



**Department of Energy**  
Carlsbad Field Office  
P. O. Box 3090  
Carlsbad, New Mexico 88221  
August 9, 2001



Mr. Steve Zappe, Project Leader  
Hazardous Materials Bureau  
New Mexico Environment Department  
2905 E. Rodeo Park Drive, Bldg. 1  
Santa Fe, NM 87505

RE: Transmittal of the Re-Certification Audit Report for the Hanford Site (A-01-03)

Dear Mr. Zappe:

This letter transmits the Hanford Site re-certification Audit Report for the processes being performed to characterize and certify contact handled debris waste (summary category group S5000) as required by Section II.C.2.c of the WIPP Hazardous Waste Facility Permit. The report contains the results of the annual re-certification audit performed for the processes previously approved by NMED for the characterization and certification of retrievably stored debris waste. The audit was conducted June 11-15, 2001.

*I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fines and imprisonment for knowing violations.*

If you have any questions concerning this audit report, please contact Mr. Sam Vega at (505) 234-7423.

Sincerely,

Dr. Inés R. Triay  
Manager

Enclosure



Mr. Steve Zappe

-2-

August 9, 2001

cc: w/enclosure  
C. Walker, Techlaw  
M. Gerle, WTS

cc: w/o enclosure  
T. Harms, DOE-HQ  
K. Watson, CBFO  
S. Vega, CBFO  
L. Chism, CBFO  
T. Shrader, DOE-RL  
J. Kieling, NMED  
J. Bearzi, NMED  
R. Dinwiddie, NMED  
J. Maupin, FH  
P. Crane, FH  
J. Lee, WTS  
L. Steven, WTS

U.S. DEPARTMENT OF ENERGY  
CARLSBAD FIELD OFFICE

FINAL AUDIT REPORT

OF THE

HANFORD SITE

RICHLAND, WASHINGTON

AUDIT NUMBER A-01-03

JUNE 11-15, 2001

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



Prepared By: \_\_\_\_\_

*SDC*  
Steven D. Calvert  
Audit Team Leader

Date: \_\_\_\_\_

*8/1/01*

Approved By: \_\_\_\_\_

*for Lea Christ*  
Samuel A. Vega  
CBFO QA Manager

Date: \_\_\_\_\_

*08/08/01*

## **1.0 EXECUTIVE SUMMARY**

Carlsbad Field Office (CBFO) Audit A-01-03 was conducted to evaluate the adequacy, implementation, and effectiveness of the Hanford Site (Hanford) transuranic (TRU) waste characterization activities for contact handled debris waste (summary category group S5000). The audit was conducted to verify the continued compliance to the requirements detailed in the Waste Isolation Pilot Plant (WIPP) Hazardous Waste Facility Permit (HWFP).

The audit was conducted at the Hanford facilities on June 11-15, 2001. The audit team concluded that the Hanford technical and quality assurance (QA) programs, as applicable to audited activities, continue to meet requirements contained in the HWFP. The audit team also concluded that the defined QA and technical processes for the audited activities continue to be implemented in accordance with the Hanford Quality Assurance Project Plan (QAPjP) and implementing procedures and that the processes are effective.

The audit team did not identify any conditions adverse to quality that required the issuance of a CBFO CAR. Three isolated deficiencies requiring only remedial corrective actions were corrected during the audit (CDA). Two Observations were identified, and two Recommendations are being offered for Hanford management's consideration. The CARs and CDAs are described in section 6.0 and the Observations and Recommendations are discussed in section 7.0.

