06-14-02) has a typographical error in item number one: it currently read F-155 and should read Fe-155. This misleads the reader into believing that Fluoride (F) is the topic of discussion, whereas Iron (Fe) is the topic.

Response to Comment 8:
The document has been revised to correct the typographical error and the revised document is provided with the corrected report and B6 checklists.

B6 Checklist comments – In general, the, B6 checklist suffers from lack of specificity in numerous items, as noted below:

NMED Comment 9:
General comment, procedure revision references -despite the fact that there may have been procedure revisions between Audits A-02-03 and A-03-13, ensure that all procedure references on the B6 checklists cite the final revision provided in the Audit Report. If there is a specific need to cite an earlier revision, provide complete justification.

Response to Comment 9:
The B6 checklists have been revised to reflect the latest revision of the procedures in effect during the final audit.

NMED Comment 10:
B6 Checklist, Item 12- the exact locations of parts C and I are not specifically identified in procedures CCP-TP-039, Rev. 6 and CCP-TP-031, Rev. 12.

Response to Comment 10:
The B6-1 checklist has been revised to add paragraph references within the identified procedures that address the specified requirements.

NMED Comment 11:
B6 Checklist, Item 12- there js no comparable correlation between the remaining sub items (e.g., A, B, D, etc.) and the cited procedures (e.g., CCP-TP-005, Rev. 11, etc.).

Response to Comment 11:
The B6-1 checklist has been revised to add paragraph references within the identified procedure that address the specified requirements.

NMED Comment 12:
B6 Checklist, Item 13-the exact locations are not specifically identified in procedures CCP-TP-039~ Rev. 6 and CCP-TP-031, Rev. 12.

Response to Comment 12:
The B6-1 checklist requirement is generic in nature and questions whether all the appropriate characterization techniques exist to assure confirmation data will be generated. The B6-1 checklist has been revised to add paragraph references within the

identified procedures that address the specified requirements and a clarification note was added to provide justification for the checklist response.

NMED Comment 13:
B6 Checklist, Item 17-the exact location is not specifically identified in procedure CCP- TP-056, Rev. 1

Response to Comment 13:
The B6-1 checklist has been revised to add paragraph references within the identified procedure that address the specified requirements and a clarification note was added to provide justification for the checklist response.

NMED Comment 14:
B6 Checklist, Item 18 -the exact locations are not specifically identified in procedures CCP-TP-039, Rev. 5, CCP-TP-031, Rev. 10, and CCP-TP-034. Rev -7

Response to Comment 14:
The B6-1 checklist has been revised to add paragraph references within the identified procedures that address the specified requirements. In addition, a clarification note was added to provide justification for the checklist response.

NMED Comment 15:
B6 Checklist, Item 21-the exact locations are not specifically identified in procedures CCP-TP-O39. Rev. 6 and CCP-TP-O31. Rev. 12

Response to Comment 15:
The B6-1 checklist has been revised to add paragraph references within the identified procedures that address the specified requirements. In addition, a clarification note was added to provide justification for the checklist response.

NMED Comment 16:
B6 Checklist,Item 33-the exact location is not specifically identified in procedure CCP-TP-034, Rev. 9. Also, Items 32 and 33 reference CCP-PO--001, Rev. 5, Sec. Bl-3b, but should this reference instead be Section B3-10?

Response to Comment 16:
The B6-1 checklist has been revised to add paragraph references within the identified procedures that address the specified requirements. The reference to B1-3b has been changed to B3-10. In addition, a clarification note was added to provide justification for the checklist response.

NMED Comment 17:
B6 Checklist, Item 34-the exact location is not specifically identified in procedure CCP-TP-034.Rev.9

Response to Comment 17:
The B6-1 checklist has been revised to add paragraph references within the identified procedure that address the specified requirements.

NMED Comment 18:
B6 Checklist, Item 38-there should be a comment to explain why parts D and E are Not Applicable (NA).

Response to Comment 18:
The ANL-E HSG sampling and analysis system is an on-line sample manifold system and the two sub items address requirements for conventional sampling operations. The B6-1 checklist has been revised by adding a note providing justification for marking the subparagraphs as Not Applicable.

NMED Comment 19:
B6 Checklist, Item 44-the exact locations are not specifically identified in procedures CCP-QP-005, Rev, 7 and CCP-QP-006, Rev. 4.

Response to Comment 19:
The B6-1 checklist has been revised to add paragraph references within the identified procedure that address the specified requirements.

NMED Comment 20:
B6 Checklist, Item 45-the exact locations are not specifically identified in procedures CCP-QP-005, Rev. 7, CCP-QP-006, Rev. 4, and CCP-QP-004) Rev. 4.

Response to Comment 20:
The B6-1 checklist has been revised to add paragraph references within the identified procedure that address the specified requirements.

NMED Comment 21:
B6 Checklist, Items 50, 51, and 52 -the exact location is not specifically identified in procedure CCP-TP-030, Rev. 7.

Response to Comment 21:
The B6-1 checklist has been revised to add paragraph references within the identified procedure that address the specified requirements.

NMED Comment 22:
B6 Checklist Item 60-the two stated sections of CCP-TP-002, Rev. 11 don't appear to address the requirement to submit waste stream summary information and reconciliation of DQOs to the WIPP facility. Section 4.5 seems to address this item.

Response to Comment 22:
The B6-1 checklist has been revised to add paragraph references within the identified procedure that address the specified requirements. In addition, Section 4.5 was added as a reference.

NMED Comment 23:
B6 Checklist, Item 67-there is no Sec. 4.9.10 (Note) in procedure CCP-QP--005, Rev. 8. This may be a typographical error and the location may be CCP-QP-008, Rev-8, Sec. 4.10 (Note).

Response to Comment 23:
The referenced paragraph section contained a typographical error. The B6-1 checklist has been revised to reflect the correct paragraph reference. In addition, the same typographical error was corrected in Checklist Item 68.

NMED Comment 24:
B6 Checklist, Item 69 -there is no Sec. 4.9.5.B in procedure CCP-QP-OO8, Rev. 8.

Response to Comment 24:
The referenced paragraph section contained a typographical error. The B6-1 checklist has been revised to reflect the correct paragraph reference.

NMED Comment 25:
B6 Checklist, Item 71-CCP-QP-008, Rev. 8, Section 2.3.6 is OK, but Section 4.10.6 [D] seems to address the W AP requirement more specifically.

Response to Comment 25:
The B6-1 checklist was revised to add the suggested paragraph reference.

NMED Comment 26:
B6 Checklist, Items 72 and 73-the exact location is not specifically identified in procedure CCP-TP-030, Rev. 7.

Response to Comment 26:
The B6-1 checklist has been revised to reflect the CCP transportation procedure.

NMED Comment 27:
27. B6 Checklist, Item 143 -CCP-TP-005, Rev. 11, Section 4.2 is cited Shouldn"t section 4.4 be cited instead of 4.2?

Response to Comment 27:
The B6-3 checklist was revised to add the suggested paragraph reference.

NMED Comment 28:
B6 Checklist Item 148 -the exact location is not specifically identified in procedure CCP-QP-002, Rev. 11.

Response to Comment 28:
The B6-3 checklist has been revised to add paragraph references within the identified procedure that address the specified requirements.

NMED Comment 29:
B6 Checklist, Item 151 -the exact locations are not specifically identified in procedures CCP-TP-005, Rev. 11; CCP-PO-002, Rev. 4; CCP-PO-008, Rev. 3; CCP-PO-009, Rev. 4; CCP-QP-002, Rev. 11; CCP-QP-004, Rev. 3; CCP-QP-005, Rev. 6; and CCP-QP-006, Rev. 3. Also, procedures CCP-PO-008 and CCP-PO-009 do not appear on the list of audited procedures.

Response to Comment 29:
The B6-3 checklist has been revised to add paragraph references within the identified procedures that address the specified requirements. In addition, CCP-PO-008 has been added to Attachments 5 and 6 of the final audit report. CCP-PO-009 is the CCP and Nevada Test Site interface document and is not applicable to this audit so it has been deleted.

NMED Comment 30:
B6 Checklist. Item 168 -there js mention of a draft accuracy report (AK -46). Should a final accuracy report be submitted as an amendment to the Audit Report in the future or will this be the subject of a subsequent re-certification audit?

Response to Comment 30:
The draft accuracy report was provided as a demonstration of the process. The audit team verified that the process was acceptable. This generic CCP process has been audited at other CCP sites and found acceptable. The CCP had not completed sufficient data to warrant issuance of a final accuracy report. A specific audit to verify this accomplishment will not be required.

Response to Comment 34:
The B6-4 checklist has been revised to add paragraph references within the identified procedures that address the specified requirements and a clarification note was added to provide justification for this position.

NMED Comment 35:
B6 Checklist, Item 235 -CCP-TP-045 does not seem to address the W AP requirement.

Response to Comment 35:
The B6-5 checklist has been revised to delete reference to the RTR procedure. This procedure provides the instruction for performance of RTR and does not necessarily require that the drums be subjected to RTR. The document referenced is the upper level requirements document that more appropriately addresses the checklist Item.

