



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



June 8, 2005



Mr. Steve Zappe, Project Leader  
Hazardous Waste Bureau  
New Mexico Environment Department  
2905 Rodeo Park Drive East, Bldg. 1  
Santa Fe, New Mexico 87505-6303

Subject: Transmittal of Final Audit Report of Audit A-05-12 of INL/CCP

Dear Mr. Zappe:

This letter transmits the Idaho National Laboratory (INL) Audit Report for the processes performed to characterize and certify waste utilizing the services of the Washington TRU Solutions (WTS) Central Characterization Project (CCP) as required by Section II.C.2.c of the Waste Isolation Pilot Plant (WIPP) Hazardous Waste Facility Permit. The report contains the results of the initial certification audit that was conducted on May 2 – 6, 2005.

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.

Please contact the CBFO Quality Assurance Manager, Ava L. Holland, at (505) 234-7423 should you have any questions concerning this audit report.

Sincerely,

Dr. Inés R. Triay  
Acting Manager

Enclosure



Mr. Steve Zappe

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June 8, 2005

cc: w/report narrative

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U.S. DEPARTMENT OF ENERGY  
CARLSBAD FIELD OFFICE

FINAL AUDIT REPORT

OF THE

IDAHO NATIONAL LABORATORY/CENTRAL CHARACTERIZATION  
PROJECT

IDAHO FALLS, IDAHO

AUDIT NUMBER A-05-12

MAY 2 – 6, 2005

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



Prepared by:

Jimmy L. Wilburn  
Jimmy L. Wilburn, CTAC  
Audit Team Leader

Date:

06-08-2005

Approved by:

Ava L. Holland FOR  
Ava L. Holland, CBFO  
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Date:

6-8-05

## 1.0 EXECUTIVE SUMMARY

Carlsbad Field Office (CBFO) Certification Audit A-05-12 was conducted to evaluate the adequacy, implementation, and effectiveness of Idaho National Laboratory (INL) transuranic (TRU) waste characterization activities performed by or for INL by the Central Characterization Project (CCP). Activities were evaluated relative to the requirements detailed in the Waste Isolation Pilot Plant (WIPP) Hazardous Waste Facility Permit (HWFP), the CBFO Quality Assurance Program Document (QAPD), and the Contact-Handled Transuranic Waste Acceptance Criteria (CH-WAC) for the WIPP Project.

The CCP was developed by Washington TRU Solutions (WTS) to provide TRU waste characterization, certification, and transportation services, including the necessary management and administrative functions to ensure the acceptability of these processes in accordance with regulatory and site requirements. The INL is utilizing the characterization services of the CCP, including overall process management.

The audit was conducted at the INL facility May 3 through 6, 2005. The audit team concluded that overall, the INL/CCP technical and quality assurance (QA) programs, as applicable to audited activities, were satisfactory in meeting requirements. The audit team verified that the INL/CCP program for characterization and certification activities related to Summary Category Groups (SCGs) S3000, homogeneous solid waste, and S5000, debris waste, are adequate, satisfactory implemented, and effective. SCG S4000, soil and gravel, was found to be indeterminate at the time of the audit because the solid sampling and analysis activities for an initial lot of S4000 waste had not been completed at the time of the audit. The INL/CCP has satisfactorily implemented the processes required by the HWFP for the characterization of both newly generated and retrievably stored TRU waste. The audit team also concluded that overall, the defined QA and technical programs for these activities were being satisfactorily implemented in accordance with the *CCP Transuranic Waste Characterization Quality Assurance Project Plan (QAPjP)* and its implementing procedures, and that the processes were effective.

No HWFP-related corrective action reports (CARs) were identified during the audit. The audit team identified three Observations and offered two Recommendations for management consideration as a result of the audit. The Observations and Recommendations are described in sections 7.1 and 7.2 respectively.

## 2.0 SCOPE AND PURPOSE

### 2.1 Scope

The audit team evaluated the adequacy, implementation, and effectiveness of the INL/CCP TRU waste characterization and certification activities for SCGs S3000, homogeneous solids, S4000, soil and gravel, and S5000, debris waste, relative to the requirements contained in the WIPP HWFP, Attachment B through B6. Characterization processes for both retrievably stored and newly generated waste were reviewed. The following elements were evaluated in accordance with the HWFP.

