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United States Government **Department of Energy**

memorandum

Carlsbad Field Office
Carlsbad, New Mexico 88221

DATE: July 24, 2002

REPLY TO ATTN OF: CBFO:QA:MN:VW:02-1237:UFC:2300

SUBJECT: CBFO Recertification Audit Report A-02-23 of the Hanford Site

TO: Todd Shrader, DOE-RL

The Carlsbad Field Office (CBFO) conducted an audit of the Hanford Site waste characterization, certification, and transportation activities during the June 24-28, 2002. The audit team concluded that the Hanford Site technical and QA programs were adequate in accordance with the CBFO QAPD and WIPP Hazardous Waste Facility Permit. The audit team also concluded that Hanford procedures were being satisfactorily implemented and that the evaluated processes were effective. The CBFO audit report is attached.

There were two CBFO corrective action reports (CARs) issued as a result of the audit. The CARs have been forwarded to you under separate cover. One isolated deficiency requiring only remedial corrective action was corrected during the audit (CDA). Five Observations and eleven recommendations were also identified during the audit.

If you have any questions or comments concerning this report, please contact me at (505) 234-7483.

for Martin P. Navarrete
Quality Assurance Specialist

Attachment

cc: w/attachment
K. Watson, CBFO
R. Knerr, CBFO
A. Holland, CBFO
D. Winters, DNFSB
S. Monroe, EPA
M. Eagle, EPA
R. Joglekar, EPA
E. Feltcorn, EPA
S. Zappe, NMED
B. Walker, EEG
P. Crane, FH
J. Maupin, FH
CBFO QA File
CBFO M&RC

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U.S. DEPARTMENT OF ENERGY
CARLSBAD FIELD OFFICE

AUDIT REPORT

OF THE

HANFORD SITE

RICHLAND, WASHINGTON

AUDIT NUMBER A-02-23

JUNE 24- 28, 2002

TRU WASTE CHARACTERIZATION, CERTIFICATION, AND TRANSPORTATION

Prepared By: _____ **Date:** 7/23/02
Pete V. Rodriguez
Audit Team Leader

Approved By: _____ **Date:** 7/24/02
Ava L. Holland
CBFO QA Manager

1.0 EXECUTIVE SUMMARY

Carlsbad Field Office (CBFO) Audit A-02-23 was conducted to re-evaluate the adequacy, implementation, and effectiveness of the Hanford Site transuranic (TRU) waste characterization, transportation, and certification activities. The audit was conducted to evaluate retrievably stored debris waste (characterized at the Waste Receiving and Processing (WRAP) facility) and documentation for newly generated debris and newly generated homogeneous solids characterized at the Plutonium Finishing Plant (PFP) facility. The summary category groups included S3000 homogeneous solids and S5000 debris waste.

The audit was conducted at the Hanford Site during the week of June 24-28, 2002. The audit team concluded that the Hanford technical and quality assurance (QA) procedures continue to be adequate relative to the flow down of requirements from the CBFO Quality Assurance Program Document (QAPD), the Waste Analysis Plan (WAP) of the Hazardous Waste Facility Permit (HWFP), Contact-Handled Waste Acceptance Criteria (CH WAC), the TRUPACT-II Safety Analysis Report, the TRUPACT- II Authorized Methods for Payload Control (TRAMPAC), and the TRUPACT-II Certificate of Compliance, NRC-Docket 71-9218.

The audit team concluded that the Hanford QA program continues to satisfactorily meet the requirements of the QAPD, WAP, CH WAC, and TRAMPAC. The audit team also concluded that the QA program is being satisfactorily implemented and, except for the areas noted in this report, the Hanford technical processes evaluated are satisfactorily implemented and effective.

The audit team identified two conditions adverse to quality that resulted in the issuance of two CBFO corrective action reports (CARs), which require corrective action in the areas of real-time radiography (RTR) and transportation. One isolated deficiency requiring only remedial corrective action was corrected during the audit (CDA). Five Observations were identified, and eleven Recommendations are being offered for Hanford management's consideration. The CARs, CDA, Observations, and Recommendations are described in section 6.0.

2.0 SCOPE

The audit team evaluated the continued adequacy, implementation, and effectiveness of technical and QA processes related to Hanford TRU waste characterization, certification, and transportation activities.