NMED Comment 36:
B6 Checklist, Item 239 -the exact locations are not specifically identified in procedures CCP-TP-045, Rev. 6, CCP-TP-028, Rev. 1, and CCP-PO-001, Rev. 4. As noted earlier, procedure CCP-PO-001 does not appear on the list of audited procedures.

Response to Comment 36:
The B6-5 checklist has been revised to add paragraph references within the identified procedures that address the specified requirements. In addition, CCP-PO-001 has been added to Attachments 5 and 6.

NMED Comment 37:
B6 Checklist, Item 294 -since the UCL90 has not yet been established should such a calculation be amended to the Audit Report in the future or will this be the subject of a subsequent re-certification audit? Also, there is no mention of the binomial distribution.

Response to Comment 37:
The initial 50 drums to establish the site-specific mis-certification rate have not yet been examined so the UCL90 has not been calculated. The process has been demonstrated using a hypergeometric distribution. The audit team verified that the process was acceptable. This generic CCP process has been audited at other CCP sites and found acceptable.

U.S. DEPARTMENT OF ENERGY
CARLSBAD FIELD OFFICE

FINAL AUDIT REPORT
OF
ARGONNE NATIONAL LABORATORY-EAST
UTILIZING THE
CENTRAL CHARACTERIZATION PROJECT

Chicago, Illinois

AUDIT NUMBER A- 02-03
September 9-13, 2002
AUDIT NUMBER A-03-13
February 10-13, 2003

FINAL AUDIT REPORT OF WASTE CHARACTERIZATION IN ACCORDANCE WITH THE HAZARDOUS WASTE FACILITY PERMIT

Prepared by: A. Earl Bradford **Date:** April 25, 2003
A. Earl Bradford, CTAC
Audit Team Leader

Approved by: Ava L. Holland **Date:** 4/25/03
Ava L. Holland, CBFO
Quality Assurance Manager

1.0 EXECUTIVE SUMMARY

The Central Characterization Project (CCP) was developed by Westinghouse TRU Solutions (now Washington TRU Solutions)(WTS) to provide transuranic (TRU) waste characterization, certification, and transportation services, including the necessary management and administrative functions to ensure the acceptability of these processes in accordance with regulatory and site requirements. The CCP provides these services under contract to those waste generator sites who request support or that lack the expertise, program infrastructure, or equipment to characterize TRU waste for shipment to and disposal at the Waste Isolation Pilot Plant (WIPP). The University of Chicago has elected to use the characterization services of the CCP at Argonne National Laboratory-East (ANL-E), including overall management of the characterization processes.

Carlsbad Field Office (CBFO) Audit A-02-03 was conducted at ANL-E, September 9-13, 2002 and Audit A-03-13 was conducted at ANL-E, February 10-13, 2003. These audits were conducted to evaluate the adequacy, implementation, and effectiveness of the ANL-E/CCP TRU waste characterization and certification activities related to Summary Category Groups S5000 (debris waste) and S3000 (homogeneous solid waste). Audit A-02-03 assessed the adequacy, implementation, and effectiveness of the Waste Analysis Plan (WAP) related quality assurance (QA) activities and the WAP technical processes for characterization and certification of Summary Category Group S5000 retrievably stored contact handled debris waste. Audit A-03-13 assessed the adequacy, implementation, and effectiveness of the WAP technical processes related to characterization and certification of Summary Category Group S3000 retrievably stored contact handled homogeneous solid waste.

A Digital Radiography/Computed Tomography (DR/CT) unit was included in the scope of audit A-02-03. Prior to audit A-03-13, ANL-E/CCP decided not to use the DR/CT unit for characterization of CH TRU waste at ANL-E. Accordingly, ~~the previous evaluation of the DR/CT unit is not addressed in this final audit report, and~~ approval of this system by the New Mexico Environment Department (NMED) is not being requested. The use of a real-time radiography unit for both S3000 and S5000 waste was assessed during audit A-03-13.

The audit scopes included an assessment of the CCP programmatic interfaces established with the University of Chicago, the CCP administrative controls needed to manage the characterization activities, and the physical characterization processes and activities being conducted at ANL-E. The activities evaluated included characterization with mobile real-time radiography (RTR) equipment, headspace gas (HSG) sampling and analysis using a mobile automated manifold system with gas chromatography/mass spectrometry (GC/MS) and gas chromatography/thermal conductivity detector (GC/TCD) methods, and mobile visual examination (VE) equipment. In addition, the

process for developing the acceptable knowledge (AK) documentation was evaluated. The audit team concluded that the ANL-E/CCP technical and QA programs, as applicable to the audited activities, met the requirements contained in the Hazardous Waste Facility Permit (HWFP). The deficiencies identified in the corrective action reports (CARs) discussed below have been corrected. The audit team also concluded that the defined QA and technical processes for the audited activities are adequate and are being implemented in accordance with the *CCP Transuranic Waste Quality Assurance Characterization Project Plan* (QAPjP) and the associated implementing procedures. The audited processes were also found to be effective.

During the September audit (A-02-03), the audit team identified ~~nine~~ 10 conditions adverse to quality (CAQs) resulting in the issuance of ~~five~~ six CBFO CARs. The ~~five~~ six CARs identified adverse conditions concerning the interpretation of requirements for developing the AK record, real-time recording of the audio record while performing NDE using DR/CT, adequacy of the procedures for performing HSG sampling, implementation issues related to the HSG sampling and analysis process, and implementation issues related to recording the weights of prohibited items removed during performance of VE. ~~Two~~ Three deficiencies isolated in nature and requiring only remedial corrective action, were Corrected During the Audit. ~~Four~~ Six Observations and ~~six~~ Seven Recommendations were identified and offered for management consideration.

During the February audit (A-03-13), the audit team did not identify any CAQs that required CAR. The audit team identified five isolated deficiencies requiring only remedial corrective actions that were corrected during the audit. In addition, the audit team identified one observation and five Recommendations that were offered for management consideration. The CARs, CDAs, Observations, and Recommendations are described in Sections 6 and 7 of this report.

2.0 SCOPE AND PURPOSE

2.1 Scope

The audit team evaluated the adequacy, implementation, and effectiveness of the ANL-E/CCP TRU waste characterization program and processes used to characterize retrievably stored debris waste and homogeneous solid waste in accordance with the requirements contained in the WIPP HWFP, Attachments B through B6. Compliance was demonstrated and documented by completing the Attachment B6 checklist for the applicable ANL-E/CCP activities. During audit A-02-03, the audit team evaluated a DR/CT NDE process which was ultimately replaced by a conventional RTR process. Approval of the DR/CT system is not being requested. During audit A-03-13, the audit team evaluated the RTR system for application for both the debris and solid wastes.

The following ANL-E/CCP program elements were evaluated in accordance with the HWFP:

WAP Quality Assurance Activities (A-02-03)

Organization
Nonconformance/Corrective Action
Personnel Qualification and Training
Documents and Records
Sample Control

WAP Technical Activities (A-02-03)

Acceptable Knowledge
Headspace Gas Sampling and Analysis
Digital Radiography/Computed Tomography (removed from the audit scope)
Visual Examination
Data Generation-Level Verification and Validation
Project-Level Data Verification and Validation
WIPP Waste Information System (WWIS) Data Entry

WAP Technical Activities (A-03-13)

Acceptable Knowledge
Headspace Gas Sampling and Analysis
Real-Time-Radiography (Summary Category Groups S3000 and S5000)
Visual Examination
Data Generation-Level Verification and Validation
Project-Level Verification and Validation

The evaluation of the ANL-E/CCP management and waste characterization and certification activities and documents was based on current revisions of the following documents:

- *Waste Isolation Pilot Plant Hazardous Waste Facility Permit*
- *Quality Assurance Program Document* (QAPD), DOE CBFO-94-1012
- *CCP Transuranic Waste Quality Assurance Characterization Project Plan* (QAPjP), CCP-PO-001
- *CCP Transuranic Waste Certification Plan*, CCP-PO-002
- Related ANL-E/CCP Quality Assurance and technical implementing procedures (Attachment 4)

2.2 Purpose

Audits A-02-03 and A-03-13 were conducted to assess whether the ANL-E/CCP retrievably stored contact handled waste characterization and certification activities for Summary Category Groups S5000 debris waste and S3000 homogeneous solid waste complied with the WIPP HWFP requirements.