## **2.0 SCOPE AND PURPOSE**

### **2.1 Scope**

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

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

- Personnel Qualification and Training
- Document Control
- Records Management
- Nonconformance Control
- Corrective Action
- Assessments/Audits
- Sample Control
- Performance Demonstration Program (PDP)

The following CBFO technical characterization elements were evaluated in accordance with the WAP:

Sampling Design  
Sample Handling  
Headspace Gas Sampling and Analysis  
Real-Time Radiography (RTR)  
Visual Examination (VE)  
Acceptable Knowledge (AK)  
Data Validation, Usability, and Reporting  
WIPP Waste Information System (WWIS)

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**

Samuel Vega	CBFO QA Manager
Steven Calvert	Audit Team Leader, CTAC
Pete Rodriguez	Auditor, CTAC
Steve Davis	Auditor, CTAC
Amy Arceo	Auditor, CTAC
Jim Schuetz	Auditor, CTAC
Dee Scott	Auditor, CTAC
Charlie Riggs	Auditor, CTAC
Dick Blauvelt	Technical Specialist, CTAC
Ken Coop	Technical Specialist, CTAC
Karen Gaydosh	Technical Specialist, CTAC
BJ Verret	Technical Specialist, CTAC
Tom Ward	Technical Specialist, WTS

## **OBSERVERS**

June Dreith	NMED/TechLaw Observer
Bob Thielke	NMED/TechLaw Observer
Steve Zappe	NMED Observer
Steve Holmes	NMED Observer
James Channell	EEG Observer
Robert Davis	DOE-ID Observer

## **3.0 AUDIT PARTICIPANTS**

Hanford individuals involved in the audit process are identified in Attachment 1. A preaudit meeting was held at the 2420 Stevens Dr. Building, Conference Room 153, on June 11, 2001. 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 of the 2420 Stevens Dr. Building on June 15, 2001.

## **5.0 SUMMARY OF AUDIT RESULTS**

### **5.1 Program Adequacy and Implementation**

This audit was performed to assess Hanford's continued ability to characterize waste from Summary Category Group S5000 (retrievably stored debris waste) to the requirements specified in the WIPP Waste Analysis Plan (WAP). The characterization methods assessed were headspace gas sampling, headspace gas analysis, acceptable knowledge (AK), radiography, and VE. Data review, validation, and use of those results to perform data quality objective (DQO) reconciliation and prepare a Waste Stream Profile Form (WSPF) were assessed. The audit team evaluated a waste stream from Summary Category Group S5000. This was the only waste stream available for demonstration during the audit. The processes demonstrated for that waste stream will also be used to characterize other retrievably stored debris waste streams. Once the Hanford processes are approved for use on this waste stream, those processes can be used for other waste streams to be characterized in the future. (AK, RTR, VE, and headspace gas sampling and analysis will be performed exactly the same for waste streams regardless of the Summary Category Group.) While the subject waste streams were retrievably stored debris, Hanford will use these procedures to certify and ship all other retrievably stored waste streams once it receives New Mexico Environment Department (NMED) approval. Newly generated waste streams and waste streams from Summary Category Groups S3000 and S4000 will require an additional audit because the requirements specific to these areas were not included in this audit scope.

The audit team concluded that the applicable Hanford TRU waste characterization activities, as described in the associated Hanford 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 Hanford program documents and procedures in which the WAP requirements are met. Attachment 3 contains examples of the objective evidence that were reviewed during the audit.

## **5.2 Technical Activities**

### **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 by using controlled procedures. This audit was performed to assess Hanford's continued ability to characterize Summary Category Group S5000 debris waste streams. In particular, a retrievably stored debris waste stream was evaluated. Objective evidence to evaluate the implementation of the associated characterization activities was selected and reviewed. Batch reports, sampling records, and training documentation for TRU Waste Characterization Program (TWCP) personnel were included in the evaluation. The audit included direct observation of actual waste characterization activities (such as gas sampling, RTR, and WIPP Waste Information System [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 inclusion in the WSPF for each characterization technique was reviewed to ensure that all applicable requirements were captured in the site operating procedures. The material in this section is also addressed in more detail in following sections, which provide the specific procedures audited and the objective evidence reviewed.