The following elements were evaluated in accordance with the CBFO QAPD:

Organization
QA Program Implementation

Personnel Qualification and Training
Document Control
Work Processes
Records Management
Nonconformance Control
Corrective Action
Procurement
Measuring and Test Equipment
Assessments/Audits
Sample Control
Software Control
QA Grading
Performance Demonstration Program (PDP)

The following CBFO technical characterization elements were evaluated in accordance with the WAP and/or WAC:

Sampling Design (for Visual Examination (VE))
Sample Handling
Headspace Gas Sampling and Analysis
Nondestructive Assay (NDA)
RTR
VE
Visual Examination Technique
Packaging (Pipe-N-Go)
Acceptable Knowledge (AK)
Data Generation, Validation, Usability, and Reporting
WIPP Waste Information System (WWIS)

The following transportation technical elements were evaluated in accordance with the CBFO TRAMPAC:

Inspection of Packaging
Visual Inspection
TRUPACT-II Preparation and Loading
TRUPACT-II Leak Check
Shipping Preparation
Package Maintenance
Documentation and Records
Payload and Drum Certification
Transportation Tracking and Communications (TRANSCOM)

Evaluation of Hanford TRU Waste Characterization Program documents was based on current revisions of the following documents:

Hanford Site Quality Assurance Project Plan (QAPjP) for the Transuranic Waste Characterization Program
Hanford Site Transuranic Waste Certification Plan
Related Hanford technical and QA implementing procedures

3.0 AUDIT TEAM, INSPECTORS, AND OBSERVERS

AUDITORS/TECHNICAL SPECIALISTS

Ava Holland	CBFO QA Manager
Pete Rodriguez	Audit Team Leader, CTAC
Annabelle Axinn	Auditor, CTAC
Earl Bradford	Auditor, CTAC
Steven Calvert	Auditor, CTAC
Steve Davis	Auditor, CTAC
Jim Schuetz	Auditor, CTAC
Dee Scott	Auditor, CTAC
Jack Walsh	Auditor, CTAC
Karen Gaydosh	Technical Specialist, CTAC
Patrick Kelly	Technical Specialist, CTAC
Ray Martin	Technical Specialist – In-Training, CTAC
Martin Navarrete	CBFO Representative/Auditor – In-Training
Todd Sellmer	Technical Specialist – In-Training, WTS
BJ Verret	Technical Specialist, CTAC
Joe Willis	Technical Specialist, WTS

OBSERVERS/INSPECTORS

Mike Eagle	EPA Inspector
Rajani Joglekar	EPA Inspector
Jim Oliver	EPA Inspector
Dave Stuenkel	EPA/Trinity Engineering Inspector
Connie Walker	EPA-NMED/Tech Law Inspector-Observer
Will Fetner	NMED Observer
Steve Holmes	NMED Observer
Phillis Stevens	NMED Observer
Scott Webb	EEG
Reinhard Knerr	CBFO/NTP – Management Representative
Rob Talyloe	NTP (RSI) Observer

4.0 AUDIT PARTICIPANTS

Hanford individuals involved in the audit process are identified in Attachment 1. A preaudit meeting was held at the 2420 Stevens Drive, Conference Room 153, on June 24, 2002. A daily meeting was held with Hanford management and staff to discuss issues and potential deficiencies. The audit was concluded with a postaudit meeting held in Conference Room 153 at 2420 Stevens Drive on June 28, 2002.

5.0 SUMMARY OF AUDIT RESULTS

5.1 Program Adequacy, Implementation, and Effectiveness

The audit team concluded that the Hanford QA program continues to satisfactorily meet the requirements of the CAO QAPD, Rev. 3; the WIPP WAP, effective date November 27, 1999; the CH WAC, Rev. 0; and the TRAMPAC, Rev. 19. The audit team also concluded that the QA program continued to be satisfactorily implemented. The Hanford technical processes evaluated by the audit team were determined to remain satisfactorily implemented and effective, except in the areas noted in this report.

5.2 QA Program Audit Activities

Details of audit activities, including specific objective evidence reviewed, are contained in the audit checklists, which are maintained as QA records. The QA program procedures evaluated during this audit are provided in Attachment 2.