### Quality Assurance

- Personnel Qualification and Training
- Nonconformance/Corrective Action
- Documents & Records

### Technical

- Data Validation & Verification (V&V)
- Acceptable Knowledge (AK)
- Real-time Radiography (RTR)
- Visual Examination (VE)
- Visual Examination Technique (VET)
- Headspace Gas (HSG) Sampling and Analysis
- Performance Demonstration Program (PDP)
- Solid/Soil and Gravel Waste Sampling and Analysis
- WIPP Waste Information System (WWIS) Data Entry
- Waste Certification (e.g., Waste Stream Profile Forms [WSPFs])

Evaluation of INL/CCP TRU waste activities and documents was based on current revisions of the following documents:

*Waste Isolation Pilot Plant Hazardous Waste Facility Permit*

*Quality Assurance Program Document, DOE/CBFO-94-1012*

*Contact-Handled Transuranic Waste Acceptance Criteria for the Waste Isolation Pilot Plant Project, DOE/WIPP-02-3122*

*CCP Transuranic Waste Characterization Quality Assurance Project Plan (QAPjP), CCP-PO-001*

*CCP Transuranic Waste Certification Plan, CCP-PO-002*

*INL/CCP Interface Document, CCP-PO-024*

Related technical and QA implementing procedures

## **2.2 Purpose**

Audit A-05-12 was conducted to assess the compliance of waste characterization and certification activities for SCGs S3000, homogeneous solids, S4000, soil and gravel, and S5000, debris waste.

### **3.0 AUDIT TEAM AND OBSERVERS**

#### **AUDITORS/TECHNICAL SPECIALISTS**

Jimmy Wilburn	Audit Team Leader, CBFO Technical Assistance Contractor (CTAC)
Steve Calvert	Auditor, CTAC
Prissy Martinez	Auditor, CTAC
Laurie Sparks	Auditor, CTAC
Tammy Bowden	Auditor, CTAC
Jack Walsh	Auditor, CTAC
Jim Schuetz	Auditor, CTAC
Earl Bradford	Auditor, CTAC
Jeff May	Auditor, CTAC
Sandra Tanner	Auditor, CTAC
Wayne Ledford	Technical Specialist, CTAC
Dick Blauvelt	Technical Specialist, CTAC
Jim Oliver	Technical Specialist, CTAC
B. J. Verret	Technical Specialist, CTAC

#### **INSPECTORS**

Ed Felcorn	Environmental Protection Agency (EPA)
Rajani Joglekar	EPA
Behram Shroff	EPA
Bob Thielke	EPA Contractor
Jim Channell	EPA Contractor
Connie Walker	EPA Contractor
Dorothy Gill	EPA Contractor

#### **OBSERVERS**

Steve Holmes	New Mexico Environment Department (NMED)
Connie Walker	NMED
Kevin Krause	NMED

### **4.0 AUDIT PARTICIPANTS**

Individuals contacted during the audit process are identified in Attachment 1. A pre-audit meeting was held in Building 637, conference rooms A and B, on May 3, 2005. Daily meetings were held with INL and CCP management and staff to discuss issues and potential deficiencies. The audit was concluded with a post-audit meeting held in Building TSA, conference room A, on May 6, 2005.

## **5.0 SUMMARY OF AUDIT RESULTS**

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

This audit was performed to assess the ability to characterize waste from SCGs S3000, S4000, and S5000 to the requirements specified in the WIPP Waste Analysis Plan (WAP). The characterization methods assessed were HSG sampling and analysis, AK, RTR, solid sampling and analysis, VE, and VET. Data review, validation, data quality objective (DQO) reconciliation, WWIS data entry, and the preparation of the WSPFs were also assessed.

The audit team concluded that the applicable TRU waste characterization activities, as described in the associated INL/CCP implementing procedures, satisfactorily meet the requirements contained in the HWFP. No CARs relative to requirements of the HWFP resulted from the audit. Details of audit activities, including specific objective evidence reviewed, are described below and are documented in the attached B6 checklist. The B6 checklist identifies the INL/CCP program documents and procedures in which the WAP requirements are met. Attachment 2 contains examples of the objective evidence reviewed during the audit. A list of INL/CCP documents evaluated during the audit is provided in attachment 3. A list of processes and equipment reviewed during the audit is included in attachment 4.

