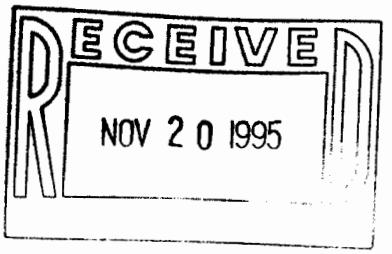
DOE F 1325.8

United States Government **Department of Energy**

memorandum

Carlsbad Area Office
Carlsbad, New Mexico 88221

DATE: NOV 0 9 1995



REPLY TO ATTN OF: CAO:NTP:RLB 95-3103

SUBJECT: Audit Report A-95-02

TO: Jerry Wells, DOE-ID

The Carlsbad Area Office (CAO) performed an audit of the Idaho National Engineering Laboratories (INEL) TRU Waste Characterization activities at the INEL on August 28 through September 1, 1995.

The audit team concluded that the INEL TRU Waste Characterization quality assurance (QA) program was adequately established and effectively implemented with the exception of the items noted in Section 6 of the attached report. Argonne National Laboratory - West does not have an adequate or effectively implemented QA program.

Eleven Corrective Action Reports were previously transmitted to you under separate cover. Please respond in writing by November 29, 1995 to Observations 1-5; 8-14 and 16.

If there are any questions concerning this report, please contact me at (505) 234-7484.

R. Dennis Brown, Manager
Quality Assurance

Attachment

printed on recycled paper

951109

cc w/attachment:
D. Tonkay, DOE-EM34
R. Stoneking, DOE-EM34
K. Hunter, CAO
D. Watkins, CAO
M. Matthews, CAO
R. Bisping, CAO
R. Hicks, CAO/CTAC
J. Benetti, EPA-LV/ORIA
R. Rosnick, EPA-OSW
B. Walker, EEG
S. Zappe, NMED
G. Hayes, INEL-LITCO
M. Connolly, INEL-LITCO
D. Pound, INEL-LITCO
T. Clements, INEL-LITCO

U.S. DEPARTMENT OF ENERGY
CARLSBAD AREA OFFICE

AUDIT REPORT

OF

IDAHO NATIONAL ENGINEERING LABORATORY

IDAHO FALLS, IDAHO

AUDIT A-95-02

AUGUST 28 - SEPTEMBER 1, 1995

TRU WASTE CHARACTERIZATION ACTIVITIES

Prepared by: R. Hicks **Date:** 11/9/95
Richard Hicks, DOE-CAO/CTAC
Audit Team Leader

Approved by: M. Matthews **Date:** 11/9/95
M. Matthews
Team Leader, National TRU Program

Approved by: R Dennis Brown **Date:** 11/9/95
R. Dennis Brown, DOE-CAO
CAO QA Manager

1.0 EXECUTIVE SUMMARY

The Carlsbad Area Office (CAO) conducted Audit A-95-02 of the INEL TRU Waste Characterization Program (TWCP) at Idaho Falls, Idaho August 28 through September 1, 1995. The audit also examined activities conducted by Argonne National Laboratories-West (ANL-W) in support of the INEL TWCP. The audit team determined that the INEL quality assurance program is adequate and is being effectively implemented in accordance with the TWCP Quality Assurance Program Plan (QAPP), with the following exceptions:

- ANL-W implementation of QAPjP W0096-0042-ES-03 Requirements.
- INEL implementation of software quality assurance requirements.

The audit team determined that the ANL-W implementation of the QAPP requirements is not adequate based upon the number and significance of deficiencies identified during the audit.

The audit team identified 14 deficiencies that resulted in the issuance of 11 Corrective Action Reports (CARs). The CARs are discussed in Section 6.1 of this report. The remaining 3 deficiencies were corrected prior to the post audit meeting and are described in Section 6.2 of this report. There are 16 Observations which are described in Section 6.3 and 14 Recommendations described in Section 6.4 of this report. The CARs and 12 of the Observations require a written response.

2.0 SCOPE

The audit was conducted to evaluate the INEL WIPP Waste Characterization Program to determine whether the requirements imposed by the CAO TRU Waste Characterization Quality Assurance Program Plan (QAPP) are being effectively implemented.