5.3 Technical Activities

Evaluations of applicable Hanford technical activities are summarized below. Technical procedures evaluated during the audit are provided in Attachment 2.

5.3.1 Nondestructive Assay

The audit team evaluated procedures and activities associated with the following nondestructive assay (NDA) systems:

- One Segmented Gamma Spectroscopy Assay System (SGSAS). This photon-based measurement system is located at the PFP and is used to assay TRU waste in billet cans.

- Two Gamma Energy Analysis (GEA) systems, GEA-A and GEA-B. These equivalent photon-based segmented gamma systems are located at the Waste Reprocessing and Packaging (WRAP) Facility and are used to assay TRU waste in 55-gallon (208 L) drums.

The audit team reviewed analyses and the reporting of data and NDA results, and observed the operation of the systems listed above. A recommendation was offered to change PFP procedure ZA-400-302 to include two references to uranium$_{234}$ (U-234) and strontium$_{90}$-cesium$_{137}$ (Sr-90/Cs-137) determinations that have been integrated (Recommendation 11). With regard to the WRAP facility, the audit team identified one issue relating to a routine practice for the use of AK with respect to isotopic ratios (Observation 5). The audit team also offered three recommendations relating to the calculation of assay results (U-234), calibration report summaries, and documentation of specific locations of calibration/radionuclide sources at the WRAP facility (Recommendations 8, 9, and 10, respectively). The audit team concluded that the written program for the above PFP and WRAP NDA systems was adequate, and determined that the processes have been satisfactorily implemented and are effective.

5.3.2 Data Generation and Data Verification and Validation

Twelve batch data reports (two NDE, two VE, two VE technique, one headspace gas sampling and analysis, two NDA from PFP and three NDA from WRAP) were examined and evaluated to verify implementation of procedural requirements. The audit team determined that procedures for data generation had incorporated upper-tier requirements and were adequate and that the current process for data generation was satisfactorily implemented and effective.

The audit team evaluated project-level verification and validation activities by reviewing the batch data reports mentioned for the above processes, and determined that procedures for project-level data verification and validation had incorporated upper-tier requirements. The audit team concluded that the procedures for data verification and validation were adequate and that the current process for data verification and validation was satisfactorily implemented and effective.

5.3.3 Real-Time Radiography

The audit team evaluated procedures and activities associated with the RTR system and reviewed analyses and the reporting of data and RTR results. The audit team reviewed five batch reports and the associated audio/videotapes. The audit team identified one deficiency associated with items that cannot be penetrated in the waste container (CAR 02-070). In addition, the audit team provided a recommendation (Recommendation 1) that when a waste item is identified that may contain PCBs, documented justification for not identifying it as a prohibited item should be provided. The audit team also determined that the RTR procedures are adequate, and with the exception of CAR 02-070, that the RTR process was satisfactorily implemented and effective.

5.3.4 Visual Examination

The audit team evaluated procedures and activities associated with the VE system and reviewed analyses and the reporting of data and VE results. The audit team reviewed two batch data reports along with the audio/video tapes. Two recommendations were offered regarding the narration during videotaping, and signatures on the VE drum log (Recommendations 2 and 3, respectively). The team determined that the VE procedures are adequate and that the VE process was satisfactorily implemented and effective.

5.3.5 Visual Examination Technique

The audit team examined the VE technique program at the PFP Facility at the Hanford Site. Two batch reports were reviewed and no concerns were identified. The program was found to be adequate, satisfactorily implemented and effective.

5.3.6 Sample Handling and Chain-of-Custody

Activities for sample handling and chain-of-custody were evaluated by observing the process steps and examining related documentation. The audit team concluded that the procedures for sample handling and chain-of-custody were adequate and that the sample handling and chain-of-custody processes were satisfactorily implemented and effective.

5.3.7 Headspace Gas Sampling and Analysis

The audit team evaluated headspace gas sampling and analysis, and sample control activities by reviewing procedures and examination of batch data reports. An inspection was also performed of the Hanford analytical laboratory, sampling area, sample storage area and canister cleaning area. The audit team identified one issue of no current deficiency but possible future impact in the area of chain-of-custody, relating to SUMMA canister "cleaning" blanks (Observation 1). The audit team concluded that the procedures for headspace gas sampling and analysis were adequate and that the processes for headspace gas sampling and analysis were satisfactorily implemented and effective.