3.0 AUDIT TEAMS AND OBSERVERS

AUDIT A-02-03 AUDITORS/TECHNICAL SPECIALISTS

Ava Holland	CBFO QA Manager
Dennis Miehls	CBFO QA Representative
Steve Calvert	QA Manager, CTAC
Earl Bradford	Audit Team Leader, CTAC
Jack Walsh	Auditor, CTAC
Steve Davis	Auditor, CTAC
Annabelle Axinn	Auditor, CTAC
Pete Rodriguez	Auditor, CTAC
Porf Martinez	Auditor, CTAC
Jim Schuetz	Auditor, CTAC
Chet Wright	Auditor, CTAC
Tom Putnam	Auditor, CTAC
Dick Blauvelt	Technical Specialist, CTAC
Kenneth Coop	Technical Specialist, CTAC
Dorothy Gill	Technical Specialist, CTAC
Karen Gaydosh	Technical Specialist, CTAC
Melissa Rojo	Clerical, CTAC

AUDIT A-02-03 OBSERVERS

Steve Zappe	NMED Observer
Will Fetner	NMED Observer
Connie Walker	NMED Observer
Bob Thielke	NMED Observer
Ben Walker	EEG Observer
Beth Bennington	CBFO Observer
Rich Allen	Illinois Department of Nuclear Safety Observer

AUDIT A-03-13 AUDITORS/TECHNICAL SPECIALISTS

Steve Calvert	CTAC QA Manager
Earl Bradford	Audit Team Leader, CTAC

Steve Davis	Auditor, CTAC
Anabelle Axinn	Auditor, CTAC
Tom Putnam	Auditor, CTAC
Dick Blauvelt	Technical Specialist, CTAC
Patrick Kelly	Technical Specialist, CTAC
Dorothy Gill	Technical Specialist, CTAC
Wayne Ledford	Technical Specialist, CTAC

AUDIT A-03-13 OBSERVERS

Steve Zappe	NMED Observer
Steve Holmes	NMED Observer
Connie Walker	NMED Observer
Rich Morris	CTAC Observer

4.0 AUDIT PARTICIPANTS

Pre-audit conferences were held in the conference room of Building 360 at the ANL-E site on September 9, 2002, and February 10, 2003. Daily management briefing meetings were held with ANL-E/CCP management and staff to discuss the progress of the audits and issues and potential deficiencies. The audits were concluded with post-audit conferences held in the conference room of Building 360 on September 13, 2002, and February 13, 2003. ANL-E and CCP personnel contacted during Audit A-02-03 are identified in Attachment 1 and CCP personnel contacted during Audit A-03-13 are identified in Attachment 2.

5.0 SUMMARY OF AUDIT RESULTS

5.1 Program Adequacy and Implementation

These audits were performed to assess the ANL-E/CCP ability to characterize and certify waste from Summary Category Groups S5000 retrievably stored contact handled debris waste and S3000 retrievably stored contact handled homogenous solid waste to the requirements specified in the WIPP Waste Analysis Plan (WAP).

The characterization methods assessed were HGS sampling and analysis, AK, RTR, and the VE process. In addition, data review and validation, as well as the use of those data to: 1) perform data quality objective (DQO) reconciliation, 2) prepare a Waste Stream Profile Form (WSPF), and 3) perform data entry to the WWIS were assessed.

The audit team concluded that the applicable ANL-E/CCP activities, as described in the associated implementing procedures, satisfactorily meet the requirements contained in the HWFP. The deficiencies identified in Section 6.1 have been corrected. Details of audit activities, including specific objective evidence

reviewed, are described below and in the attached B6 checklist. The B6 checklist identifies the ANL-E/CCP program documents and procedures in which the requirements of the WAP have been met. Attachment 4 contains examples of the objective evidence that was reviewed during the audits.

A list of ANL-E/CCP procedures evaluated during Audit A-02-03 is provided in Attachment 5 and the list of ANL-E/CCP procedures evaluated during Audit A-03-13 is provided in Attachment 6.

5.2 Technical Activities

Each technical area audited is discussed in detail in the following sections. The method used to select objective evidence is discussed, the objective evidence used to assess compliance with the WAP is cited briefly (and in detail on the checklist), and the results of the assessments are provided.

If a requirement was not met, an audit deficiency was identified. Deficiencies that were corrected during the audit are discussed in Section 6.2. A CAR was prepared to document those items that were not adequately addressed during the audit. A CAR allows CBFO to track ANL-E/CCP efforts to remediate the identified deficiency. The CARs are described in Section 6.1. All CARs have been satisfactorily closed. Each deficiency corrected during the audit (CDA) and each CAR is identified on the B6 checklist tables under the corresponding item number.

5.2.1 Table B6-1 WAP Checklist

The B6-1 WAP checklist addresses program requirements from an overall management perspective. It documents the verification that the waste characterization strategy as defined in the WAP is implemented using controlled procedures. These audits were performed to assess the ability of the ANL-E/CCP to characterize waste from Summary Category Groups S3000 (homogeneous solid waste) and S5000 (debris waste). In particular, a homogeneous solid waste stream and a retrievably stored debris waste stream were evaluated. Objective evidence to evaluate the implementation of the associated characterization activities was selected and reviewed. Batch data reports, sampling records, and training documentation for ANL-E/CCP personnel were included in the evaluations. The audits included direct observation of waste characterization activities (such as gas sampling and analysis, RTR, VE, and WWIS data entry). Each characterization process involves:

- Collecting raw data
- Collecting quality assurance/quality control (QA/QC) samples or information
- Reducing the data to a useable format, including a standard report
- Review of the report by the data generation facility and the site project office
- Comparing the data against Program DQOs

- Reporting the final waste characterization information to WIPP

The flow of data from the point of generation to incorporation on the WSPF for each characterization technique was reviewed to ensure that all applicable requirements were included in the operating procedures.

The ANL-E/CCP demonstrated compliance with the characterization requirements of the WAP through documentation and by demonstrating the characterization activities. The following batch data reports were reviewed as objective evidence of completion of characterization activities:

- HSG batch data reports AEHSG01040302a, AEHSG01050102a, AEHSG01040502a, AEHSG01012303a, and AEHSG01012403a
- RTR batch data reports AERTR001 and AERTR002
- VE batch data reports AEMover042202a, AEMover071602a, AEMover051402a, AEMover042602a, AEMover072902a, AEMover013003i, and AEMover013003f

The project-level data verification and validation process for S5000 was evaluated by reviewing HSG batch data reports, AEHSG01040302a, AEHSG010501102a, AEHSG01040502a and VE batch data reports, AEMover042202a, AEMover071602a, AEMover051402a, AEMover042602a, AEMover072902a, and AEMover051702a.

Copies of the batch data reports are included in Attachment 4. The processes for demonstration of project-level data verification and validation for S3000 will be completed at a later date.

The AK process and the AK auditable record were reviewed in detail for a Summary Category Group S3000 homogeneous solid waste stream and a S5000 retrievably stored debris waste stream. The AK record was reviewed to demonstrate that the required information was present and correctly interpreted. The batch data reports cited above were also used to demonstrate the confirmation of AK, the reconciliation of DQOs, the preparation of a WSPF, and the transmittal of data to WIPP (using the WWIS) for the S5000 debris waste stream. Although the processes were verified, the demonstration of AK confirmation, DQOs reconciliation, preparation of a WSPF, and the transmittal of data to WIPP for the S3000 homogeneous solid waste stream will be verified at a later date.

A draft WSPF #AECHDM (for debris waste only) and summarized characterization information related to it were reviewed to evaluate the objective evidence for reporting waste characterization information to WIPP. The form was completed using information from the various characterization processes. A WSPF will be submitted to CBFO prior to any shipments. The form will be

reviewed and approved by the CBFO when the waste stream has been fully characterized and the site is approved to ship waste to WIPP.

The audit teams concluded that these areas were adequate, satisfactorily implemented, and effective. The A-02-03 audit team documented one condition (Observation 1) that, if left uncorrected, could result in a future condition adverse to quality. This observation identified a situation where a procedural requirement for document reviews could not be verified. Since the requirement did not really apply to the current program, it was identified as an Observation only. In addition, the A-02-03 audit team offered two Recommendations, one for improvement of the WWIS data entry process (Recommendation 1), and one for improvement of the personnel training and qualification process (Recommendation 2).

The Observation and Recommendations are described in Sections 7.1 and 7.2.

5.2.2 Table B6-2 Solids and Soils/Gravel Sampling Checklist

Audit A-03-13 was performed to assess the ANL-E/CCP ability to perform physical characterization of Summary Category Groups S3000 homogeneous solid waste drums. The audit team examined the characterization activities associated with homogeneous solid waste. The audit team evaluated batch data reports from these characterization processes. The audit team evaluated the AK documentation associated with the S3000 waste stream but could not evaluate AK confirmation processes at the time of the audit.

S3000 sampling operations (e.g., specific container selection, sample collection, sample chain-of-custody, analytical laboratory sample analysis) will be evaluated at a later date and no S3000 waste will be shipped to WIPP until successful implementation and CBFO verification of these activities has occurred.

Soils/gravel waste streams were not included in the audit scope; therefore, no Summary Category Group S4000 waste will be characterized for disposal at WIPP until ANL-E/CCP procedures and processes have been audited and accepted by CBFO and a final audit report for those processes has been approved by the New Mexico Environment Department (NMED).