Hanford demonstrated compliance with the characterization requirements of the WAP through documentation and by performing the characterization activities. Hanford provided combined sampling and analysis batch reports, WSPF-010319, WSCF-

010302, and WSCF-01-423 (containing sampling and gas analytical batch information); radiography batch reports WR-TB-2000-88, WR-TB-2000-89, WR-TB-2000-116, WR-TB-2001-017, WR-TB-2001-048; and VE batch reports WR-TB-2000-117 and WR-TB-2001-027. The project level data verification and validation process was evaluated by reviewing the following batch data reports (copies of all the referenced batch reports are included in attachment 3):

- WR-TB-2000-88 (RTR)
- WR-TB-2000-89 (RTR)
- WR-TB-2000-99 (RTR)
- WR-TB-2000-116 (RTR)
- WR-TB-2000-117 (VE)
- WSCF-000726 (HGAS)
- WSCF-000822 (HGAS)

AK and the auditable record were reviewed in detail for a Summary Category Group S5000 retrievably stored debris waste stream. The AK record was reviewed to demonstrate that the required information was present and correctly interpreted. The batch reports cited above were used to demonstrate confirmation of AK, to reconcile DQOs, to prepare a WSPF, and to transmit data to WIPP using the WWIS.

A WSPF and the summarized characterization information related to it were reviewed to establish the objective evidence for reporting waste characterization information to WIPP. The form was completed using information from characterization processes. An actual WSPF has been prepared and was submitted to CBFO prior to any shipments as required. The form was reviewed and approved by the CBFO when the waste stream had been fully characterized and the site was approved to ship waste.

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

No solids or soils/gravel waste streams are being addressed by Hanford at this time. These areas were not audited; therefore, no Hanford S3000 or S4000 waste will be accepted for disposal at WIPP until the procedures and processes have been audited and accepted by CBFO and a final audit report for those processes has been approved by NMED.

### **5.2.3 Table B6-3 Acceptable Knowledge Checklist**

This audit was performed to assess Hanford's ability to characterize Summary Category Group S5000 retrievably stored debris waste streams. Items on the AK checklist are intended to ensure that Hanford has an AK process in place to:

- Train personnel in the data collection requirements
- Assemble those data into a coherent narrative detailing the waste generation and constituents
- Segregate the waste into like waste streams
- Provide Resource Conservation and Recovery Act (RCRA) characterization for those waste streams
- Confirm those characterizations using sampling and analysis
- Provide an auditable set of records to support the characterization

The AK summary documentation contained in the auditable record and container-specific information were reviewed. The audit was limited to a single debris waste stream. Traceability of the AK documentation was accomplished by selecting a random sample of reference documents. The summary document and supporting documentation identifies the waste stream and point of generation for the containers. Several of the references are selected to ensure they are available in the auditable record and to see if the source documents support the characterization determination. These sources include such items as published reports, process flow diagrams, interviews with site personnel concerning use of hazardous materials, and reports of previous waste characterization sampling and analysis efforts.

The AK process was evaluated by reviewing the AK summary for the subject waste stream in HNF-5482 and HNF-5481 titled "Hanford Site TRU Waste Specific AK Documentation for the Plutonium Finishing Plant" and "Hanford Site TRU Waste Specific AK Documentation for PFP Non-Mixed Debris. Other upper tier AK summary documents were examined as well for mixed PFP debris (HNF-6489) and Purex mixed and non-mixed debris (HNF-6900 and 7355 respectively). 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 waste stream was selected and the AK information for its characterization was traced from the summary to the point of generation.

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 discrepancy resolution procedure is WMH-400, section 7.1.9, *Acceptable Knowledge Documentation Management*.

The AK checklist was completed, in part, by reviewing primarily three documents as noted above: HNF-5482, HNF-5481 and HNF-6489 for mixed PFP debris. Additional documentation supporting the AK summary documents and AK source document review summaries are contained in attachment 3 to support the entries in table B6-3.

Hanford WSPF RLNPDT.002 for non-mixed PFP debris and the information related to it were reviewed to establish the objective evidence for reporting characterization information to WIPP. Procedure WMH-400, section 7.1.1, *TRU Waste Characterization DQO Reconciliation and Reporting*, was evaluated during the audit.