The following QA Program sections of the QAPP, were evaluated during the audit:

1.0 Program Management
2.0 Assessments and Oversight
3.0 Data Validation; Usability and Reporting
4.0 Management and Data Acquisition
6.0 Sample Handling and Custody Requirements

The following sections of the QAPP were evaluated as part of the technical scope of the audit:

5.0 Sampling Process Design
7.0 Headspace Gas Sampling
8.0 Sampling of Process Residues and Soils

9.0 Nondestructive Assay
10.0 Radiography
11.0 Gas Analysis
12.0 Gas Volatiles
13.0 Total Volatiles
14.0 Total Semi-Volatiles

Section 15.0, *Total Metal Analysis*, of the CAO-94-1010 QAPP was not audited, since the TRU Waste Characterization Program at INEL is not analyzing for metals at this time.

3.0 AUDIT TEAM AND OBSERVERS

The following is a list of audit team members and their assigned areas of responsibility:

Name/Title/Organization	Area of Responsibility
R. Hicks, Audit Team Leader DOE/CAO/CTAC	All Areas
Robert Paedon, Auditor DOE/CAO/CTAC	QA, ANL-W
Fred Dunhour, Auditor DOE/CAO/CTAC	QA Records, SPO, RWMC/SWEPP, ECL, ANL-W
Paul Bryant, Auditor DOE/CAO/CTAC	QA, SPO
Steve Davis, Auditor DOE/CAO/CTAC	QA, RWMC/SWEPP, BIR
Saundra Wander, Auditor DOE/CAO/CTAC	QA, ECL QA, ANL-W
Ava Holland, Auditor DOE/CAO/CTAC	QA, RWMC/SWEPP
James Lloyd, Technical Specialist WID	M&TE, ANL-W, RWMC/SWEPP, ECL
John Devanney, Technical Specialist DOE/CAO/CTAC	Waste Characterization, RWMC/SWEPP, ANL-W

Russ Bisping, Auditor DOE/CAO	Chemical Analysis, ECL
Ken Mikus, Technical Specialist WID	Waste Characterization, RWMC/SWEPP, ANL-W
Paul Hale, Technical Specialist DOE/CAO/CTAC	Software Quality Assurance, RWMC/SWEPP, ECL, ANL-W
B.J. Jennings, Technical Specialist DOE/CAO/CTAC	QA Records, SPO, RWMC/SWEPP, ECL, ANL-W

The following is a list of audit observers and their organizations.

James Benetti, EPA- ORIA
Patrick Kelly, EPA - ORIA/ S. Cohen & Associates
Ben Walker, EEG
S.J. Chern, EPA - ORIA
Bob Stoneking, DOE/HQ/EM-34/BDM

4.0 AUDIT MEETINGS AND AUDIT PARTICIPANTS

The pre audit meeting was held at the INEL WIPP Site Project Office in Idaho Falls, Idaho on August 28, 1995. A daily management meeting was held with the INEL TRU Waste Characterization Program management and staff to discuss the daily audit results. In addition, a daily audit team meeting was held to discuss audit issues and potential deficiencies. The audit was concluded with a post audit meeting held at the Site Project Office on September 1, 1995. Personnel contacted during the audit are listed in Attachment 1. The list indicates those that attended the pre audit and post audit meetings.

5.0 AUDIT RESULTS

5.1 Program Adequacy, Implementation and Effectiveness

The audit team concluded that the INEL QA program is adequate and being effectively implemented with the following exceptions:

ANL-W QAPjP, sections 1.7, 1.8, 1.9, 2.1, 3.1, 4.0, 6.1, 7.0, and 8.0

INEL Software Quality Program

5.2 QA Program Audit Activities

A summary of the audit results is provided in Attachment 2. The details of the audit evaluation, along with the objective evidence reviewed, are contained within the audit checklists. The checklists are retained and maintained as QA records.

The training records for ANL-W were not available during the audit. A surveillance of these records will be accomplished during verification of corrective action. See Observation No. 16.

5.3 Technical Audit Activities

The TRU waste characterization technical activities at the following facilities were reviewed during the audit:

Argonne National Laboratory (ANL-W)
Radioactive Waste Management Complex/Stored Waste Examination Pilot Plant (RWMC/SWEPP)

ANL-W

The audit team did not observe actual sampling operations that were being performed by the ANL-W Waste Characterization Chamber (WCC). Video tapes of previous operations were used to evaluate the technical adequacy of the waste characterization techniques for coring sludge drums and taking gas samples from both sludge and debris drums. Based on this review it was concluded that sampling operations performed by the WCC were in accordance with applicable procedures and were technically effective except as noted in CARs 95-046 and 95-056 and Observation No. 12.

RWMC/SWEPP

Data from the Radioassay (RA) systems at SWEPP were provided to the radiation physics personnel who determine how the RA results are to be interpreted. The gamma system results were used to confirm the historical weapons grade plutonium mass ratios. The mass ratios determined from the system agreed with those previously established by destructive radiochemical analysis. Results were reported using the default values previously established by the destructive analysis, since this procedure yields more precise results than does the gamma system. If the mass ratios for a particular container of waste were substantially different from those previously established, the drum was labeled as special case waste and excluded from the characterization program.