5.2.3 Table B6-3 Acceptable Knowledge Checklist

These audits were performed to assess the ability of ANL-E/CCP to characterize and certify Summary Category Groups S3000 homogeneous solid waste and S5000 retrievably stored debris waste streams. Items on the AK checklist are intended to ensure that the ANL-E/CCP has an AK process in place to:

- Train personnel in data collection requirements

- Assemble data into a coherent narrative detailing the waste generation and constituents
- Segregate waste into like waste streams
- Perform Resource Conservation and Recovery Act (RCRA) characterization of waste streams
- Confirm the acceptability of waste characterization using sampling and analysis
- Provide an auditable set of records to support waste characterization

The following procedures relating to the AK process were evaluated:

CCP-TP-002, *CCP Reconciliation of DQOs and Reporting Characterization Data*
CCP-TP-005, *CCP Acceptable Knowledge Documentation*
CCP-TP-030, *CCP TRU Waste Certification and WWIS Data Entry*

The AK summary documentation contained in the auditable record and container-specific information were reviewed. The traceability of the AK documentation was verified by selecting a random sample of reference documents. The AK summary document and the supporting documentation identify the waste stream and the point of generation for the containers. Several of the references were selected to ensure that they were available in the auditable record and to ascertain if the source documents supported the characterization determination. These sources included such items as published reports, process flow diagrams, interviews with site personnel concerning the use of hazardous materials, and the reports of previous waste characterization sampling and analysis efforts.

The AK process was evaluated by reviewing ANL-E/CCP AK Summary Report, CCP-AK-ANLE-001, *CCP Acceptable Knowledge Summary Report for Argonne National Laboratory-East Contact-Handled TRU Waste Facility Maintenance and Laboratory Operations.* The auditable record was searched to ensure that the cited references were available and that the reviewer could come to the same hazardous waste determination as presented in the AK summary. Information from the debris waste stream and the homogeneous solid waste stream was selected and the AK information was traced from the summary report through the AK source document reviews to the original records. The information for three debris waste drums (25969, 25577, and 25513) and two solid waste drums (24430 and 24919) was traced to verify the characterization as determined by the AK. The information was available in the record files and supported the AK determination.

The AK process includes provisions to identify information that conflicts with what is expected in a waste stream (confirmation processes) and a method by which these conflicts can be resolved. The audit team reviewed several examples of the resolution of discrepancies identified in the AK record and examined the process for dealing with prohibited items in the debris waste

stream. The discrepancy resolution procedure is CCP-QP-005, *CCP TRU Nonconforming Item Reporting and Control.*

Additional documentation supporting the AK summary documents and AK source document review summaries are contained in attachment 4 to support the entries in the B6-3 checklist.

CCP WSPF #AECHDM (for debris waste only) and the information related to it were reviewed to establish the objective evidence for reporting characterization information to WIPP.

The procedures used by the ANL-E/CCP to assemble, evaluate, document, and reconcile sampling and analysis results were reviewed for adequacy and implementation during the audit. The specific AK requirements evaluated included AK procedure content, the specific requirements relative to retrievably stored debris waste and homogeneous solid waste, and evaluation of the AK summary to ensure inclusion of all mandatory information required by the WAP.

Reports and records used to document the ANL-E/CCP AK basis were evaluated. Copies of pages used to evaluate the objective evidence are in Attachment 4. The reports were satisfactory and the records were being properly maintained as QA records. The list of AK documentation reviewed is included in Attachment 4.

The A-02-03 audit team identified three deficiencies that resulted in the issuance of CARs 02-087 and 02-088. In addition, the A-02-03 audit team offered two Recommendations for improvement of the AK procedure (Recommendation 5) and AK Summary Report (Recommendation 6).

Follow-up activities to verify corrective action of the identified issues was performed during audit A-03-13. As a result the ANL-E/CCP process of using sampling and analysis data to confirm the waste characterization designations made using AK was determined to be satisfactory. The ANL-E/CCP process used to resolve discrepancies and document changes was determined to be satisfactory. Waste characterization designations were confirmed by reviewing the batch data reports that provide documentation of the characterization activities.

The A-03-13 audit team evaluated closure documentation for the two CARs (CARs 02-087 and 02-088) identified during Audit A-02-03 and obtained sufficient objective evidence to allow closure. The audit team identified two conditions adverse to quality that were corrected during the audit. The first concern (CDA 3) identified that the Hazardous Constituents Form for Solids did

not contain all of the "D" codes listed in the AK Summary Report. The second concern (CDA 4) identified that a form (Waste Material Parameters, Prohibited Items Packaging Form) had entries reversed for Waste Matrix Codes and Waste Matrix Code Group.

To improve the data verification process, the audit team recommended (Recommendation 10) that CCP personnel initiating the Nondestructive Examination Project Level Validation Checklist and Summary note that the determination of the location of free liquids was not applicable if the quantity of free liquids was within the acceptable criteria.

The AK confirmation processes for the reconciliation of DQOs, and the sample design and data analysis processes are adequate with respect to the WAP requirements. Implementation and effectiveness of these processes will be further assessed prior to shipment of homogeneous wastes to WIPP.

The CARs, CDAs, and Recommendations are addressed in Sections 6.1, 6.2 and 7.2 and are noted on the B6-3 checklist as appropriate.

The audit team determined that the AK procedure and AK Summary Report were adequate and satisfactorily implemented, and that the AK development process was effective.

5.2.4 Table B6-4 Headspace Gas Checklist

These audits were performed to assess the ability of the ANL-E/CCP to characterize and certify Summary Category Groups S3000 homogeneous solid waste and S5000 retrievably stored debris waste streams. The audit team evaluated the ANL-E/CCP HSG sampling and analysis operations. Sampling and analysis activities were observed during sample collection and analysis operations. The CCP HSG sampling operation uses a mobile automated manifold system with gas chromatography/mass spectrometry (GC/MS) and gas chromatography/thermal conductivity detector (GC/TCD) methods. The processes and the evaluation methodology are described below.

The ANL-E/CCP procedures governing operation of the automated manifold system sampling and analysis activities and data review and validation included:

- CCP-TP-031, *CCP Headspace Gas Sampling Using Automated Manifold*
- CCP-TP-034, *CCP HSG Data Generation and Batch Data Reporting*
- CCP-TP-039, *CCP Preparing and Handling Waste Drums for Headspace Gas*
- CCP-TP-056, *CCP HSG Performance Demonstration Plan*

HGS sampling and analysis activities were evaluated by verifying the sampling equipment, observing sampling and analysis activities, and reviewing available

HGS batch data reports. Batch data reports were reviewed to evaluate sampling and analysis results against WAP requirements (batch data reports AEHSG01082002a and AEHSG01082602a for debris waste and AEHSG01012303a, and AEHSG01012403a for homogeneous solid waste). Documentation specific to these activities (e.g., calibration records, maintenance logbooks, and instrument logbooks) was reviewed to ensure that the mobile operations met QA requirements, as specified in the WAP. Copies of the applicable documentation reviewed are included in the batch data reports.

The audit team completed the B6-4 checklist while assessing implementation of the applicable procedures. Sampling and analysis operations were observed and records from these activities were evaluated for accuracy and conformance to requirements.

A review of the batch data reports verified compliance with the WIPP WAP requirements and that the ANL-E/CCP plans and procedures successfully implement requirements in both the technical and QA areas. Pages from the batch data reports that serve as objective evidence for implementation of activities required by the B6-4 checklist are included in Attachment 4.

The A-02-03 audit team identified five deficiencies that resulted in the issuance of CARs 02-089 and 02-090. The A-02-03 audit team identified two concerns that were corrected during the audit (CDA 1 and CDA 2) and documented two conditions (Observation 2 and Observation 4) that, if left uncorrected, could result in future conditions adverse to quality. In addition, the audit team offered one Recommendation (Recommendation 4) for improvement of the filter installation process.

The A-03-13 audit team identified one concern that was corrected during the audit. The concern (CDA 5) identified that the HSG operators were not properly recording temperature measurements in accordance with the procedure. The audit team also identified one condition that, if left uncorrected, could result in a future condition adverse to quality. This concern (Observation 5) deals with methods used for establishing the retention time windows for HSG analysis. The audit team provided two Recommendations for improvement of the HSG sampling and analysis process. The first recommendation (Recommendation 7) suggested that CCP regularly check the quality of nitrogen gas produced by a nitrogen generator. The second Recommendation (Recommendation 11) provided suggestions for improvement of the HSG batch data reports.

The CARs, CDAs, Observations, and Recommendations are addressed in Sections 6.1, 6.2, 7.1, and 7.2 and are noted on the B6-4 checklist.

Overall, the audit team concluded that the HSG sampling and analysis operations were adequate, satisfactorily implemented, and effective.

5.2.5 Table B6-5 Radiography Checklist

~~During Audit A-02-03, the audit team evaluated a DR/CT NDE unit for use on the S5000 retrievably stored debris waste. During evaluation of this DR/CT NDE system the audit team identified one deficiency that resulted in the issuance of CAR 02-092. In addition, the audit team identified one concern that was corrected during the audit, two Observations, and made one Recommendation for improvement of the DR/CT NDE process. Subsequent to Audit A-02-03, WTS elected to remove the DR/CT from use on CH TRU waste at ANL-E. CAR 02-092 has been closed based upon this decision and the CDA, Observations, and Recommendations related to the DR/CT system are not included in this report.~~

During Audit A-02-03, the audit team evaluated the procedures and observed the operation of a mobile WIT system, which used a DR/CT process. NDE operations were observed on September 10, 2002, and five batch data reports were reviewed, along with the associated data files. The completed training records for all of the DR/CT operators were reviewed to assure that proper training was completed in compliance with the requirements of the WAP.