5.3.8 Transportation

The transportation program was evaluated by reviewing shipment data packages, waste container description data sheets, and the applicable procedures. The documentation reviewed was generated during previous Hanford shipment activities. The audit team reviewed associated documentation that supports the maintenance control and

measuring and test equipment activities related to the transportation process. The audit team reviewed training and qualification records for personnel performing TRUPACT II operations and TRANSCOM. An example of a mixed waste-shipping package was reviewed to assure that Hanford personnel could implement the uniform hazardous waste manifesting process.

A demonstration was performed using a training TRUPACT-II for payload assembly loading, TRUPACT-II operations, maintenance, and leak testing. The audit team observed the lack of conduct of operations and failure to follow sequential procedure steps during the demonstration, as required by DOE/WIPP 02-3183, Rev. 0, Interim Change 1, *CH Packaging Program Guidance* and DOE/WIPP 02-3184, Rev. 0, *CH Packaging Operations Manual,* resulting in a corrective action report (CAR 02-069).

The audit team identified two issues relating to missing information that was identified on TRUPACT-II maintenance records and inadequate segregation of TRUPACT-II spare parts (Observations 2 and 3).

The audit team concluded that the transportation procedures were adequate. The process and procedures, however, were not satisfactorily implemented, nor were they effective in the areas of TRUPACT-II operations and TRUPACT-II maintenance.

5.3.9 Software

The audit team evaluated the Hanford Site software QA procedures for adequacy in relation to the CBFO QAPD upper-tier requirements. The audit team also evaluated implementation of these procedures with respect to software development and configuration management. The evaluation included a review of the development, change control, and configuration management of the GEA-A and -B, and SGSAS software baselines, and the change control, configuration management, and use of spreadsheet software for headspace gas (HGAS) analysis. The lifecycle documentation reviewed for the vendor-acquired GEA and SGSAS systems included the software acceptance evaluation, software requirements, software verification and validation planning, implementation, test reports and software problem reports and change requests (PR/CR). The evaluation also included the TRU program software inventories for SGSAS/PFP Total Measurement Uncertainty (TMU), WRAP, and the organic chemistry Waste Sampling and Characterization Facility and the calculation of assay results. An observation identified a situation of no current deficiency but possible future impact in the area of Gamma Waste Assay Software (GWAS) and PFPTMU re-analysis activities regarding configuration management and verification and validation of software and data (Observation 4). It was determined that the written software procedures are adequate and the software QA process is satisfactorily implemented and effective.

5.3.10 WIPP Waste Information System

The audit team examined Hanford's WWIS data entry process and applicable documentation. The team verified that access control had been established and that Hanford has the ability to input correct data into the WWIS and certify and assemble shipments. The evaluation included an examination of data, data entry reports and record packages for data entered into WWIS for both shipments assembled during the previous 12-month period. Review of these documents was performed with respect to entry, review and approval of characterization and shipment elements. The audit team determined that the procedure for WWIS is adequate and that, for the portion of WWIS reviewed, the process has been satisfactorily implemented and is effective.

5.3.11 Acceptable Knowledge

The AK process was evaluated by reviewing AK summary reports, source documents, and other applicable documentation related to waste streams from the PFP, Plutonium Uranium Extraction Plant (PUREX), and waste being processed that was shipped from Rocky Flats Environmental Technology Site (RFETS). An issue was identified relative to the AK summary not referencing all the applicable documents that support the AK polychlorinated biphenyl (PCB) conclusions. The issue was determined to be an isolated case and was corrected during the audit (CDA 1). Three recommendations were offered relative to acquiring additional information supporting the Sr-90/Cs-137 scaling factor/value, waste matrix code (WMC) determination and reassignment and AK Accuracy/Performance Report clarification, and consistent application of waste stream code assignment (Recommendations 5, 6, and 7). The audit team concluded overall that the program for AK and data reconciliation was adequate and that the implementation and effectiveness of AK activities are satisfactory.