Results of the RA evaluation for solidified waste drums (sludge drums) reported in RWMC Engineering Design File report (EDF-776) were reviewed and found to be technically adequate; however, the overall rationale employed for reporting of the RWMC

RA results should be included in the overall SWEPP RA system process control documents as discussed in Observation No. 13.
The audit team concluded that an additional technical evaluation of the characterization activities performed at the SWEPP should be conducted after the new QAPjP is approved and implemented.

6.0 CORRECTIVE ACTIONS/OBSERVATIONS/RECOMMENDATIONS

The audit team identified 14 deficiencies that resulted in the issuance of 11 CARs. The remaining 3 deficiencies were corrected prior to the post audit meeting.

6.1 Corrective Action Reports (CARs)

As a result of the audit, the following CARs were issued:

CAR-95-043

Annual Management Assessments have not been conducted in accordance with paragraph 2.1.5 of ANL-W QAPjP W0096-0042-ES-03.

CAR-95-044

Quality assurance audits have not been conducted in 1994 and none are scheduled for 1995. Paragraph 2.1.1.6 of ANL-W QAPjP W0096-0042-ES-03 requires QA audits to be conducted annually.

CAR 95-045

Non-Routine Occurances, described as "system failures", during drum gas sample testing were not documented on NCR forms as required by ANL-W QAPjP W0096-0042-ES-03.

CAR-95-046

Completed drum data packages submitted to SPO revealed numerous errors and omissions contrary to the requirements of paragraphs 3.1.1.c, 6.1, 6.2, 6.4, 7.1, 7.2, and 7.6.1 of ANL-W QAPjP W0096-0042-ES-03.

CAR-95-047

Purchase requisitions categorized as quality level B are not developed and controlled in accordance with paragraph 1.8.1 of ANL-W QAPjP W0096-0042-ES-03.

CAR-95-048

Hot Fuel Examination Facility (HFEF) data packages are not controlled as QA records copies, as required by paragraphs 1.7.1 and 1.7.2.c of ANL-W QAPjP W0096-042-ES-03.

CAR-95-049

Environmental Chemistry Laboratory (ECL) Gas Characterization data records are stored in standard filing cabinets which do not satisfy the requirements of paragraph 1.7.1 of ANL-W QAPjP W0095-0042-ES-03.

CAR-95-050

RWMC/SWEPP has not developed and implemented a software quality assurance program in accordance with the requirements of section 5.21 of QPP-130.Rev 2.0.

CAR-95-051

ANL-W has not developed and implemented a software quality assurance program in accordance with the requirements of paragraph 1.9.3 of ANL-W QAPjP W-0096-0042-ES-03.

CAR-95-052

Measuring and test instruments are not being calibrated, labeled, and controlled in accordance with the requirements of paragraph 4.0 of the ANL-W QAPjP W0096-0042-ES-03.

CAR-95-056

Incorrect calculations and incorrect data recorded on sample records sheets are not being detected through independent technical reviews performed by ANL-W as required by ANL-W QAPjP W0096-0042-ES-03, paragraph 3.2

6.2 Deficiencies Corrected During the Audit

Three deficiencies considered to be isolated in nature and which require only remedial action were corrected during the audit.

1. The responsibility for indexing quality assurance records had not been assigned in accordance with the requirements of the CAO QAPD, section 1.5.2.A. SPO PD-13 was revised to include the assigned responsibility.

2. The QA records receipt control system did not provide for the receipt of all QA records as required by CAO QAPD. The implementing Procedure PD-13 was revised to provide for the receipt of all QA records.

3. The implementing procedure for QA records storage (ECL SOP 1.7.5, *Data and Records Archiving*) did not provide for a description of the indexing system used at ECL. The indexing system has been added to the implementing procedure.

6.3 Observations

The following observations were identified during the audit and, except for Nos. 6,7, and 15, require a written response describing actions that were taken in each instance.

1. Two RWMC Engineering Design Files have the same title and identification number. Neither file has a revision number. One is dated 9/1/93 and the other is dated 6/28/94. A line by line comparison should be made to identify any differences, and each file should then be marked with a revision number. A written response is required to identify the results of the comparison.