The audit team identified one concern considered to be a condition adverse to quality that resulted in the issuance of a CBFO CAR (CAR 02-092). This condition was related to the failure of the DR/CT process to allow recording the audio/videotape of the operator analysis during real-time operation of the DR/CT equipment.

A concern was identified related to the method used by the Independent Technical Reviewer (ITR) to document acceptance and resolution of data package inconsistencies found during ITR review process. The ITR had recognized the deficiency but had failed to properly note his resolution activities. This concern was corrected during the audit (CDA 8).

The audit team identified two concerns related to conditions that, if uncorrected, could lead to a future condition adverse to quality. One concern was related to the method the DR/CT operators were using to make judgments for determination of waste items and materials (Observation 6). The other concern was related to the inconsistent methods the DR/CT operators use to document the location of prohibited items (Observations 7). In addition, the audit team offered a Recommendation (Recommendation 12) for improvement of the NDE process. The audit team recommended that the determination of waste materials would be more consistent if CCP developed an attenuation value table to be used as a guide. The audit team determined that the CCP DR/CT process procedures were adequate, satisfactorily implemented, and effective.

The CAR, CDA, Observations, and the Recommendation are addressed in Sections 6.1, 6.2, 7.1, and 7.2. The CCP elected to discontinue use of the DR/CT at ANL-E and replaced the equipment with a standard RTR process.

Approval of the DR/CT system is not being requested. The objective evidence noted on B6-5 checklist and provided in support of the audit reflects evaluation of the RTR system as the final system of choice at ANL-E.
Objective evidence for closure of the CAR and the CDA is provided in Attachment 3.

Audit A-03-13 was performed to assess the ability of ANL-E/CCP to characterize Summary Category Groups S3000 homogeneous solid waste and S5000 retrievably stored debris waste streams with a standard RTR system. The ANL-E/CCP procedures governing the mobile RTR operations included:

- CCP-TP-045, *CCP RTR #5 Radiography Inspection Operation Procedure*
- CCP-TP-028, *CCP Radiographic Test and Training Drum Requirements*

The ANL-E/CCP RTR operations are performed using a mobile RTR system. The Table B6-5 (radiography) checklist was completed by assessing operating procedure CCP-TP-045, *CCP RTR #5 Radiography Inspection Operation Procedure.* The audit team reviewed RTR batch data reports, videotape records of the operations, and the resulting documentation. RTR testing batch data reports AERTR001, AERTR002, and AERTR003 are included in Attachment 4. Training course material and the RTR test drum evaluations were reviewed for adequacy and acceptability.

The RTR process was witnessed and batch data reports and RTR videotapes were selected and evaluated. RTR daily image quality checks were evaluated in accordance with the WAP requirements and as described in the RTR procedure. The procedure was determined to be acceptable. RTR results were being properly reported on standard forms and were being adequately reviewed, as required by the WAP. Copies of the forms are included in the batch data reports listed in Attachment 4.

The audit team concluded that the ANL-E/CCP RTR procedures and processes were adequate, satisfactorily implemented, and effective. The audit team offered one Recommendation (Recommendation 9) for improvement of the NDE process.

The Recommendation is described in Section 7.2 and is noted on the B6-5 checklist.

5.2.6 Table B6-6 VE Checklist

Audit A-02-03 was performed to assess the ANL-E/CCP VE process and the CCP ability to characterize Summary Category Group S5000 retrievably stored debris waste streams. The VE process was evaluated to determine the effectiveness of VE as a confirmation of the NDE process and as a characterization method that can be used in lieu of NDE. VE performed as a

confirmation of NDE or in lieu of NDE is recorded on audio/videotape and the results are documented on standard forms in accordance with procedure CCP-TP-013, *CCP Waste Visual Examination and Packaging.*

ANL-E/CCP VE activities were evaluated by observing examination operations, reviewing videotapes, and evaluating the VE batch data reports. The visual examination of drum AE27229 was observed by the audit team. The audit team reviewed testing batch data reports AEMover051402a, AEMover071602a, AEMover042602a, and AEMover072902a. These batch data reports are included in Attachment 4.

Data generated from the VE activities were compiled and reviewed. The batch data reports were reviewed to ensure that the information collected, using the VE procedure, meet the WAP requirements. In addition, the batch data reports were reviewed to verify that the independent technical review, the technical specialist review, and the QA Officer review were conducted as defined in the procedure. Procedures and processes were concluded to be adequate, satisfactorily implemented, and effective.

The training course content for operators and VE experts was reviewed to verify that all WAP requirements were included. Training files were reviewed for VE experts and operators to verify that individuals responsible for performing the visual examination of drums had been properly trained and qualified.

The A-02-03 audit team identified one deficiency that resulted in the issuance of a condition adverse to quality (CAR 02-095). The audit team also identified one condition (Observation 3) that, if left uncorrected, could lead to a future condition adverse to quality. In addition, the audit team offered one Recommendation (Recommendation 3) for improvement of the VE process. These conditions are addressed in Sections 6.1, 7.1 and 7.2, and noted on the B6-6 checklist.

The A-03-13 audit team evaluated closure documentation for the condition adverse to quality (CAR 02-095) identified during Audit A-02-03 and determined that the previous VE issue was resolved and there was sufficient objective evidence to allow closure.

The A-03-13 audit team evaluated the VE operations for S3000 homogeneous solid waste at ANL-E/CCP during the week of February 10-13, 2003. The VE operations for evaluation of homogeneous solid waste were conducted in a radiological containment tent. VE operations were observed on February 12, 2003, for the examination of two drums (AE24456 and AE24436). Nine batch data reports (AEMover013103a, AEMover013103b, AEMover013103c, AEMover013103d, AEMover013103e, AEMover013103f, AEMover013103g, AEMover013103h, and AEMover013103i) and their associated videotape records were also examined. The completed training records for the VE experts

and VE operators were reviewed to assure that proper training was completed in compliance with the requirements of the WAP.

The audit team identified two conditions that, if left uncorrected, could result in a future condition adverse to quality. The first concern (CDA 6) dealt with the improper recording of the actual date that VE was performed. The e-QA system records the date that data is entered into the system instead of the date the VE was performed. The second concern (CDA 7) deals with the VE operators properly documenting in the VE data packages the contents of the drums as shown in the videotape. The audit team provided one Recommendation (Recommendation 8) that identified several suggested improvements to be considered while preparing the audio/ videotape records of the VE process.

Additional information regarding the evaluation of the VE operations at ANL-E is contained in the B6-6 checklist in Attachment 4. The audit team concluded that the ANL-E/CCP VE process used for S5000 waste was adequate, satisfactorily implemented, and effective. The audit team determined that the VE process used for S3000 waste was adequate, satisfactorily implemented, and effective.

The CAR, CDAs, Observation, and Recommendations are addressed in Sections 6.1, 6.2, 7.1, and 7.2 and are noted on the B6-6 checklist.

6.0 SUMMARY OF DEFICIENCIES

6.1 Corrective Action Reports

During the audit, the audit team may identify conditions adverse to quality (CAQ) and document such conditions on corrective action reports (CARs).

Condition Adverse to Quality (CAQ) – Term used in reference to failures, malfunctions, deficiencies, defective items, and nonconformances.

Significant Condition Adverse to Quality – A condition which, if uncorrected, could have a serious effect on safety, operability, waste confinement, TRU waste site certification, compliance demonstration, or the effective implementation of the QA program.

Five WAP-related CARs (described below) were initiated during audit A-02-03. Those conditions adverse to quality have been corrected by ANL-E and CCP (see Attachment 2).

6.1.1 CBFO CAR 02-087

Adequacy issues associated with the AK procedure CCP-TP-005, Rev. 7, *CCP Acceptable Knowledge Documentation:*

Changes were required to clarify the AK procedure regarding AK reevaluation and AK confirmation as identified in this section. In addition, several other changes were needed within the procedure, as follows:

- The CCP program attempted to document, categorize, roadmap, and present AK information using several checklists and attachments. While this approach is a good way to roadmap information, the information presented in the attachments was not sufficiently summarized in the AK Summary. As a result, the AK Summary was not stand alone, in that the user requires not only the attachments, but all of the references in the attachments to derive an understanding of the AK characterization results. The AK Summary must include sufficient discussion to justify conclusions included therein.

Adequacy issues associated with the ANL-E AK Summary Report, CCP-AK-ANL-E-001, Rev. 5, were as follows:

- There was insufficient justification in the AK Summary Report for assigning or not assigning hazardous waste numbers. The appropriate conclusions derived from the supporting reference documents needed to be included.
- The defense waste determination needed to be clarified, particularly with respect to co-mingling activities.
- The AK record did not include cellulosics, plastics, rubber, and ferrous/non-ferrous waste material parameter information compiled from the drum-specific data.