The procedures cited above, which are used by the site to assemble, evaluate, document, and reconcile sampling and analysis results, were reviewed for adequacy and their implementation was assessed during the audit. The AK requirements include procedure content and specific requirements for retrievably stored waste and ensure that the AK summary includes all mandatory information required by the WAP.

Reports and records used to document the basis of Hanford AK were evaluated; copies of pages used for objective evidence can be found in attachment 3 of this report. The reports were found to be satisfactory and the records properly maintained as QA records. The list of AK documentation reviewed in support of Procedure WMH-400 sec. 7.1.1 is identified in attachment 3.

Hanford was found to be satisfactorily using sampling and analysis data to confirm the waste characterization designations made using AK. Hanford has an adequate process in place to resolve discrepancies and document changes. Waste characterization designations were confirmed by reviewing the batch reports documenting the characterization activities. If the characterization results do not support the AK waste stream description, a non-conformance report (NCR) is prepared. The site is making conservative assignments of hazardous waste designations

This audit verified that Hanford is satisfactorily implementing the AK process to delineate, characterize, and confirm the characterization of waste for disposal in accordance with WIPP WAP requirements.

#### 5.2.4 Table B6-4 Headspace Gas Checklist

This audit was performed to assess Hanford's ability to characterize Summary Category Group S5000 debris waste streams. Headspace gas sampling and analysis operations at Hanford were observed during actual sample collection and analysis of SUMMA® canister samples. The procedures evaluated are:

WHM-400, section 7.1.7, *TRU Waste Sample and Waste Container Management Activities*

WHM-400, section 8.1.1, *Logkeeping Practices for WIPP Activities in Special Analytical Support*

WHM-400, section 8.1.8, *Data Management for Headspace Gas Sampling and Analytical Results*

LO-080-407, *Cleaning Summa Canisters for TRU Waste HSG Sampling*

LA-523-410, *Determination of VOCs in TRU/Mixed Waste Container Headspace*  
LA-523-426, *Determination of Permanent Gases in Waste Container Headspace*  
LO-090-450, *TRU Project Sample Chain-of-Custody, Acceptance, and Disposal*  
DO-080-009, *Obtain Headspace Gas Samples of TRU Waste Containers*

Headspace gas sampling and analysis was audited by evaluating the sampling equipment, observing sampling and analysis activities, and reviewing available headspace gas batch reports. Sampling and analytical batch data reports are combined into a single report. Batch reports were reviewed to evaluate sampling and analysis results against WAP requirements (Batch Numbers WSPF-010319, WSCF-010302, and WSCF-01-423).

Documentation specific to these activities (e.g., calibration records, maintenance logbooks, and instrument logbooks) were reviewed to ensure that laboratory operations met QA requirements, as specified in the WAP. Copies of the applicable documentation reviewed are included in the batch reports.

The table B6-4 headspace gas checklist was completed by assessing the implementation of the procedures listed above. Sampling and analysis operations were observed and records from these activities were reviewed.

At Hanford, headspace gas is sampled using a manifold system installed on a mobile platform. The system has sample ports, a photo-ionization detector (to determine cleanliness), purge gas (pure nitrogen), and calibrated pressure/vacuum gauges. Samples are collected by inserting a side-port needle through the drum filter. More detail concerning the sampling system can be found in the Hanford QAPjP and the applicable procedure.

Many of the questions on the B6-4 checklist involve the techniques, handling, and quality controls associated with sampling. Equipment is controlled to ensure that it does not contaminate the sample. Sample integrity is protected using procedure LO-090-450, *TRU Project Sample Chain-of-Custody, Acceptance, and Disposal*. The implementation of this procedure was observed. Copies of the chain of custody (COC) and sample canister information documents are included in the batch reports. Sample collection is assessed by collecting QC samples and evaluating the process against specific quality assurance objectives (QAOs). Sample collection is controlled by procedure DO-080-009, *Obtain Headspace Gas Samples of TRU Waste Containers*, and analysis of samples is controlled by procedures LA-523-410, *Determination of VOCs in TRU/Mixed Waste Container Headspace*, and LA-523-426, *Determination of Permanent Gases in Waste Container Headspace*. Review of the results to ensure they meet program QAOs is controlled by WHM-400, section 8.1.8, *Data Management for Headspace Gas Sampling and Analytical Results*. Sampling QAOs are assessed after the QC samples are analyzed and are documented in the analytical batch report.