2. The inspection and test instruction for the Gas Sampling System Operational Test, W0096-0158-ES-00, Rev. 0, refers to attachments that are draft documents (01-6891 and M1-6891). Paragraph 4.3 of the same document states all work shall be performed sequentially. Sections 8.10 through 8.15 were not performed in the sequence noted. In addition, Section 8.1 shows gas mixtures that have hand written changes with no explanation or identification of the person responsible for making the changes. This is considered to be an isolated condition; no other instances were found. However, a written response to this observation is required to explain why data quality in this case has not been adversely affected.

3. The RWMC Software Design and Test Report, EGG-RAAM-10425, page 81 shows a window entitled "active data". Above the window is a subsection entitled "expected results" which is shown in decimal digits, while the "active data" window shows the values with no decimal digits. A written response to this observation, is required to explain impact, if any, on data quality.

4. The RWMC Software Design and Test Report, page 85 shows a window entitled "measurement results." Above the window the "expected results" are shown. There are significant differences between the two with no explanation for the differences or evaluation of the effect of these differences upon data quality. A written response is required to resolve this issue.

5. RWMC procedure PD-RS-3.1 lists completed Detailed Operating Procedures (DOPs) as records, but does not invoke QA record requirements for maintenance or disposition as part of the Project QA records system. The DOPs are being controlled in accordance with QAPP requirements as QA records. A written response is required to address the lack of requirements regarding DOP maintenance and disposition.

6. The RWMC quality requirements do not address training required by quality inspectors who evaluate the data taken from Real Time Radiography (RTR) videos. SWEPP management does consider this training by the inspectors to be necessary and it is being provided prior to evaluation of the data.

7. RWMC/SWEPP nonconformance reports are not being forwarded to the Site QA Office within two working days after identification as required by QAPjP INEL - 94/0085, paragraph 2.2. The NCRs are subsequently being provided to the Site QA office.

8. RWMC/SWEPP Directive PD-RS-8.2 does not include a description of the predetermined storage facility and configuration for QA records, a description of the QA records indexing system, nor a description of controls governing QA records access. The QA records and records access are being adequately controlled. A written response is required to address the lack of QA records facility description.

9. The records storage facility at the ANL-W Document Control Center has not developed an implementing procedure to document record storage controls and practices, and there is no list of designated personnel who are permitted access to the storage facility. The QA records are accessible only to Document Control Center personnel. Although a procedure was not available for records storage, the audit team concluded that record storage activities being implemented were satisfactory. A written response is required to address the lack of documentated controls.

10. Although NCRs are being corrected in a timely manner, the ANL-W Project Quality Assurance Representatives (PQAR) are not tracking NCRs due to the lack of procedural requirements to do so. As a result, there is no indication that all NCRs are recorded in the ANL-W PQAR NCR log which is part of the tracking system. In addition, ANL-W initiated NCRs are not being trended as required by ANL-W -0096-0042-ES-03. Currently the NCRs are being tracked only when the PQAR is requested to follow-up, or when the PQAR initiates the NCR. Corrective action has been initiated to revise the procedure to include the tracking of NCRs. A written response is required to address the lack of NCR trending.

11. ANL-W-0096-0042-ES-03, paragraph 2.1.1.c allows a period of five years to audit all elements of the quality assurance program, The five year period is beyond normal industry standards. Also, the Project Quality Assurance Office process to prepare for an audit is to use the ANL-W QAP, compare it to the ANL-W QAPjP, and then to audit to the QAP. The potential problem with this process is that there are requirements in the QAPjP that are not in the ANL-W QAP; therefore, requirements could be missed. The audit team did not find any requirements that had been missed to this date. A written response is required to address the effectiveness and frequency of this process.

12. During the viewing of a video tape that documented the headspace gas sampling operation for sludge drums, it was noted that a gas sample was not taken from the outer 55-gallon polybag. This bag is in direct contact with the inner poly bag containing the sludge. A gas sample was taken through the filter into the head space of the drum, outside of the 55 gallon poly bag. A second sample was taken by inserting the sampling needle directly through the outer 55-gallon poly bag into the inner poly bag containing the sludge. Hence a separate gas sample of the outer 55-gallon poly bag was not taken. The QAPjP requires gas samples:

    1. Through the filter.
    2. Through the 55-gallon poly bag.
    3. Through the inner most layer (in this case, the plastic bag containing the sludge).

    It was suggested and agreed to by RWMC engineering that the procedure for obtaining gas samples from sludge drums be modified to reflect the actual practice of inserting the sampling needle through the 55 gallon poly bag into the plastic bag containing the sludge. No technical questions were identified by the audit team regarding the existing method of obtaining the samples. A written response is required to address the procedural modification.