6.1.2 CBFO CAR 02-088

The CCP had failed to correctly interpret and implement the requirements of DOE/WIPP-02-3122 (CH WAC), Rev. 0, Appendix A. Impacted were the AK procedure and the ANL-E Waste Summary Report. The audit team identified the following issues related to the AK Procedure, CCP-TP-005, Rev. 7:

- The CH WAC states that AK, measurement, and/or combinations thereof may be used to characterize waste. However, this statement does not relieve the site/CCP of performing adequate AK data assembly and compilation. It is apparent that some have interpreted the statement to mean that because NDA measurements are being performed, less or no AK data compilation is required, but this is not the case and is not consistent with commitments made by DOE in either the WAP or CCA and associated attachments. The procedure needed to be revised to ensure that activities are not performed which promote (either intentionally or unintentionally) inadequate AK compilation. AK must be completed regardless of data quality or availability of isotopic ratios for all

information; all available isotopic information must be reported even if it applies to only a few of the 10 WIPP-tracked isotopes.

- Comparability states that "comparison of measured data with AK derived or based values, as applicable, provides a means to assess comparability on a waste stream basis." Section 4.5, or another appropriate section of the procedure, needed to be revised to reflect the need to perform qualitative and/or quantitative comparisons of AK-derived radiological information and information obtained through measurement (depending upon the nature of AK data assembled).

- The procedure did not reflect AK-related data collection requirements of the CH WAC. If the AK record does not support generation or presentation of the information, this needed to be so stated in the AK Summary. These CH WAC AK requirements include:

  1) Waste identification and categorization schemes relevant to the isotopic composition of waste and description of isotopic composition of waste streams.
  2) Physical/chemical waste composition that could affect isotopic distribution.
  3) Numerical adjustments applied to derive isotopic composition.
  4) Isotopic ratio determination for the 10 WIPP-tracked radionuclides and, if applicable, the radionuclides that comprise 95% of the waste.

6.1.3 CBFO CAR 02-089

Procedure CCP-TP-031, *CCP Headspace Gas Sampling Using Automated Manifold*, did not adequately addressed WAP requirements in the following areas:

- The procedure referenced equations 8 and 10 for calculation of concentrations, but did not specify the analytes calculated by each equation.
- A default value of 0.01 for methane was assigned as the method detection limit (MDL), however assignment of default values was not addressed.
- No instructions existed for generating the record that contains the lot number and cylinder number for bromofluorobenzene (BFB).

6.1.4 CBFO CAR 02-090

HSG sampling and analysis procedures were inadequate in the following areas:

- Real-time equipment blanks were not collected through all of the sampling equipment.
- The detection limit reported for analytes was not adjusted to accommodate the dilution shown in Sample #02064-07, of batch AEHSG01082602a, which had a dilution factor of 12.782. In addition, procedure CCP-TP-034 did not clearly define methods for sample dilution.

6.1.5 CBFO CAR 02-092

An audio/videotape of the operator analysis (scan) of the data was not produced during real-time operation of the DR/CT. The audio record was created after the DR/CT examination by the operator, reading from the radiography data form. The audio/videotape is required to be produced while the operator is analyzing the data to identify the waste items and estimate waste management program (WMP) weights. (This CAR was related to the DR/CT system which has been removed from service at ANL-E)

~~6.1.5~~6.1.6 CBFO CAR 02-095

During VE, prohibited items were being removed, but the weights of the items were not being deducted from the total waste weight and waste material parameter (WMP) weights reported in e-QA (which is reported to WWIS). The waste weight and WMP weights are required WWIS data. The weight data being reported to the WWIS, therefore, was incorrect.

6.2 Deficiencies Corrected During the Audits (CDAs)

During the audit, the audit team may identify CAQs. Using the following definitions, the audit team members and the Audit Team Leader (ATL) evaluate the CAQs to determine if they are significant:

CAQ – Term used in reference to failures, malfunctions, deficiencies, defective items, and nonconformances.

Significant CAQ – A condition which, if uncorrected, could have a serious effect on safety, operability, waste confinement, TRU waste site certification, compliance demonstration, or the effective implementation of the QA program.

Once a determination is made that the CAQ is not significant, the audit team member, in conjunction with the ATL, determines if the CAQ is an isolated case requiring only remedial action and therefore can be corrected during audit (CDA).

Upon determination that the CAQ is isolated, the audit team member, in conjunction with the ATL, evaluates/verifies any objective evidence/actions submitted or taken by the audited organization and determines if the condition was corrected in an acceptable manner. Once it has been determined that the CAQ has been corrected, the ATL categorizes the condition as a CDA according to the definition below.

CDAs – Isolated deficiencies that do not require a root cause determination or actions to preclude recurrence. Correction of the deficiency can be verified prior to the end of the audit. Examples include one or two minor changes required to correct a procedure (isolated), one or two forms not signed or not dated (isolated), and one or two individuals that have not completed a reading assignment.

The audit teams identified seven WAP-related conditions adverse to quality that were considered isolated deficiencies and were corrected during the audits:

CDA 1

The WAP requires the use of American Society for Testing and Materials (ASTM)Type I or II water to humidify purge gas for the HSG manifold. The water used was obtained from the WIPP site with only reported values for resistivity. No supporting documentation was available and characterization by resistivity only did not comply with the ASTM standard. NCR-CCP-0003-02, Rev. 0, was written to document the nonconformance. The NCR assessed the impact on the collected HSG data, and technical justification was written to explain the validity of the data. Additionally, new water was ordered from a vendor and certifications were shown to the auditors during the audit. The water was ASTM Type I, with all associated documentation.

CDA 2

The HSG procedure required the facility QA officer (FQAO) to verify that the completeness QAO has been met. The procedure did not provide instructions for how, when, and by whom completeness is calculated. CCP revised the procedure and deleted the requirement for the FQAO to review completeness. This verification is required during project level V&V. The audit team verified completion of the corrective action during the audit.

CDA 3

CCP-TP-005, Attachment 5, "Hazardous Constituents Form for Solids," did not contain all of the "D" codes listed in the AK Summary Report. In addition, Attachment 5 was not properly paginated and did not have the waste stream name identified on each page. The documents were revised and the audit team verified the corrective actions taken.

CDA 4

The audit team identified that a form (CCP-TP-005, Attachment 6, "Waste Material Parameters, Prohibited Items Packaging Form") had entries for the Waste Matrix Code and Waste Matrix Code Group reversed on the form. The document was corrected and was verified by the audit team.

CDA 5

In data package AEDRCT073102, the replicate scan and independent observation are discrepant in the number of prohibited items identified with respect to the original scans. The ITR did not document the resolution of these discrepancies on the NDE Generation Level Data Review Validation and Verification Checklist as part of his review. The reconciliation was documented on the NDE Generation Level Data Review Validation and Verification Checklist.

CDA 6

VE for homogeneous solids waste was first performed on 1/29/03. The batch data reports for the 10 drums that were processed through VE on this date showed a "VE examination date" of 1/30/03 and, in one case, 1/31/03. The VE records were revised by adding a note in the "description of contents" section of the VE data sheet to accurately state the VE date and explain what had happened. In addition, direction was given to the VE operators to complete drum routing in e-QA for homogeneous solids drums on the day the VE is performed. The audit team verified completion of the corrective actions.

CDA 7

During VE of container AE 24418, a small mesh (screen) triangle was on top of the liner lid. This mesh triangle was placed in the annulus between the drum and liner during VE but its existence was not recorded on the audio/videotape or the VE data sheet. The batch data report was revised to address the missed item. This incident was considered to be isolated. The audit team verified the corrected batch data report.

CDA 8

In data package AEDRCT073102, the replicate scan and independent observation both have discrepancies in the number of prohibited items identified with respect to the original scans. The ITR did not resolve these discrepancies as part of his review. The reconciliation of these discrepancies was documented on the NDE Generation Level Data Review Validation and Verification Checklist. In addition, NCR-ANLE-0136-02 and NCR-ANLE-0135-02 documented the proper, reconciled number of prohibited items. The corrective action was verified

by the audit team. (The issue identified and corrected was related to the DR/CT system which has been removed from service at ANL-E)

7.0 SUMMARY OF OBSERVATIONS AND RECOMMENDATIONS

7.1 Observations

During the audit, the audit team may identify potential problems or suggestions for improvement that should be communicated to the audited organization. The audit team member, in conjunction with the ATL, evaluates these conditions and classifies them as Observations or Recommendations using the following definitions:

Observation – A condition that, if not controlled, could result in a CAQ.

Recommendations – Suggestions that are directed toward identifying opportunities for improvement and enhancing methods of implementing requirements.

Once a determination is made, the audit team member, in conjunction with the ATL, categorizes the condition appropriately.

Observation 1

The CCP document control procedure specifies that CBFO be notified within five days of significant document changes (non-administrative changes that affect performance criteria, and changes that affect data quality) that require CBFO approval. This requirement is imposed upon sites that have been certified. There is currently no method in use that can provide objective evidence that this requirement has been met.