The processes used to clean, leak-check, and maintain sampling equipment were evaluated and found to adequately meet WAP requirements. Procedure LO-080-407, *Cleaning Summa Canisters for TRU Waste HSG Sampling* controls canister cleaning and certification. Field records associated with sampling activities were also found to be acceptable. Copies of pages from the field records can be found in the batch reports in attachment 3. Review of the batch reports showed compliance with the WIPP WAP requirements and that Hanford has effective plans and procedures that have been successfully implemented in both the technical and QA areas. Pages from the batch reports that serve as objective evidence for implementation of some activities of the B6-4 checklist are in attachment 3.

A minor issue resulting in a CDA is listed in section 6.2 (CDA 1) of this report and noted on the B6 checklist.

The headspace gas sampling and analysis process at Hanford satisfactorily implements the WIPP WAP requirements.

#### 5.2.5 B6-5 Radiography Checklist

This audit was performed to assess Hanford's ability to characterize Summary Category Group S5000 retrievably stored debris waste streams. Hanford radiography operations are performed using a real-time system. The unit is located in the Waste Repackaging and Processing (WRAP) facility. Hanford has controls to allow the operator to enhance the image quality of the radiograph, annotate the videotape with text, provide narration with video, rotate the drum as it is imaged, enlarge the image, and pan up and down the container. These systems allow site personnel to view drums while recording the examination on an audio/video tape.

The table B6-5 radiography checklist was completed by assessing operating procedure WRP1-OP-0908, *Operation of Drum NDE System*. Actual RTR operation (Drum Number RHZ-A-87-024) was observed, videotapes of operations were reviewed, and the documentation provided by these activities was evaluated. Batch reports WR-TB-2000-88, WR-TB-2000-89, WR-TB-2000-116, WR-TB-2001-017, WR-TB-2001-048 are included in attachment 3. Training course material and the RTR test drums (no specific drum number) were reviewed for adequacy.

Objective evidence was evaluated for RTR equipment and operations. The RTR process was observed during operation in the WRAP facility. Batch reports and RTR videotapes were selected to evaluate the documentation of the RTR process.

Radiography equipment maintenance and daily checks were evaluated against the WAP requirements as implemented in the RTR procedures and were found to be

satisfactory. Radiography results are properly reported on standard forms and are adequately reviewed, as required by the WAP. Copies of the forms are included in the batch reports listed in attachment 3.

Hanford satisfactorily implements the WIPP WAP radiography requirements.

#### 5.2.6 B6-6 VE Checklist

This audit was performed to assess Hanford's ability to characterize Summary Category Group S5000 retrievably stored debris waste streams. Visual examinations include both the QC check performed on radiography results and observations made during initial waste packaging. Hanford was audited to determine the effectiveness of VE as the QC check on RTR. VE to support radiography is recorded on audio/video tape and documented on standard forms.

Hanford VE activities were evaluated by observing actual examinations, reviewing videotapes, and evaluating all of the VE batch reports. The batch reports reviewed were WR-TB-2000-117 and WR-TB-2001-027. These batch reports are included in attachment 3.

The VE procedure is WRP-OP-0729, *Visual Examination*. The procedure was found to be adequate in meeting the WAP requirements.

The random selection procedure, WMH-400, section 7.1.4, *Sampling Design and Data Analysis for RCRA Characterization and Visual Examination of Retrievably Stored Waste*, which is used to select drums to confirm radiography results, was audited. Procedure WHM-400, section 7.1.6, *TRU Waste Project Level Data Validation and Verification*, which is used to determine the miscertification rate for the site, was assessed.