13. The Quality Assurance Project Plan (QAPjP) for the INEL WIPP Waste characterization Program, EGG-WM-10667 Revision 1, refers to the QAPjP (EGG-WM-9527 Revision 1, April 2, 1993) for the RWMC for the stated radio assay data quality objectives. The INEL QAPjP data quality objectives apply only to the passive/active neutron (PAN) system. The gamma ray system is not included in the QAPjP. In addition, Section 9.1 of the QAPjP states that the PAN system is limited to a determination of an absolute Pu240 mass, when in fact the active portion of the PAN system actually measures the Pu239 mass as required by INEL procedures. The active mode is actually being used to assay sludge drums.

The gamma system is being used at SWEPP to determine relative mass ratios for weapons grade plutonium. It is uncertain at this time as to how the gamma system mass ratio determinations are used to report nuclide information being supplied as part of the characterization data. Since the gamma system is not incorporated into the current QAPjP, it is not possible at this time to assess completely the effectiveness of the total system at SWEPP. A written response is required to address the use of the gamma ray system in supplying characterization data and to explain how this system will be incorporated into the QAPjP.

14. Chain-of-Custody documents and sample tags that accompany samples shipped from ANL-W to ECL for analysis do not contain information as required by the documents. The core and sample tags are being properly corrected upon receipt after verifying the information with ANL-W. A written response is required to address the process for ensuring that the information is correctly supplied.

15. Summarized sampling and analytical data are not being transmitted electronically to DOE-CAO quarterly as required by paragraph 3.3 of INEL-94/0085. The electronic transfer system is not yet functional. The hard copies are being transmitted until the electronic transfer system becomes operational.

16. The surveillance team was not able to verify that personnel performing activities affecting quality had been indoctrinated and trained in accordance with the ANL-W *Waste Characterization Area Initial & Continuing Training Plan*. The surveillance team requested training records for a sample of personnel assigned to perform characterization activities. The project was not able to provide records or other documentation of training. The supervisor responsible for training was reported to be absent from work (sick) during the entire period of the audit, and no other manager could provide access to the training records in the supervisor's absence. The area of personnel training will be evaluated later. A written response is required to address the lack of availability of training and certification records.

6.4 Recommendations

The following are recommendations for program improvement:

1. Recommend that the ECL training to SOPs be documented as qualification records. As currently kept, records show that a meeting was held to discuss the SOP, but attendance is not linked with qualifications of personnel.

2. Recommend that ECL controlled documents have a red stamp that identifies the document as the original document. This recommendation was implemented

during the audit. Originals are now stamped with red ink that reads "Red Original, Black Copy."

3. Recommend that a section be added to the ECL SOPs that describes responsibilities, especially when personnel matrixed from other divisions perform the activities.

4. Recommend that ECL develop a process for tracking and closure of those deficiencies found during self-assessments and analytical laboratory evaluations. Currently, deficiencies are reported in monthly QA reports to the SPO, but when closed, the self-assessment files are not completed with closure documentation. This recommendation was implemented during the audit.

5. Recommend that the terminology in the ECL QAPjP be changed so that data reports are not considered to be controlled documents. Currently, additions to the report made during the validation process are forwarded to ECL by SPO and a receipt is returned, but the original data report does not require a return receipt.

6. ECL should assess the effect of changes that have been made to the record copies of data reports by SPO. SPO should provide a feed back process to ECL on results of validations.

7. ECL should revise their QAPjP to indicate the process to be followed when the chain of custody documentation is not correct and to indicate how, in that case, data is reconciled after receipt (describe what is actually happening upon receipt of samples).

8. The ANL-W programs for the control and calibration of measuring and test instruments (M&TE) is currently based on MIL-STD-45662A, which was cancelled effective January 20, 1995. ANSI/NCSL Z540-1-1994 was adopted by the Department of Defense to replace 45662A. The Department of Energy has promoted the application of ANSI/NCSL Z540-1-1994 in various correspondence with DOE contractors. It is recommended that ANL-W shift its program towards meeting the requirements of ANSI/NCSL Z540-1-1994. Commercial industry and federal agencies are increasingly referencing this standard for calibration programs and calibration activities.

9. M&TE calibration intervals and interval adjustments are established and maintained by the INEL Metrology Laboratory. It is recommended that the service, provided by the INEL Metrology Laboratory be identified in the ECL SOPs and the RWMC/SWEPP Programs Project Directives addressing the calibration and control of M&TE.

10. U.S. National Standard ANSI-NCSL Z540-1-1994 Part 2 provides quality assurance requirements for the control and calibration of M&TE. Part two of the standard is specifically directed at the "control" requirements and responsibilities for M&TE at the user/owner level. Implementation or utilization of Part two of ANSI/NCSL Z540-1-1994 would greatly enhance and strengthen the level of quality of the ECL and the RWMC/SWEPP programs for M&TE.