Three Observations were identified during the audit, and two Recommendations are being offered for management consideration, as described in sections 7.1 and 7.2 respectively.

### **5.2 Technical Activities**

Each technical area audited is discussed in the following sections, including the method used to select objective evidence, the objective evidence used to assess compliance with the WAP (described in detail on the checklist), and the results of the assessment.

Objective evidence was selected and reviewed to evaluate the implementation of the associated characterization activities. Batch data reports and training documentation for INL/CCP personnel were included in the evaluation. The audit included direct observation and/or a demonstrated walk-through of waste characterization activities (such as gas sampling and analysis, RTR, and WWIS data entry). Each characterization process involves:

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

- Reporting the final waste characterization information to WIPP

Each checklist question that cannot be satisfactorily answered resulted in an audit deficiency. All checklist items were adequately addressed during the audit.

### **5.2.1 Table B6-1 WAP Checklist**

The B6-1 WAP checklist addresses program requirements from an overall management perspective and the data validation at the site project level. It documents the verification that the waste characterization strategy, as defined in the WAP, is implemented by using controlled procedures. In addition, Table B6-1 documents the site project-level reviews of the data collected as a result of the waste characterization implementing procedures. This audit was performed to assess the ability of the INL/CCP to characterize waste from SCGs S3000, S4000, and S5000. Objective evidence was reviewed as part of this assessment and utilized in the completion of the table. The objective evidence included completed batch data reports (completed through the SPO review) for RTR, HSG, solid sampling, solid analysis, VE, and VET. In addition, procedures and objective evidence were reviewed to ensure that INL/CCP could adequately perform data reconciliation and properly prepare a WSPF.

The CCP procedures governing these project-level activities included:

*CCP-TP-030, CCP TRU Waste Certification and WWIS Data Entry*

*CCP-TP-001, CCP Project Level Data Validation and Verification*

*CCP-TP-002, CCP Reconciliation of DQOs and Reporting Characterization Data*

*CCP-TP-003, CCP Sampling Design and Data Analysis for RCRA Characterization*

Objective evidence was reviewed to determine of the adequacy of the SPO V&V procedures. Evidence included batch data reports from each of the waste characterization activities.

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 the following checklists, where the specific procedures audited and the objective evidence reviewed is identified.

Compliance with the characterization requirements of the WAP was demonstrated through documentation and by demonstrating the characterization activities. The project-level data V&V process was evaluated by reviewing the following batch data reports:

#### Radiography

ID05-NDE02-0002



ID05-NDE02-0003

VE to Confirm Radiography

WCV-10010345

WCV-IDRF001209273

VET

IN-ARP-VE-000018

IN-ARP-VE-000021

HSG Sampling Using Summa® Canisters

INL050002

INL050003

INL050006

HSG Analysis of Samples in Summa® Canisters

ECL05009M

ECL05009G

ECL05010M

ECL05010G

ECL05016M

ECL05016G

On-line HSG Sampling and Analysis

INHSGA0500003

INHSGA0500005

INHSGA0500006

Solid Sampling

022205-13

030605-19

032305-17

032205-04

Solid Sample Analysis

ALD05005N

ALD05005V  
ALD05006N  
ALD05006S  
ALD05006V  
ALD05008M  
ALD05008N  
ALD05008S  
ALD05008V  
ALD05010M

Copies of these batch data reports are included in Attachment 2.

AK and the auditable record were reviewed in detail for SCGs S3000, S4000, and S5000 waste streams. The AK record was reviewed to demonstrate that the required information was present and correctly interpreted. The batch data reports cited above were used to demonstrate confirmation of AK, reconcile DQOs, prepare a WSPF, and transmit data to WIPP using the WWIS.

The audit team examined the INL/CCP manual data entry process, electronic submittal of data into the WIPP WWIS, and associated documentation. The audit team verified that access control has been established and that CCP personnel are trained in WWIS data entry, WWIS software operation, and INL/CCP procedures. The audit team reviewed CCP training documents and determined that detailed information is adequately provided to allow personnel to identify specific data items for specific waste streams on specific reports. The audit team evaluated CCP processes for collection of certification data from paper records of validated container lots and determined the process to be adequate to provide a valid data source for data entry personnel. Case file records packages were reviewed and evaluated with respect to certification data entry and to records of data entry of shipment assembly and completion activities. The audit team determined that records are adequate, controlled, and submitted in accordance with procedure.