The training course content for operators and VE experts was reviewed to verify that all WAP requirements were captured in the course. The course material is included in attachment 3. No deficiencies were noted in this area.

Hanford is satisfactorily implementing the WIPP WAP VE requirements.

## **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 that condition(s) on Corrective Action Reports (CAR).

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 Quality Assurance (QA) program.

No WAP related concerns requiring issuance of a CAR was identified during phases the audit.

## **6.2 Deficiencies Corrected During the Audit**

During the audit, the audit team may identify Conditions Adverse to Quality (CAQ). The audit team members and the Audit Team Leader (ATL) evaluates the CAQs to determine if they are significant using the following definitions. 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 a isolated case requiring only remedial action and therefore can be Corrected During the 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.

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

Corrected During the Audit (CDA) – Isolated deficiencies that do not require a root cause determination or actions to preclude recurrence, and 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). One or two individuals have not completed a reading assignment.

Three WAP related concerns hat resulted in CDAs were identified during this audit.

1. DO-080-009, obtain headspace gas samples of TRU Waste Containers Section 6.1.7 indicates that the traveler and AK are used to verify drum liners have been vented. RTR/VE are actually used to make this determination, and a procedure change was completed to reflect the correct information.
2. Copy of closed NCR TRU-WRP-01NCR-017, and copies of Deficiency Evaluation forms (DEFs) for NCRs TRU-WRP-01NCR-055 and 057 not in file. Copies of the

documents were placed on file prior to the end of the audit. No other instances of missing NCRs or DEFs were found.

3. Corrective Action Report TRU-WSCF-00CAR-108 closure documentation needed clarification. NCR closure documentation incomplete, A memo was added to the file explaining the closure actions.

## **7.0 SUMMARY OF OBSERVATIONS AND RECOMMENDATIONS**

During the audit, the audit team may identify conditions, which warrant input by the audit team to the audited organization regarding potential problems or suggestions for improvement. The audit team members in conjunction with the Audit Team Leader (ATL) evaluates these conditions and classifies them as Observations or Recommendations using the following definitions. Once a determination is made, the audit team member in conjunction with the ATL categorizes the conditions appropriately.

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.

### **7.1 Observations**

Two WAP related issues resulting Observations identified during the audit:

1. AK information was used as confirmation of RTR for a potential pressurized container. RTR could not confirm if the container had been vented. Review of the AK documentation confirmed that the container had been vented. The method for making these type of determinations needs to be better defined and results documented in concise manner.
2. Training for RTR operators lapsed. An internal CAR was written and training was performed. The operators passed the re-qualification tests. The corrective action should include a review of data generated during the time frame the operators training lapsed.

### **7.2 Recommendations**

Two WAP related Recommendations were provided to Hanford management during the audit:

1. Recommend that when discrepancies are identified during the Independent Technical Review (ITR) and changes are made to the data that reference back to the ITR checklist be entered with the change to establish the reason for the changes.
2. Visual examination tapes do not show the role of the Visual Examination Expert (VEE) when providing direction during the process. Recommend that the narrator state what direction the VEE is providing.

## **8.0 LIST OF ATTACHMENTS**

Attachment 1: Personnel Contacted During the Audit and the List of Procedures Audited