11. Readiness review forms do not indicate what each signature represents. Recommend that the readiness review document indicate a statement such as "Verification Signatures" and the date of signature.

12. The variance and nonconformance procedure (TWCP-PD-2.3) requires the SQAO to "review" the documentation. Recommend the "review" be conducted by the facility originating the variance, and that the SQAO signature be for approval. This would eliminate the variances that are originated at SPO from looking as if they are not approved (they have only the "reviewed by" signatures on them).

13. ANL-W QAPjP should be revised (paragraph 2.2.1) to delete reference to the Performance Demonstration Program results being included in the Quarterly QA Report, since ANL-W does not participate in the Performance Demonstration.

14. The Software Quality Assurance Specialist at the RWMC facility does not report to the Quality Assurance Manager as indicated by the RWMC Software Configuration Management Plan. The QA Specialist should report to the QA Manager, or the plan should be revised.

7.0 LIST OF ATTACHMENTS

Attachment 1: Personnel Contacted During the Audit

Attachment 2: Summary Table of Audit Results

ATTACHMENT 1

NAME	ORG/TITLE	PRE-AUDIT MEETING	CONTACTED DURING AUDIT	POST AUDIT MEETING
Batte, G	ANL-W/Info Services		x	
Bennett, J	ECL/Team Leader	x	x	x
Bevlter, P	RWMC/Quality Eng.	x	x	
Brown, RD	DOE-CAO QA Manager			x
Chappell, J	ANL-W/Info Services		x	
Colvin, C	ANL-W/Secretary		x	
Clements, T	LITCO/ TRU Waste Dept. Manager	x	x	x
Crank, J	ANL-W/Secretary		x	
David, L	RWMC/ Administration		x	
DeHaan, M	LITCO/Inventory Analysis	x		x
Duncan, D	ANL-W/Proj Manager		x	
Dumas, E.	RWMC/Quality Eng.	x	x	
Dwight, C	ANL-W/TRU Waste Proj. Manager.	x	x	x
East, L.	RWMC/RAD Phys.		x	
Evens, R	ANL-W/QA RED		x	
Falconer, R	LITCO/Inventory Analysis	x		x
Flores, A	RWMC/Doc. Control		x	
Frasure, J	Willow Creek Software Dept. Manager.		x	

NAME	ORG/TITLE	PRE-AUDIT MEETING	CONTACTED DURING AUDIT	POST AUDIT MEETING
Halley, S	SPO/Validation Officer	x	x	x
Harker, Y	RWMC/Principal Investigator		x	
Hayes, G	SPO/Site QA Officer	x	x	x
Huffaker, M	LITCO/Software QA Officer	x		x
Henline, S	Willow Creek Principal Tech		x	
Ingle, S	RWMC/Materials Coordinator		x	
Jacobs, J	ANL-W/Eng. Tech.		x	
Jensen, B	ANL-W, Systems Engineering		x	
Jones, R	ANL-W/CSMI-I&C Coordinator		x	
Korenke, R	RWMC/Operations Supervisor	x		
Kovach, D	RWMC/Admin		x	
Magan, J	ANL-W/QA Representative	x		
Magnan, J	ANL-W/QA Representative	x	x	x
Menkhaus, D	RWMC/Program Engineer	x	x	x
Moody, H	Met Lab/Met Manager		x	
NeSmith, R	RWMC/Audit Coordinator		x	

NAME	ORG/TITLE	PRE-AUDIT MEETING	CONTACTED DURING AUDIT	POST AUDIT MEETING
Oates, B	ECL/Scientist		x	
Parker, D	RWMC/Program Manager	x	x	x
Parks, R	ANL-W/HFEF Manager	x	x	
Pound, D	RWMC/Program Engineer	x	x	x
Riedle, M	RWMC/Admin; Records Coordinator		x	
Sabel, F	ECL/Data & Records		x	
Sailer, S	ECL/QA Officer	x	x	
Sayer, R	ANL-W/Insp. Sect. Hd.		x	
Sharp, M	SPO/Doc Ctr Officer		x	
Southon, R	ANL-W/ QA Representative		x	
Stedtfeld, J	RWMC/M&TE Coordinator		x	
Sturdevant, S	RWMC/Trainer		x	
Tedford, G	RWMC/Certification Specialist	x	x	
Torres, K	RWMC/Tech Support Supervisor		x	
Twedell, G	RWMC/Sr. Engineer		x	
Wasylow, J	RWMC/Maintenance Supervisor		x	
Wells, J	DOE ID/TRU Program Manager	x		x
Whitehead, M	RWMC/Certification Specialist		x	