Overall, WWIS activities were determined to be adequate, satisfactorily implemented, and effective.

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

The audit team examined the solid sampling program at INL/CCP. The INL/CCP is obtaining samples of S3000 (homogeneous solids) and S4000 (soil and gravel) as material is removed from Pit 4. The governing procedures for sampling are CCP-TP-008, *CCP Solids Sampling Procedure*, and CCP-PO-025, *CCP WIPP/RCRA Field Sampling and Analysis Plan for the Accelerated Retrieval Project for a Described Area Within Pit 4*.

The audit team witnessed sampling operations on May 4, 2005. The audit team examined all of the sampling supplies in the storage area in TR-1 at the Radioactive Waste Management Complex (RWMC) and verified that the cleanliness requirements of the HWFP were met. Batch data reports 032305-17, 030605-19, and 032205-04 were reviewed. Copies of these reports are included in Attachment 2.

Training for three solid sampling personnel was reviewed and determined to be adequate.

Analysis of solid samples is performed by the INL laboratory, which is approved under a separate certification.

Overall, solid sampling activities were determined to be adequate, satisfactorily implemented, and effective.

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

The audit team assessed the ability of INL/CCP to characterize waste from SCGs S3000 (homogeneous solids), S4000 (soil and gravel), and S5000 (debris). Items on the AK checklist are intended to ensure that INL/CCP has an AK process in place to:

- Train data collection personnel
- Assemble data into a coherent narrative that describes the waste generation process and constituents of the waste
- Segregate the waste into like waste streams
- Provide Resource Conservation and Recovery Act (RCRA) characterization for the waste streams
- Confirm characterization using testing, sampling, and analysis
- Provide an auditable set of records to support characterization

The procedure governing the AK process for the INL/CCP is CCP-TP-005, *Acceptable Knowledge Documentation*.

The audit team examined AK documentation for three mixed TRU waste streams: a debris stream (S5000), a sludge solids stream (S3000), and a soils stream (S4000) from a designated area of Pit 4. The corresponding AK Summary Reports examined were CCP-AK-INL-001, *CCP AK Summary Report for a Described Area in Pit 4 at INL, R1*; CCP-AK-INL-002, *CCP AK Summary Report for the INL Rocky Flats TRU Graphite Debris, R1*; and CCP-AK-INL-003, *CCP AK Summary Report for Rocky Flats Bldg. 374 Sludge Stored at INL, R1*. In addition to the AK Summary Reports and the applicable AK attachments from Procedure CCP-TP-005 for the subject waste streams, the audit team examined AK source documents for each stream that provided support for assigned hazardous waste numbers (HWNs). Examples of discrepancy resolution of the AK record and nonconformance reports (NCRs) concerning prohibited items were also examined. The audit team noted that the CCP AK procedure now allows AK

discrepancies and their resolutions to be documented in the AK Summary itself, in lieu of completing attachment 11 to CCP-TP-005. The team issued an Observation (see Observation 3) that cautioned that if the use of the AK Summary was chosen, the discrepancy resolution must be clearly identified in the text, with reference to the supporting AK source documentation.

Confirmatory testing batch data reports for five containers from the three waste streams reviewed were used for the required traceability exercise. Draft WSPFs and attachments, including the characterization information summary (CIS) and DQO checklist, were reviewed for each of the three streams. The audit team verified compliance with requirements for sample design and data analysis for RCRA characterization. Documents reviewed included draft HSG and solids summary reports and RTR/VE comparison reports. Because there has not been sufficient VE done to date for the solids and debris streams to prepare a waste material weight parameter comparison report and trending chart, an example was reviewed from CCP work at another site. No examples of reconciliation between AK and confirmatory test results were available for the INL, therefore an example from CCP Lawrence Livermore National Laboratory was reviewed. The audit team also reviewed draft AK accuracy reports and training records for AK experts (AKE) and site project management personnel.