Attachment 2: Corrective Action Supporting Documentation

Attachment 3: Objective Evidence

Attachment 4: Audited Hanford Implementing Procedures

# **ATTACHMENT 1**

<b>HANFORD PERSONNEL CONTACTED</b>				
<b>NAME</b>	<b>ORG/TITLE</b>	<b>PREAUDIT MEETING</b>	<b>CONTACTED DURING AUDIT</b>	<b>POST AUDIT MEETING</b>
Ailes, Sid	Duratek Consultant	X	X	X
Aromi, Ed	FH/WMP/Vice President	X		X
Bartus, Dave	EPA Region 10	X		
Beebe, Kevin	FH Sample Receiving		X	
Blackford, L.	FHI/WMP/Manager Waste Services	X		X
Bloom, Robert	WRAP Facility Manager		X	
Bogart, Don	QA Records Management		X	
Brandon, Dave	FH Treatment Facility		X	
Brooks, Patti	FH Clerk		X	X
Campbell, Jim	Transportation Specialist			X
Cantaloub, Michael	FD/NDA/Engineer	X	X	X
Clinton, Richard	AK Data Collector	X	X	X
Colly, Briana	FH Plant Engineer	X	X	X
Crane, Paul J.	TRU Site Project Manager	X	X	X
Day, Sandra	WMP QA Clerk		X	
DeRosa, David	FH SPM	X	X	X
Djang, Lincoln	FH Statistics Analyst			X
Dougherty, Leslie A.	TRU Records Specialist		X	X
French, Mark	DOE-RL Manager	X	X	X
Garcia, Art	WMP Manager			X
Gillespie, Bruce	Canberra, Scientist	X		

<b>HANFORD PERSONNEL CONTACTED</b>				
<b>NAME</b>	<b>ORG/TITLE</b>	<b>PREAUDIT MEETING</b>	<b>CONTACTED DURING AUDIT</b>	<b>POST AUDIT MEETING</b>
Greager, Eric	FH TRU Project	X		X
Greager, Tim	TRU Program/Alternate Site Project Manager	X	X	X
Guercia, Rudy	DOE-RL/Acting Director Waste Management			X
Hale, Joe	FH Scientist	X	X	X
Harris, Phillip	WRAP NDA		X	
Heath, Nettie	FH records Specialist		X	X
Hey, Bruce	FH Scientist		X	
Higgins, Ron	DOE-RL/WRAP Facility Representative	X		
Huggins, Stewart	TRU QA/QC Engineer		X	X
Hutchins, Les	FH Plant Engineer			X
Ibatuan, Mark	FH Manager			X
Jamisen, Fred	WM Project Manager			X
Keve, John	Independent Technical Reviewer		X	
Kidder, Bryan	Duratek/Communications	X		
Kooiker, Susan	FH Engineer	X	X	
Kover, Karola	WMP, Waste Certification Official Alternate	X	X	X
Kowitz, Robert	WRAP NDE Technician		X	
Leonard, Kathy	Transportation Certification Official	X	X	X

<b>HANFORD PERSONNEL CONTACTED</b>				
<b>NAME</b>	<b>ORG/TITLE</b>	<b>PREAUDIT MEETING</b>	<b>CONTACTED DURING AUDIT</b>	<b>POST AUDIT MEETING</b>
Lockard, Larry	FH Scientist		X	
Maupin, Jim	Site Quality Assurance Officer	X	X	X
McGhan, Mark	FH CAM		X	
Meier, Kirsten	Facility Quality Assurance Officer/WSCF	X	X	X
Nance, Sheri	FH Alternate SQAQO	X	X	X
Richards, Dave	WRAP Operations		X	
Skeels, Brian	FH PFP Project Manager			X
Srader, Todd	DOE-RL Program Manager	X	X	X
Stauffer, Markus	COGEMA/Scientist	X	X	X
Sutter, Caroline	FH PFP Residues Manager	X	X	X
Svoboda, Ken	FH WCO	X	X	X
Thackaberry, W.R.	WRAP/Facility Quality Assurance Officer		X	X
Thomas, Debra	FH Training Administrator		X	X
Thurman, Pam	FH Records Specialist		X	
Van Slyke, Jan	FH Procedure Writer		X	X
Wardrobe, L. F.	WRAP NDA		X	
Weidert, John R.	FH WRAP Manager		X	
Westsik, George	FH Scientist	X	X	
Widhalm, Cherie Ann	FH Records Specialist	X		