ATTACHMENT 2

AUDIT SUMMARY A-95-02

Audit Checklist	Audited Activity	Checklist Details Pages(s)	CAR	CDA	Obser	Rec	IMP	Eff
QA-1	RWMC QAPjP-WM10667, Rev 1	1 - 29						
RWMC	- Organization Section 3.3	1 - 4					S	NA
	- Personnel Training and Qualification Section 2.10	4 - 5			#6		S	NA
Ava Holland	- Quality Improvement Section 2.12	6 - 8			#7		S	NA
	- Documents and Records Section 2.7-2.8	9 - 13			#5		S	E
	- Work Processes Section 3.0,5.0,6.0,7.0,12.0,13.0	13 - 24					S	NA
	- Procurement Section 1.8 - 2.9	25					S	NA
	- Inspection Section 7.3-9.3-10.3	26					S	NA
	- Testing Section 9.4 -10.4	26					S	NA
	- Audits and Assessments Section 2.4 - 2.13	27-29					S	E

Legend:
CAR=Corrective Action Report Issued
CDA=Corrected During the Audit
Observ=Observation Offered
Rec=Recommendation Offered
IMP=Implementation
Eff=Effectiveness Statement
NA=Not Applicable
S=Satisfactory
U=Unsatisfactory
E=Effective
NE=Not Effective
Shaded=None

AUDIT SUMMARY A-95-02

Audit Checklist	Audited Activity	Checklist Details Pages(s)	CAR	CDA	Obser	Rec	IMP	Eff
QA-2 ANL-W Robert Paedon	ANL-W QAPjP W0096-0042-ES-03	1-36						
	Program Organization Section 1.1	1-2					S	NA
	Training & Certification Section 1.6	2			#16		U	NA
	Procurement Section 1.8	3	95-047				S	NA
	Work Processes Section 1.9	4-5	95-051 95-052				U	NA
	Assessments and Oversights Section 2.0	6-10	95-043 95-044		#10 #11	1	U	E
	Data Validation Usability & Reporting Section 3.0	10-13	95-056				U	NA
	Measurement and Data Acquisition Section 4.0	14	95-052				U	NA
	Sample Handling & Custody Section 6.0	15-22	95-046			1	U	NA
	Headspace Gas Sampling Section 7.0	22-26	95-045 95-046		#14		U	NA

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QA.2 Cont.	ANL-W QAPjP W0096-0042-ES-03	1-36						
	Sampling of Solid Processing Residues and Soils Section 8.0	27-36	95-046 95-048 95-052				U	NA
QA-3 ECL Sandy Wander	ECL QAPjP INEL-94/0086	1-19						
	Program Management Section 1.0	1-6				7	S	NA
	Assessment and Oversight Section 2.0	6-8					S	E
Russ Bisping	Data Validation, Usability & Reporting Section 3.0	9-10					S	
	Measurement & Data Acquisition Section 4.0	10					S	NA
	Drum & Sample Handling & Custody Requirements Section 6.0	11-12					S	NA
	Headspace Gas Sampling Section 7.0	12					S	NA
	Hydrogen & Methane Analysis Section 11.0	12-18					S	NA
	Gas Volatile Organic Compound Analysis Section 12.0	19					S	NA

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QA-4	SPO QAPjP INEL-94/0085	1-35						
SPO	Program Management Section 1.0	1-10					S	NA
	Assessment and Oversight Section 2.0	11-16					S	E
Paul Bryant	Data Validation, Usability, and Reporting Section 3.0	17-2			#15		S	NA
	Sample Handling & Custody Req. Section 6.0	22-24					S	NA
	Headspace Gas Sampling Section 7.0	24-27					S	NA
	Sampling of Solid Process Residue Section 8.0	28-29					S	NA
	Radioassay Section 9.0	30					S	NA
	Radiography Section 10.0	31-33					S	NA
	Hydrogen and Methane Analysis Section 11.0	34					S	NA
	Gas Volatile Org. Compound Analysis Section 12.0	34					S	NA
	Total Volatile Org. Compound Analysis Section 13.0	35					S	NA
	Total Semi-volatile Organic Compound Analysis Section 14.0	35					S	NA