The INL/CCP AK program was judged to be adequate with respect to procedural compliance with requirements, and satisfactory and effective in the implementation of those requirements for both the S5000 and S3000 waste streams reviewed. The S4000 waste stream was deemed to be adequate and satisfactorily implemented except in the area of AK reconciliation. AK reconciliation for S4000 waste cannot be performed until waste sampling and analysis is completed. Therefore, the AK reconciliation portion of the process is indeterminate for SCG S4000 waste. CCP has developed a plan for taking samples for solids/soils analysis from randomly selected sections of the excavation to address the WAP requirements for solids/soils sampling. The plan is described in CCP-PO-025 R1, *CCP WIPP/RCRA Field Sampling and Analysis Plan for the Accelerated Retrieval Project for a Described Area within Pit 4*. This sampling process was examined during the audit and found to be adequate.

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

The audit team assessed the ability of INL/CCP to characterize waste from SCGs S3000 (homogeneous solids), S4000 (soil and gravel), and S5000 (debris). The CCP procedures governing on-line sampling and analysis activities, Summa<sup>®</sup> canister sampling, and data review and validation included:

*CCP-TP-082, CCP Preparing and Handling Waste Drums for Headspace Gas Sampling*

*CCP-TP-090, CCP Headspace Gas Sampling Using the Automated Manifold System*

*CCP-TP-091, CCP HSG Data Generation and Batch Reporting*

CCP-TP-093, *CCP Sampling of TRU Waste Containers*

CCP-TP-102, CCP Headspace Gas Sampling Batch Data Report Preparation

HSG sampling and analysis activities were evaluated by reviewing the sampling equipment, observing sampling and analysis activities, and reviewing available HSG batch data reports. The audit team evaluated INL/CCP operations for HSG sampling and analysis using an online system and HSG sampling using SUMMA<sup>®</sup> canisters.

HSG online sampling and analysis operations performed by the CCP include sampling operations and sample analysis for volatile organic compounds (VOCs) and hydrogen and methane. Successful participation in the latest HSG PDP was verified; determination of minimum detection limits (MDL) and performance and accuracy (P&A) studies, laboratory notebooks, standard certification, and material and testing equipment certification were audited and found to be acceptable. Batch Data Report INHSGA050007 was examined. Training and qualification of analysts were confirmed to be acceptable. Sampling operations and analytical operations were audited and found to be acceptable. For CCP HSG online sampling and analysis, the CCP procedures were found to be adequate and CCP operations were satisfactorily implemented and effective. One Observation (see Observation 1) and one Recommendation (see Recommendation 2) were made for the online sampling and analysis operations.

The audit team verified drum sampling by CCP using SUMMA<sup>®</sup> canisters, and Batch Data Report INL050004 was examined. Field sampling notebooks, standard certification, and material and testing equipment certification were audited and found to be acceptable. Sample storage, transfer to the analytical laboratory, and custody were found to be compliant. For HSG sampling using SUMMA<sup>®</sup> canisters, the CCP procedures were found to be acceptable and CCP operations were satisfactory and effective. One Recommendation (see Recommendation 1) was made for the SUMMA<sup>®</sup> canister sampling operations.

The Advanced Mixed Waste Treatment Project (AMWTP) at the INL plans to use the INL/CCP to perform HSG sampling using SUMMA<sup>®</sup> canisters. Project-level V&V performed by the AMWTP of SUMMA<sup>®</sup> canister sampling and analytical data was also reviewed and found to be satisfactory and effective. One Observation was identified (see Observation 2) related to the V&V review checklists used by the AMWTP.

Overall, HSG and gas VOCs analysis activities were determined to be adequate, satisfactorily implemented, and effective.

#### **5.2.5 Table B6-5 Radiography Checklist**

The audit team assessed the ability of INL/CCP to characterize waste from SCGs S3000 (homogeneous solids), S4000 (soil and gravel), and S5000 (debris). INL/CCP radiography operations are performed using a real-time system that meets the system specifications identified in the WAP. INL/CCP has controls to allow the operator to enhance the image quality of the radiograph, provide narration with the video, rotate the

drum as it is imaged, enlarge the image, and pan up and down the container. The system allows personnel to view drums while recording the examination on an audio/videotape.

The Table B6-5, Radiography Checklist, was completed by assessing the following procedures CCP-TP-102, *CCP RTR#2 Radiography Inspection Operating Procedure*, and CCP-TP-028, *CCP Radiographic Test and Training Drum Requirements*.