Observation 2

A HSG batch data log (electronic notebook) requires the use of a "Users Manual for HGAS II Manifold System," to identify data elements recorded in the notebook. The HSG procedures do not reference the use of, or provide direction for use of, the user manual.

Observation 3

VE batch data report AEMover071602 for the examination of container AE25972 is incomplete. The videotape showed that a gas cylinder was found that contained a black powder. This black powder was not described in the data package.

Observation 4

The e-QA review forms for technical supervisor and QAO are pre-filled (computer-generated) with responses for all review activities. This does not ensure that the appropriate reviews have been done.

Observation 5

During HSG sampling and analysis, retention time windows are empirically set rather than using data from previous analyses. SW-846, Method 8260B, requires retention time windows be established statistically from experimental data.

Observation 6

NDE operators use attenuation information from the computed tomography (CT) slices to identify the waste items and materials. The operators determine the various materials utilizing the known density of the barrel wall and the liner wall as a comparison. This method may not be sufficient to assure all materials will be properly categorized. (This observation is related to the DR/CT system which has been removed from service at ANL-E)

Observation 7

Procedure CCP-TP-012, Section 4.7.1, requires that when a prohibited item is found, the quantity, location, and type of the item is recorded. The item location is not always recorded. (This Observation is related to the DR/CT system which has been removed from service at ANL-E)

7.2 Recommendations

The following 12 WAP-related Recommendations were provided to the ANL-E/CCP management for consideration.

Recommendation 1

The CCP has implemented on-the-job-training (OJT) at ANL-E for providing direction for data entry into the WWIS. This additional training provides direction for locating data in source documents, as well as placement of that data in the correct WWIS data fields. It is recommended that this OJT be considered at the other CCP sites.

Recommendation 2

It is recommended that CCP management re-evaluate and determine the need for personnel performing audits of the AK process to be trained in accordance with the same requirements as personnel that are assigned the responsibility for compiling and managing AK information (see CCP-QP-002, Rev. 10, Section 4.2).

Recommendation 3

During VE operations, the scale readout is not captured on the videotape. It is recommended that the scale readout be captured on the videotape when an item is being weighed.

Recommendation 4

Procedure CCP-TP-039, Section 4.3.5, states that Locktite® is applied to the first three threads of the new filter. In practice, Locktite® is applied to the operator's glove and smeared on the filter threads (on all of the filter, including the bottom). It is recommended that the Locktite® application be better controlled to be in compliance with the intent of the procedure.

Recommendation 5

The audit team recommends the following improvements to the AK Procedure (CCP-TP-005):

- Assign the confirmation data review to the SPM.
- Clarify the guidance for discrepancy resolution.
- Clarify methods for tracking containers that the NDE process identifies with a different waste matrix code (WMC). In addition, the AK accuracy report should take into account those containers.
- Remove Table 1 and the associated documentation from the procedure.

Recommendation 6

The audit team recommends the following improvements to the ANL-E AK Summary Report (CCP-AK-ANL-E-001):

- The radionuclide table in Appendix 3 should be modified to reflect the currently required format.
- The AK summary should cite the reference for the WMC assignment workup calculations.
- The AK summary should include a detailed discussion of the specific processes by which waste was generated and specifically correlate waste to waste generating processes, even if waste can be correlated to buildings.

- In the AK summary, remove the word "often" from the phrase "it is often anticipated that individual containers will often be outside of the range" (out of the AK assigned WMC range).

Recommendation 7

HSG operations utilize a nitrogen generator to produce the required nitrogen gas. Although the nitrogen generated was checked on 2/13/02, there is no requirement in place to recheck the quality of nitrogen produced on a regular basis. It is recommended that the nitrogen produced be verified on a regular basis.

Recommendation 8

The following recommendations were offered for improvement of the S3000 VE Audio/Visual Record:

1. The videotape should not be stopped during filter replacement. This operation does not consume much time (less than 2 minutes). Continuing the tape would provide a complete record of the VE from lid removal to replacement.
2. An electronic date and time stamp should be added to the videotape image of the VE examination.
3. CCP should consider preparing an operator aid to prompt the VE Expert to narrate all required information on the videotape (e.g., WMPs)
4. CCP should investigate methods of improving the audio quality of the videotape in the solids VE area.

Recommendation 9

CCP should consider having the RTR test drum prepared by personnel other than the RTR subject matter expert and technical supervisor. Only one of the CCP personnel assigned to the RTR process did not participate in preparation of the test drum.

Recommendation 10

On the Nondestructive Examination Project-Level Validation Checklist and Summary (CCP-TP-001, Attachment 3), it is recommended that N/A be recorded in the second bullet under "NDE Tasks," if the criterion for amount of free liquid is met.

Note: The second bullet reads "If yes, location of free liquid"

Recommendation 11

It is recommended that the following items be corrected in the HSG batch data reports:

1. Batch data report HSG data sheets and HSG On-line Control Standard (OCS) data sheets produced in the e-QA lists compounds/analytes inconsistently.
2. It is recommended that response factor (RF) and relative response factor (RRF) be defined. At present these terms are used interchangeably.
3. The link to OCS/OCS duplicate, in the Project Level Review Checklist (III Quality Assurance Objectives, first bullet) is incorrect.
4. The response to question #5 of the Project-Level Review Checklist (II Data Management for Headspace Gas Analysis) should be appropriate for the actual language of the question. At present, when no NCRs have been issued, the question is answered with a "Yes." The response should be "No."

Recommendation 12

When using the attenuation function to analyze CT slices (density determinations for various materials), NDE operators do not have a guide to ensure consistency in their determination of waste materials. It is recommended that an attenuation value table be developed to be used as a guide for making the necessary determinations. (This recommendation was related to the DR/CT system which has been removed from service at ANL-E)

8.0 LIST OF ATTACHMENTS

Attachment 1: Personnel Contacted During Audit A-02-03
Attachment 2: Personnel Contacted During Audit A-03-13
Attachment 3: Corrective Action Supporting Documentation
Attachment 4: Objective Evidence for Both Audits
Attachment 5: ANL-E/CCP Implementing Procedures, Audit A-02-03
Attachment 6: ANL-E/CCP Implementing Procedures, Audit A-03-13

PERSONNEL CONTACTED DURING AUDIT A-02-03				
NAME	**TITLE/ORG**	**PRE AUDIT MEETING**	**CONTACTED DURING AUDIT**	**POST AUDIT MEETING**
Anderson, Jonathan	CCP Documents	X	X	X
Beallis, Pat	PFS/WMO		X	
Becker, David	CCP AK	X		
Bernardi, Richard	CCP Technical Specialist		X	X
Bickerstaff, Sheila	CCP Record Custodian	X	X	X
Billet, R. A.	CCP Site Opp Mgr.		X	
Bindokas, Tony	ANL-E/DOE WM Program Manager	X		
Bray, Bill	ANL-E Facility Manager	X		
Burns, Tim	LANL CCP Manager	X	X	X
Castillo, Rick L.	CCP VE Operator	X	X	
Clarke, Charles J.	ANL-E Project Manager	X		
Colglazier, Robin	PFS WMO		X	
Cooney, Jo	ANL-E Health Physics	X		
Coomer, Patricia	CCP Operator		X	X
Crawford, Beverly	CCP SPM	X	X	X
Djordjevic, Sinisa	CCP SQA		X	
Elkins, Jeanne	CCP SPQAO		X	
Erdmann, Nancy	ANL-E Records	X	X	
Fisher, A. J.	CCP QA Manager	X	X	X
Freeze, Deborah	CCP Training Specialist	X	X	X
Frego, James	ANL-E WMOTPM	X	X	X

PERSONNEL CONTACTED DURING AUDIT A-02-03				
NAME	**TITLE/ORG**	**PRE AUDIT MEETING**	**CONTACTED DURING AUDIT**	**POST AUDIT MEETING**
Geller, Jay D.	ANL-E QA Engineer	X	X	
Gutierrez, Ben	CCP AK	X	X	X
Haar, Dave	CCP Deputy Manager	X	X	
Hecker, Daniel	ANL-E Waste Specialist	X		
Hylka, Terry	PFS/WMO		X	
Jenson, Shelley	CCP Facility Records Custodian	X		X
Joshi, Kaushik	ANL-E/DOE Project Mgr	X		X
Klebe, Micheal	Observer, State of Illinois			X
Klover, Steve	CCP SPQAO	X	X	X
Krause, Tom	Benchmark AK	X	X	X
Kroeger, Ed	ANL-E WMO		X	X
Kulma, Gregg	ANL-E Env. Engineer	X		
Luck, Bill	ANL-E Legal	X		
Malhotra, Rab	ANL-E Associate Director	X		X
Martin, Forrest	CCP WIT Operator		X	
Melton, Jesse L.	HSG Sr. Scientist		X	
Mojica, Ron J.	VE Operator	X	X	X
Nelson, Bob	ANL-E Contractor	X		
Padilla, Harvey	CCP HSG		X	
Porter, Larry	CCP e-QA	X	X	X
Redman, Gary	ANL-E Mechanic		X	