6.0 CARs, CDA, OBSERVATIONS, AND RECOMMENDATIONS

6.1 CARs

6.1.1 CARs Initiated as a Result of CBFO Audit A-02-23

The following CARs, initiated as a result of Audit A-02-23, have been transmitted to Hanford under separate cover. Brief descriptions of the CARs are provided below.

6.1.1.1 CBFO CAR 02-069

Non-compliance with procedural sequential steps during minor TRUPACT-II maintenance, loading payload assembly into the TRUPACT-II, closure of TRUPACT-II outer containment vessel (OCV), and leak testing of the TRUPACT-II OCV.

6.1.1.2 CBFO CAR 02-070

Two drums were examined that contained leaded rubber gloves and could not be completely examined because the mass of gloves was impenetrable.

6.2 Deficiencies Corrected During the Audit

One deficiency, requiring remedial action only, was identified and corrected during the audit. The deficiency was that the AK summary did not reference all the applicable documents that support the AK PCB conclusions. The applicable documents were obtained and included in the AK summary prior to the end of the audit.

6.3 Observations

Observations are issues that could result in compliance concerns if action is not taken. The following five Observations were identified during the audit:

1. SUMMA™ canister "cleaning" blanks are sent to the analytical lab (in a separate building), and not handled per the TRU Project chain-of-custody procedure L0-090-450. It was determined that while a deficiency did not currently exist, there is a potential for future problems. It should also be noted that a Document Change Form (DCF) was initiated on June 26, 2002, for procedure L0-080-407, *Cleaning Summa™ Canisters for TRU Waste HSG Sampling.* This DCF provides clarifications on technical requirements and will require that "cleaning" blanks also be handled per the chain-of-custody procedure L0-090-450, *TRU Project Sample COC, Storage, Acceptance, and Disposal.*

2. Three "maintenance records" were identified as being incomplete. The audit team determined that a current deficiency did not exist, but that future deficiencies could arise if greater attention to detail is not paid to the completion of "maintenance records".

3. Inadequate segregation of spare parts was noted, in that parts with differing numbers were stored together. The audit team determined that a current deficiency did not exist, but that future deficiencies could arise, if greater attention is not paid to spare parts storage requirements.

4. It was found during the audit that the re-analysis computer contained development and production areas in one folder, and software verification and validation (V & V) was not performed prior to a re-analysis event. Data for re-analysis was also not being requested from records and verified for use prior to re-analysis. This

observation identified a situation of no current deficiency but with possible future impact in the area of GWAS and PFPTMU re-analysis activities regarding configuration management and V & V of software and data. Performance and documentation of V & V (on a more frequent basis, and on the same hardware) prior to a re-analysis would assure the use of identical software between computers and assure the use of the most current version.

5. A routine practice for the use of AK with respect to isotopic ratios is not formalized in a written procedure, and direction has been provided only verbally. Procedure WMP-350, Section 2.2, R16 provides cursory direction but lacks specificity. The audit team determined that while a deficiency did not exist, there was potential for future problems.

6.4 Recommendations

The following eleven Recommendations are presented for Hanford management's consideration:

1. When a waste item is identified (during RTR) that could contain PCBs, (such as ballasts and transformers) a justification should be documented for not identifying it as a prohibited item.

2. During video taping of visual examination, the narrator should state his or her name and the name of the VE expert and VE operators.

3. Specify the meaning of signatures of VE technician and VE expert on the VE drum log, and be timelier in obtaining signatures.

4. The CBFO QAPD contains specific language regarding project personnel responsibility for achieving and maintaining quality. (QAPD section 1.1.1 states in part that: "...the individual performing the work is responsible for achieving and maintaining quality.") However, the Hanford TRU Waste Certification Plan (HNF-2600, R6) does not use similarly strong language (e.g., paragraph 5.1 states that: "Project personnel are accountable for ensuring quality within their assigned areas of responsibility"). The recommendation, therefore, is to strengthen the language in the Certification Plan.

5. Hanford should explore the need for acquiring additional information to support the Sr-90/Cs-137 scaling factor/value and place this information in the AK record. HNF-6489 (Table 3-4) documents critical isotope distribution information, but the source of the data could be discussed in greater detail within the text of HNF-6489.