The audit team examined the radiography program for the INL/CCP. One RTR system, RTR Unit #2, was being used on the project. As part of the RTR review, the following batch data reports were reviewed: ID05-NDE02-0001, ID05-NDE02-0002, ID05-NDE02-0003, ID05-NDE02-0004, ID05-NDE02-0005, and ID05-NDE02-0006. The associated audio/videotapes for these batch data reports were also reviewed. Operations were observed on May 3, 2005, on drum IDRFP1213864.

Training files for three operators were reviewed and videotapes of the biannual scanning of the test drums by the radiography operators were examined.

Overall, RTR activities were determined to be adequate, satisfactorily implemented, and effective.

#### **5.2.6 Table B6-6 Visual Examination Checklist**

The audit team assessed the ability of INL/CCP to characterize waste from SCGs S3000 (homogeneous solids), S4000 (soil and gravel), and S5000 (debris). The INL/CCP VE process was evaluated to determine the effectiveness of VE as a confirmation of the RTR process. VE to confirm RTR is performed by the Materials and Fuels Complex (MFC) (formerly Argonne National Laboratory - West) at the INL. The VE program at the MFC is audited and certified under a separate program. The audit team verified that the INL/CCP could properly perform project-level V&V of VE data produced by the MFC. The VET process was also evaluated. The INL/CCP is performing VET of waste as it is packaged after retrieval from Pit 4. VET is performed in accordance with the following Procedure CCP-TP-006, *CCP Visual Examination Technique for INL Newly Generated TRU Waste Received from Pits*.

The audit team examined the VET program for the INL/CCP. Batch data reports IN-ARP-VE-000117, IN-ARP-VE-000119, IN-ARP-VE-000032, and IN-ARP-VE-000026 were examined for VET. Training and qualification files for six VE personnel were also reviewed. Four batch data reports for VE to confirm radiography, WCV-10009600, WCV-IDRF001208619, WCV-10010345, and WCV-IDRF001209273, were reviewed during the audit. The INL/CCP is currently performing VE to confirm radiography on the first 50 containers for SCGs S3000 and S5000 to establish the initial miscertification rates. No concerns were identified in this area.

Overall, the audit team concluded that VE and VET activities were adequate, satisfactorily implemented, and effective.

### **5.2.7 General**

Because this was the initial INL/CCP Certification Audit, no previous results were available for review in the following areas:

- Changes in programs or operations
- New programs or activities being implemented
- Changes in key personnel

## **6.0 SUMMARY OF DEFICIENCIES**

### **6.1 Corrective Action Reports**

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

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

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

No conditions adverse to quality associated with the requirements of the HWFP were identified during the audit.

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

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

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

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

Once a determination is made that the CAQ is not significant, the audit team member, in conjunction with the ATL, determines if the CAQ is an isolated case requiring only remedial action and therefore can be corrected during audit (CDA). Upon determination that the CAQ is isolated, the audit team member, in conjunction with the ATL, evaluates/verifies any objective evidence/actions submitted or taken by the audited organization and determines if the condition was corrected in an acceptable

manner. Once it has been determined that the CAQ has been corrected, the ATL categorizes the condition as a CDA according to the definition below.

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

The audit team did not identify any HWFP-related CDAs as a result of this audit.

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

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

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

*Recommendation* – A suggestion that is directed toward identifying opportunities for improvement and enhancing methods of implementing requirements.

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

### **7.1 Observations**

The following WAP-related Observations were provided to INL/CCP management during the audit.

#### **Observation 1**

CCP-TP-090 is titled *CCP Headspace Gas Sampling Using the Automated Manifold System*. Use of the word “manifold” is misleading. The system is an on-line sampling and analysis system. Section B1-1a (4) of the WAP contains requirements for manifold sampling that are not applicable to the CCP unit.

#### **Observation 2**

The questions related to the contents of batch data reports on forms 1620, 1621, and 1622 from Procedure MP-TRUW-8.9 should be revised to eliminate the possibility of confusion on the part of the SPM and Site Quality Assurance Officer (SQA) as to the required contents of SUMMA<sup>®</sup> sampling, VOC, and hydrogen and methane analysis batch data reports. The batch data reports reviewed contained the proper information.



### **Observation 3**

The CCP AK procedure has been revised with regard to the documentation of the resolution of discrepancies in the AK record. The change allows CCP to document the resolution in the relevant AK Summary document instead of using attachment 11 to CCP-TP-005, the AK Source Document Discrepancy Resolution Form. If CCP chooses to use the AK Summary Report, they should clearly identify the discrepancy in the text with an explanation of the resolution activities conducted, and reference additional AK source documents including interviews that were used to resolve the discrepancy.