PERSONNEL CONTACTED DURING AUDIT A-02-03				
NAME	**TITLE/ORG**	**PRE AUDIT MEETING**	**CONTACTED DURING AUDIT**	**POST AUDIT MEETING**
Riggs, Matt	CCP WWIS Data Entry		X	
Robson, Judith	ANL-E Records Clerk	X		X
Rock, Cynthia	ANL-E/WMO	X	X	X
Root, Wesley F.	CCP/WTS Operations	X		
Romo, Abraham	VE Operator	X	X	X
Rose, Steve	CCP OPPS	X	X	
Ruehr, Marlene	Input Clerk		X	X
Ruppert, Gloria	ANL-E WMO		X	X
Sholeen, Charlotte	ANL-E WMO	X		
Taggart, Dan	CCP Technical Support	X		
Walker, L. J.	CCP VE Operator		X	
Williams, Michael	HSG Technical Specialist	X	X	X

PERSONNEL CONTACTED DURING AUDIT A-03-13				
NAME	TITLE/ORG	PRE AUDIT MEETING	CONTACTED DURING AUDIT	POST AUDIT MEETING
Aveson, Kent	CCP VPM	X	X	X
Beallis, Pat	WMO Mechanic	X		
Becker, David	CCP AK	X	X	X
Bernardi, Richard	CCP Technical Specialist		X	X
Bickerstaff, Sheila	CCP Record Custodian	X	X	X
Billet, R. A.	CCP Site Opp Mgr.	X	X	X
Bramblett, Dick	APNEA Tech. Consultant		X	
Bray, Bill	ANL-E Facility Manager	X		X
Buss, Ken	WMO HP		X	
Burns, Tim	LANL CCP Manager	X	X	X
Colglazier, Robin	PFS WMO		X	
Cooney, Jo	ANL-E Health Physics			X
Coomer, Bruce	CCP ITR	X	X	X
Erdmann, Nancy	ANL-E Records	X	X	
Ewing, Steve	RTR Technical Spec		X	
Fesmire, Courtland	SPM	X	X	X
Frantini, Judy	WMO Mechanic	X		
Frego, James	ANL-E WMOTPM	X	X	X
Geller, Jay D.	ANL-E QA Engineer	X	X	X
Gilbert, Patsy	CCP			X
Haar, Dave	CCP Deputy Manager	X	X	X
Hecker, Daniel	ANL-E Waste Specialist	X		X

PERSONNEL CONTACTED DURING AUDIT A-03-13				
NAME	TITLE/ORG	PRE AUDIT MEETING	CONTACTED DURING AUDIT	POST AUDIT MEETING
Hedahl, Tim	CCP Manager	X		X
Hirsch, Joseph J.	WMO HP		X	
Hylka, Terry	PFS/WMO		X	
Joshi, Kaushik	ANL-E/DOE Project Mgr	X		X
Klein, Gary	CCP WIT Operator	X	X	X
Klover, Steve	CCP SPQAO	X	X	X
Krause, Tom	Benchmark AK	X	X	X
Kroeger, Ed	ANL-E WMO		X	X
Malhotra, Rab	ANL-E Associate Director	X		X
Maly, Aziz	ANL-E HP	X		
Medlin, Beverly	HSG Operator		X	X
Melton, Jesse L.	HSG Sr. Scientist	X	X	X
Mojica, Ron	VE Operator			X
Mojica, Tommy	VE Operator/Expert	X	X	X
Nelson, Bob	ANL-E Contractor	X		
Nisius, Dave	WIT SME		X	X
Padilla, Harvey	CCP HSG		X	X
Pennala, Eric	MCS-GM	X		
Pooler, Fred	RTR Operator		X	
Porter, Larry	CCP e-QA	X	X	X
Ray, Willis D.	WMO Foreman	X		X
Robson, Judith	ANL-E Records Clerk	X		X

PERSONNEL CONTACTED DURING AUDIT A-03-13				
NAME	TITLE/ORG	PRE AUDIT MEETING	CONTACTED DURING AUDIT	POST AUDIT MEETING
Rock, Cynthia	ANL-E/WMO			X
Root, Wesley F.	CCP/WTS Operations	X		
Romo, Abraham	VE Operator	X	X	X
Rose, Steve	CCP OPPS	X	X	
Ruehr, Marlene	WMO		X	
Sharif, Farok	CCP Manager	X		X
Schmidt, David	CCP WIT Operator/ITR		X	X
Sholeen, Charlotte	ANL-E WMO	X		
Smith, E. Lee	RTR ITR		X	
Taggart, Dan	CCP Technical Support		X	
VanMeighem, Jeff	VPM	X	X	X
Vie, James A.	WMO HP		X	
Walker, L. J.	CCP VE Operator		X	X
Wallace, Steven	CCP APNEA SME		X	X
Webb, Marsha	SPQAO	X		
Whitworth, Julia	AKE		X	X
Williams, Andre	WMO Mechanic	X		
Williams, Michael	HSG Technical Specialist	X	X	X

ANL-E/CCP IMPLEMENTING PROCEDURES (A-02-03)		
Number of Documents	**Procedure Number/Rev. No.**	**DOCUMENT TITLE**
1	CCP-PO-002	CCP Transuranic Waste Certification Plan
2	CCP-PO-007	CCP/ANL-E Interface Document
3	University of Chigago/WTS Contract, Appendix B	Argonne National Laboratory-East (ANL-E) Statement of Work for Characterization of ANL-E TRU Waste
4	CCP-QP-002	CCP Training and Qualification Plan
5	CCP-QP-004	CCP Corrective Action Management
6	CCP-QP-005	CCP TRU Nonconforming Item Reporting and Control
7	CCP-QP-006	CCP Corrective Action Reporting and Control
8	CCP-QP-008	CCP Records Management
9	CCP-QP-009	CCP Work Control Process
10	CCP-QP-010	CCP Document Preparation and Approval
11	CCP-QP-011	CCP Notebooks & Logbooks
12	CCP-QP-028	CCP Records Filing, Inventorying, Scheduling, and Dispositioning
13	CCP-TP-001	CCP Project Level Data Validation and Verification
14	CCP-TP-002	CCP Reconciliation of DQOs and Reporting Characterization Data
15	CCP-TP-003	CCP Sampling Design and Data Analysis for RCRA Characterization
16	CCP-TP-005	CCP Acceptable Knowledge Documentation
17	CCP-TP-013	CCP Waste Visual Examination and Repackaging
18	CCP-TP-014	CCP Prohibited Items Removal and Repackaging
19	CCP-TP-028	CCP Radiographic Test and Training Drum Requirements
20	CCP-TP-030	CCP WWIS Data Entry and TRU Waste Certification
21	CCP-TP-031	CCP Headspace Gas Sampling Using Automated Manifold
22	CCP-TP-034	CCP HSG Data Generation and Batch Data Report
23	CCP-TP-039	CCP Preparing and Handling Waste Drums for Headspace Gas
24	CCP-TP-056	CCP HSG Performance Demonstration Plan
25	CCP-TP-060	CCP Container Management at Argonne National Laboratory-East
26	CCP-QP-018	CCP Management Assessments
27	CCP-QP-019	CCP Quality Assurance Reporting to Management
28	CCP-QP-020	CCP Independent Assessments
29	CCP-QP-021	CCP Surveillance Program
30	CCP-PO-001	CCP Transuranic Waste Quality Assurance Characterization Project Plan (QAPjP)
31	CCP-PO-008, Rev. 3	CCP Quality Assurance Administrative Program

ANL-E/CCP IMPLEMENTING PROCEDURES (A-03-13)		
Number	**Procedure Number/Rev**	**DOCUMENT TITLE**
1	CCP-PO-002,	CCP Transuranic Waste Certification Plan
2	CCP-PO-007	CCP/ANL-E Interface Document
3	University of Chigago/WTS Contract/Statement of Work	Argonne National Laboratory-East (ANL-E) Statement of Work for Characterization of ANL-E TRU Waste
4	CCP-TP-001,	CCP Project Level Data Validation and Verification
5	CCP-TP-002,	CCP Reconciliation of DQOs and Reporting Characterization Data
6	CCP-TP-003,	CCP Sampling Design and Data Analysis for RCRA Characterization
7	CCP-TP-005,	CCP Acceptable Knowledge Documentation
8	CCP-TP-013	CCP Waste Visual Examination and Repackaging
9	CCP-TP-028	CCP Radiographic Test and Training Drum Requirements
10	CCP-TP-031	CCP Headspace Gas Sampling Using Automated Manifold
11	CCP-TP-034	CCP HSG Data Generation and Batch Data Report
12	CCP-TP-039	CCP Preparing and Handling Waste Drums for Headspace Gas
13	CCP-TP-041	CCP Preparing and Handling Waste Drums for Visual Examination
14	CCP-TP-045	CCP RTR #5 Radiography Inspection Operation Procedure
15	CCP-PO-001	CCP Transuranic Waste Quality Assurance Characterization Project Plan (QAPjP)
16	CCP-PO-008, Rev. 3	CCP Quality Assurance Administrative Program