6. The waste matrix code (WMC) determination by Hanford resulted in assignment of a broad category to the Mixed Plutonium Finishing Plant Debris (MPFPD) waste stream (S5490). AK personnel are performing the appropriate WMC checks. However, procedure WMP-400, section 7.1.9, could be enhanced to include specific direction on how to track waste matrix and parameter volumes and criteria on when an AK re-evaluation is needed for possible WMC reassignment based on the results of the tracking. In addition, Hanford should include NDA-AK comparison data to the AK accuracy/performance reports.

7. Hanford applies hazardous waste codes to all containers in a waste stream, even though the AK data indicate most of the containers do not contain the material that requires the application of the codes. It was noted that this approach is different from other sites, which break out the individual containers with unique hazardous waste codes into separate waste streams. The generator sites should request guidance from CBFO and consider consistent application of hazardous waste codes. Consistent hazardous waste code assignment by all the generator sites would ensure that the data quality requirements of the permit are met.

8. The Hanford Memorandum 02-NMA-002 should be referenced in WMP-350, section 2.2 - *Calculation of Assay Results* - in terms of determining U-234.

9. Calibration reports for GEA-A and GEA-B include a summary that provides significant highlights (i.e., operating range of instrument in terms of Pu mass loadings and matrix density). It should be noted that some of this information is currently provided for GEA-A, except matrix density, while the GEA-B report does not contain this information.

10. Six mixed-radionuclide line sources were used to calibrate the GEA-B. While the sources were specified, the location of each source in the surrogate container was not documented in the calibration report or procedures. The sources are of the same nominal activity, and their position had minimal impact on the

calibration. Although there was no significant effect on the calibration, the recommendation is for the specific location of each source to be documented.

11. Recommend that PFP procedure ZA-400-302 be changed to include two references to U-234 and Sr-90/Cs-137 determinations that have been integrated as a result of previous corrective actions for CBFO CAR 01-043.

7.0 LIST OF ATTACHMENTS

Attachment 1: Personnel Contacted During the Audit
Attachment 2: Table of Procedures Audited

PERSONNEL CONTACTED DURING THE AUDIT

HANFORD PERSONNEL CONTACTED				
NAME	ORG/TITLE	PREAUDIT MEETING	CONTACTED DURING AUDIT	POST AUDIT MEETING
Abdurrahman, Naeem	FH, NDA Senior Scientist	X	X	
Ailes, Sid	FH/Duratek Consultant	X	X	X
Anderson, Aaron	WRAP RTR Operator		X	
Bancroft, Linda	WRAP Tool Crib Attendant		X	
Bisping, Russ	Fluor Global Services Measurement Assurance Lead	X		
Bisping, Scott	FH AK Expert	X	X	X
Bloom, Robert	WRAP Facility Manager		X	
Bottenus, R. Jay	FH WRAP Engineering	X	X	X
Brickey, M. F.	FH QC		X	
Brooks, Patti	FH Sr. Clerk		X	X
Burrow, Barry	FH T-Plant Mgr.	X		
Campbell, Jim	Training Specialist		X	
Cantaloub, Michael	FD/NDA/Engineer		X	
Chase, R. E.	WRAP Operations		X	
Clinton, Richard	FH TRU AK Expert	X	X	X
Colley, Briana	FH WSCF HSG		X	X
Crane, Paul J.	TRU Site Project Manager	X	X	X

HANFORD PERSONNEL CONTACTED				
NAME	ORG/TITLE	PREAUDIT MEETING	CONTACTED DURING AUDIT	POST AUDIT MEETING
Curfman, E.W.	FH PFP A-Lab Manager			X
DeRosa, David	FH Assistant TRU SPM	X	X	X
Durkin, B. K.	WRAP Maintenance		X	
Gentry, Wayne	T-Plant Crane Ops.		X	
Gillespie, Bruce	Canberra, NDA Scientist	X	X	X
Greager, Eric	FH TRU Project Alternate SMP	X	X	X
Greager, Tim	TRU Program/Alternate Site Project Manager	X	X	X
Guera, R.F.	DOE-RL SW Program Mgr.			X
Hale, Joseph	FH Scientist HSG	X	X	X
Halelki, Tom	Corrective Action Mgmt.		X	
Harris, Phillip	WRAP NDA / Operations		X	
Heath, Nettie	FH Records Specialist		X	X
Henry, Deanna	Oregon Energy Emergency Preparedness Coordinator	X		
Hey, Bruce	FH Scientist		X	
Hiegel, Bob	DOE-RL, Engineer	X		
Hines, K.	WRAP RADCON		X	
Hopkins, Blaine	NDE Level II - Leak Test		X	