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SQA-1	CAO-94-1012 QAPD	1-9						
RWMC/ SWEPP ANL-W Paul Hale	Graduation of Quality Measures Section	1	95-050 95-051				U	NE
	Software QA Plans and Procedures Sect 6.3	1-2	95-050 95-051		#2		U	NE
	Inventory of Software Section 6.4	2	95-050 95-051				U	NE
	Classification of Software Section 6.5	2	95-050 95-051				U	NE
	Procured or otherwise acquired Software Sect. 6.6	3	95-050 95-051				U	NE
	Software Development and Maintenance Sect. 6.7	3-4	95-050 95-051				U	NE
	Software Documentation and Records Sect. 6.8	5	95-050 95-051		#1 #3 #4		U	NE
	Software Validation Section 6.9	6-7	95-050 95-051				U	NE
	Software Traceability and Version Control Section 6.10	7	95-050 95-051				U	NE
	Installation and Checkout Section 6.11	8	95-050 95-051				U	NE

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M&TE-1	INEL QAPjP EGG-WM-10667/CAO QAPD	1-5						
RWMC/ SWEPP James Lloyd	Calibration Procedures and Frequency Section 8	1-3				2	S	E
	Equipment Testing, Inspection, and Maintenance QAPD Section 4.4 & 8.5	4,5					S	E
	ANL-W QAPjP W0096-0042-ES-03/CAO QAPD	1-5						
M&TE-2 ANL-W James Lloyd	Measurement and Data Acquisition Section 4.0	2,3					S	E
	Equipment and Calibration Frequency Section 7.5 & 8.5	1	95-052			2	U	NE
M&TE-3 ECL James Lloyd	Equipment Testing, Inspection, and Maintenance QAPD Section 4.4 & 8.5	4,5					S	E
	ECL QAPjP INEL-94/0086/CAO QAPD	1-5						
	Measurement and Data Acquisition Section 4.0	3					S	E
	Instrument Calibration & Frequency Section 11.5-12.5	1,2				1	S	E
	Equipment Testing, Inspection, and Maintenance QAPD Section 4.4	3-5					S	E

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CHARA-1 RWMC/ SWEPP John Devanney	INEL QAPjP EGG-WM-10677	1-15						
	Analytical/Operating Procedures Section 9.0	1-3					S	E
	QAO/SWEPP Examinations Section 4.1	4-5, 12-13			#13		S	E
	QAO/Waste Examinations Section 4.2	5					S	E
	RWMC/SWEPP QC Checks Section 10.1	6-7					S	E
	Data Reduction, Validation, and Reporting Section 12	7-10, 15					S	E
	SPO QAPjP INEL-94/0085	11-17						
	Data Reduction Validation and Reporting Section 3.0	11,17					S	E
	Radioassay Section 9	12,14-15					S	E
	Radiography Section 10	15					S	E
	Facility - Section 1.4.2	16					S	E

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CHARA-2 ANL-W John Devanney	SPO QAPjP INEL-94/0085	1-10						
	Sampling Process Design Section 5	1-2					S	E
	Headspace Gas Sampling Section 7	3-4					S	E
	Sampling of Solid Process Residue and Soils Section 8	5-7					S	E
	Radiography Section 10	8-10					S	E
	ANL-W QAPjP W0096-ES-03	11-19						
	Sample Handling and Custody Requirements Section 6.0	11-12					S	E
	Headspace Gas Sampling Section 7.0	13,18			#12		S	E
	Sampling of Solid Processing Residue and Soils Section 8.0	14-15,19					S	E
	Radiography Section 10	16-18					S	E
	Data Validation, usability and Reporting Section 3.2	17					S	E

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QA Records RWMC ANL-W ECL SPO Fred Dunhour	NQA-1 Supp 17S-1	1-21						
	Records Adminstration Section 2	1,9,12,20					S	E
	Records Receipt Section 3	11		1			S	E
	Storage, Preservation & Safekeeping, Section 4.0	13,18					S	E
	Retrieval Section 5.0	4					S	E
	CAO-94-1012 QAPD	1-21						
	General QA Records Section 1.5.1	1,2,19					S	E
	Indexing QA Records Section 1.5.2	12,13		1	#8		S	E
	Classifying QA Records Section 1.5.3	2,8,9	95-048, 95-049				U	NE
	Receiving QA Records Section 1.5.4	12,19					S	E
	Storage, Preservation, and Disposition, QA Records Section 1.5.5	3,4,10,14-17, 20	95-048, 95-049	1	#8 #9		U	NE
	Retrieval QA Records Section 1.5.6	18					S	E
	QAO IMP	3-7,9-11,13,15	95-048, 95-049				U	E
	Overall ANL-W	69	9	0	11	2	U	NE
	Overall INEL	183	2	3	4	12	S	E

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