<b>HANFORD PERSONNEL CONTACTED</b>				
<b>NAME</b>	<b>ORG/TITLE</b>	<b>PREAUDIT MEETING</b>	<b>CONTACTED DURING AUDIT</b>	<b>POST AUDIT MEETING</b>
<b>Wilkinson, Robert</b>	<b>FH Treatment Facility</b>		<b>X</b>	
<b>Wise, Will</b>	<b>WRAP OPs/Operator</b>		<b>X</b>	
<b>Wright, Allison</b>	<b>DOE-RL, Residues PM</b>	<b>X</b>		<b>X</b>
<b>Wright, Debra</b>	<b>FH Records Specialist</b>		<b>X</b>	
<b>Yoakum, A. K.</b>	<b>FH Maintenance Manager</b>	<b>X</b>		

**Personnel Contacted During the Audit by Area**

Nonconformance/Corrective Action	P. Crane J. Maupin K. Meier S. Nance
Personnel Qualification and Training	D. Thomas
Documents and Records	J. Van Slyke J. Maupin S. Nance D. Bogart S. Day N. Heath P. Thurman C. Widhalm D. Wright L. Dougherty
Sample Control	K. Meier M. Stauffer B. Hey K. Beebe J. Hale L. Lockard G. Westsik S. Huggins
Acceptable Knowledge	R. Clinton P. Crane D. DeRosa
Headspace Gas Sampling and Analysis	K. Meier M. Stauffer B. Hey K. Beebe J. Hale L. Lockard G. Westsik S. Huggins
Real-Time Radiography	J. Keve R. Kowitz D. Richards W. Thackaberry S. Kooiker
Visual Examination	J. Keve R. Kowitz D. Richards W. Thackaberry S. Kooiker
Verification and Validation	D. DeRosa S. Nance P. Crane J. Maupin K. Meier

## HANFORD PROCEDURES AUDITED FOR A-01-03

NUMBER	PROCEDURE NUMBER	TITLE
1.	WMP-400, section 1.2.1	TRU Training and Qualification Plan
2.	WMP-400, section 1.2.2	Qualification and Certification of Inspection and Test Personnel
3.	WMP-400, section 1.3.1	TRU Corrective Action Management
4.	WMP-400, section 1.3.2	TRU Nonconforming Item Reporting and Control System
5.	WMP-400, section 1.3.3	TRU Corrective Action Reporting and Control
6.	WMP-400, section 1.4.1	TRU Document Control
7.	WMP-400, section 1.5.1	TRU Records Management
8.	WMP-400, section 2.4.4	TRU Control of Measuring, Test, and Data Collecting Equipment
9.	WMP-400, section 7.1.1	TRU Waste DQOs Reconciliation and Reporting
10.	WMP-400, section 7.1.3	Transuranic Waste Repackaging, Visual Examination, and Sampling
11.	WMP-400, section 7.1.4	Sampling Design and Data Analysis for RCRA Characterization and Visual Examination of Retrievably Stored Waste
12.	WMP-400, section 7.1.5	WWIS Data Reporting and Entry
13.	WMP-400, section 7.1.6	TRU Waste Project Level Data Validation and Verification
14.	WMP-400, section 7.1.7	TRU Waste Sample and Waste Container Management Activities
15.	WMP-400, section 7.1.9	Acceptable Knowledge Documentation Management
16.	WMP-400, section 8.1.1	Logkeeping Practices for WIPP Activities in Special Analytical Support
17.	WMP-400, section 8.1.8	Data Management for Headspace Gas Results
18.	WMP-350, section 2.3	Data Management of NDE/NDA Results
19.	WRP1-OP-0726	Glovebox Loadout
20.	WRP1-OP-0729	Visual Examination
21.	WRP1-OP-0908	Operation of Drum NDE System
22.	DO-080-009	Obtain Headspace Gas Samples of TRU Waste Containers
23.	LA-523-410	Determination of VOCs in TRU/Mixed Waste Container Headspace
24.	LA-523-426	Determination of Permanent Gases in Waste Container Headspace
25.	LO-080-407	Cleaning SUMMA Canisters
26.	LO-090-450	TRU Project Sample Chain-of-Custody, Acceptance, and Disposal