HANFORD PERSONNEL CONTACTED				
NAME	**ORG/TITLE**	**PREAUDIT MEETING**	**CONTACTED DURING AUDIT**	**POST AUDIT MEETING**
Huggins, Stewart	FH Alternate SQAO		X	X
Hutchins, Les	FH Environmental Engineer		X	X
Keve, John	Independent Technical Reviewer – NDE Level III		X	
Kover, Karola	FH WMP, Waste Certification Official Alternate, and TRU HSG	X	X	X
Leonard, Kathy	TRU Transportation Certification Official	X	X	X
Maupin, Jim	Site Quality Assurance Officer	X	X	X
McCollum, Rick	FH WMP Calibration Activity Manager	X		
McGhan, Mark	FH CAM		X	
Miller, Loretta	FH Records Specialist		X	X
Moore, Terry	FH, Director	X		
Nance, Sheri	FH Alternate SQAO		X	X
Parsons, Brian	WSCF Radcon.		X	
Richards, Dave	WRAP Operators		X	
Ruhlman, W.A. "Bill"	DOE-RL Facility Rep. WRAP CWC	X	X	
Sams, C. A.	WRAP QA/QC, QAE		X	
Sax, Scott	FH PFP Director	X		
Skeels, Brian	FH PFP Project Manager	X		X

HANFORD PERSONNEL CONTACTED				
NAME	**ORG/TITLE**	**PREAUDIT MEETING**	**CONTACTED DURING AUDIT**	**POST AUDIT MEETING**
Shrader, Todd	DOE-RL TRU Program Manager	X	X	X
Southworth, Tim	WRAP NDA Expert		X	
Sutter, Caroline	FH PFP Residues Manager	X	X	X
Svoboda, Ken	FH TRU Lead Process/WCO	X	X	X
Taylor, Charles	WRAP NDE Technical Supervisor		X	
Thackaberry, W.R.	WRAP/Facility Quality Assurance Officer		X	
Thomas, Debra	FH Training Administrator		X	X
Valero, Oscar	NDA PFP residues Operator		X	
Van Slyke, Jan	FH Procedures		X	X
Van Vliet, Jim	FH WMP Vice President	X		X
Varljen, Greg	FH WRAP Verification	X		
Wardrobe, L. F.	WRAP NDA		X	
Weeks, K. E.	WRAP Facility Rep. HP		X	
Westsik, George	FH PFP NDA Scientist	X	X	X
Wilkinson, Robert	FH Treatment Facility		X	
Wise, Will	WRAP Ops/Operator		X	
Wright, Allison	DOE-RL, Residues PM	X		X
Yale, Chris	NDA PFP Residues		X	

HANFORD PROCEDURES AUDITED

NUMBER	PROCEDURE NUMBER	TITLE
1.	WMP-400, section 1.1.2	TRU Graded Approach
2.	WMP-400, section 1.2.1	TRU Training and Qualification Plan
3.	WMP-400, section 1.2.2	Qualification and Certification of Inspection and Test Personnel
4.	WMP-400, section 1.2.3	Qualification and Certification of Audit Personnel
5.	WMP-400, section 1.3.1	TRU Corrective Action Management
6.	WMP-400, section 1.3.2	TRU Nonconforming Item Reporting and Control System
7.	WMP-400, section 1.3.3	TRU Corrective Action Reporting and Control
8.	WMP-400, section 1.4.1	TRU Document Control
9.	WMP-400, section 1.5.1	TRU Records Management
10.	WMP-400, section 2.1.1	TRU Process Control
11.	WMP-400, section 2.1.2	TRU Operating Procedure Preparation and Approval
12.	WMP-400, section 2.1.3	TRU Administrative Procedure Preparation and Approval
13.	WMP-400, section 2.1.5	TRU Transportation Logistics
14.	WMP-400, section 2.1.6	TRU Analytical Procedure Process
15.	WMP-400, section 2.3.1	TRU Procurement Planning
16.	WMP-400, section 2.3.2	TRU Procurement Document Control
17.	WMP-400, section 2.3.3	TRU Control of Purchased Items and Services
18.	WMP-400, section 2.4.4	TRU Control of Measuring, Test, and Data Collecting Equipment
19.	WMP-400, section 2.4.5	TRU Identification and Control of Items
20.	WMP-400, section 3.1.1	TRU Management Assessment
21.	WMP-400, section 3.1.2	Quality Assurance Reports to Management
22.	WMP-400, section 3.2.1	TRU Independent Assessments
23.	WMP-400, section 3.2.2	TRU Surveillance Program
24.	WMP-400, section 6.1.1	TRU Software Quality Assurance
25.	WMP-400, section 7.1.1	TRU Waste DQOs Reconciliation and Reporting
26.	WMP-400, section 7.1.3	Transuranic Waste Repackaging, Visual Examination, and Sampling
27.	WMP-400, section 7.1.4	Sampling Design and Data Analysis for RCRA Characterization and Visual Examination of Retrievably Stored Waste
28.	WMP-400, section 7.1.5	WWIS Data Reporting and Entry
29.	WMP-400, section 7.1.6	TRU Waste Project Level Data Validation and Verification
30.	WMP-400, section 7.1.7	TRU Waste Sample and Waste Container Management Activities
31.	WMP-400, section 7.1.8	Transuranic Waste Transportation and Disposal Certification
32.	WMP-400, section 7.1.9	Acceptable Knowledge Documentation Management
33.	WMP-400, sec. 7.1.10	TRU Waste VE Technique
34.	WMP-400, section 8.1.1	Logkeeping Practices for WIPP Activities for Headspace Gas Sampling and Analysis
35.	WMP-400, section 8.1.8	Data Management for Headspace Sampling and Analytical Results
36.	WMP-350, section 2.2	Calculation of Assay Results
37.	WMP-350, section 2.3	Data Management
38.	WMP-350, section 2.5	GEA Energy and Efficiency Setup and Baseline Establishment
39.	WMP-350, section 2.8	WRAP NDA Measurement Control Program
40.	WMP-350, section 2.9	Performing Calib. Verifications and Confirmations for NDA at WRAP
41.	WRP1-OP-0503	Move Drums Throughout WRAP
42.	WRP1-OP-0521	Receive and Load TRUPACT Containers
43.	WRP1-OP-0522	Assemble and Stretch Wrap TRUPACT Payload
44.	WRP1-OP-0524	Helium Leak Test of the TRUPCT-II Shipping Container
45.	WRP1-OP-1225	Radiological Support of TRUPACT-II Shipping and Receiving
46.	WRP1-OP-0726	TRU Loadout Gloveboxes Operation
47.	WRP1-OP-0729	Visual Examination
48.	WRP1-OP-0906	Gamma Energy Assay Operations
49.	WRP1-OP-0908	Operation of the Drum NDE System
50.	WRP1-OP-0911	Storage and Use of Special Nuclear Material (for PDP work only)
51.	DO-080-009	Obtain Headspace Gas Samples of TRU Waste Containers

HANFORD PROCEDURES AUDITED

NUMBER	PROCEDURE NUMBER	TITLE
52.	LA-523-410	Determination of VOCs in TRU/Mixed Waste Container Headspace
53.	LO-080-407	Cleaning SUMMA Canisters for TRU Headspace Gas Sampling
54.	LO-090-450	TRU Project Sample C-O-C, Storage, Acceptance, and Disposal
55.	ZA-400-301	SAS Energy and Efficiency Setup and Baseline Determination
56.	ZA-400-302	Calculation of Assay Results
57.	ZA-948-385	NDA Using the Segmented Gamma Scan Assay System (SGSAS)
58.	ZO-160-080	Pipe-n-Go Processing
59.	FSP-PFP-5-8, sec. 16.2	Data Management
60.	FSP-PFP-5-8, sec. 16.3	Establishing QC Criteria for the SGSAS
61.	FSP-PFP-5-8, sec. 16.4	Calibration Confirmation for the SGSAS at PFP