### **7.2 Recommendations**

The following WAP-related Recommendations were provided to INL/CCP management during the audit.

#### **Recommendation 1**

SUMMA<sup>®</sup> sampling for drum HSG is performed sequentially. If CCP would perform the sampling simultaneously, production could be increased by a factor of 4 to 6. Recommend CCP modify the sampling procedure to include simultaneous sampling.

#### **Recommendation 2**

CCP reports the MDL for the online HSG system in ng/0.100ml. The sample size is 0.100ml, so the value reported is actually ng, as required by the WAP, B3-5. Recommend CCP change the form to report in ng only.

### **8.0 LIST OF ATTACHMENTS**

Attachment 1:	Personnel Contacted During the Audit
Attachment 2:	Permit Attachment B6 Checklists and Objective Evidence
Attachment 3:	Listing of Audited Documents
Attachment 4:	Processes and Equipment Reviewed During Audit A-05-12

**PERSONNEL CONTACTED DURING THE AUDIT**

<b>PERSONNEL CONTACTED DURING AUDIT A-05-12</b>				
<b>NAME</b>	<b>ORG</b>	<b>PREAUDIT MEETING</b>	<b>CONTACTED DURING AUDIT</b>	<b>POST AUDIT MEETING</b>
Abbott, Preston	Canberra		X	
Allred, Jim	BEA	X	X	
Ashford, Angela	CCP	X	X	
Becker, Cindy	CCP		X	
Behanna, James	CCP	X	X	
Berg, Vance	GTI	X		X
Beutler, Paul	CWI		X	
Billett, Bob	CCP	X	X	X
Bolander, Thane	GTI	X		
Brasier, John	Canberra		X	
Broomfield, Barbara	WTS	X	X	X
Cantu, Adela	CCP	X	X	
Carmichael, Robert	CWI		X	
Chavez, Rick	CCP		X	
Chulli, Joshua	CCP	X		
Clements, Tom	CWI	X	X	
Connolly, Joan	AMWTP		X	
Crisp, Dan	CWI	X		
Czyzewski, Robert	WTS	X	X	X
Djordjevic, Sinisa	CCP	X	X	
Donohoue, Tom	CCP	X	X	
Dumas, Elvin	AMWTP		X	
Earhardt, William	AMWTP		X	
Edgerton, Brian	DOE-ID			X
Fisher, A.J.	CCP	X	X	X
Fisher, John	Antech		X	
Fournum, Keith	EGG		X	
Freeze, Deborah	CCP	X	X	X
French, Bob	AMWTP			X
Frost, Lisa	CWI		X	
Gillespie, Burce	MCS	X	X	
Gomez, Christine	CCP		X	

PERSONNEL CONTACTED DURING AUDIT A-05-12				
NAME	ORG	PREAUDIT MEETING	CONTACTED DURING AUDIT	POST AUDIT MEETING
Gomez, Paul	CCP		X	
Gregsted, Kathy	GTI	X		X
Griggs, Dave	AMWTP	X		X
Grover, Greg	BBWI	X		
Gulbransen, Ed	MCS	X	X	
Haar, David	CCP	X	X	
Harrison, Jeff	CCP		X	
Harvill, Joe	CCP	X	X	
Hasselstrom, Thad	MCS		X	
Hendrickson, R.W.	CWI	X		X
Johnsen, Tom	VE Support			X
Knight, Joann	GTI	X		X
Krivanek, K.R.	GTI	X		
Lamb, Larry	MCS		X	
Lattin, William	DOE-ID		X	X
Major, Chris	AMWTP		X	
Medlin, Beverly	WTS		X	X
Miles, Richard	WTS			X
Miles, Shane	CCP	X		
Miller, Ron	Quality Manager			X
Mousseau, Jeff	BBWI	X	X	
Muse, Stan	CCP	X	X	
Newby, Chris	Canberra		X	
O'Leary, Jerry	CWI	X		X
O'Neil, Kevin	DOE-ID		X	X
Padilla, Harvey	WTS	X	X	X
Parker, Dough	CWI	X		X
Pearcy, Mark	CCP		X	
Pearcy, Sheila	CCP	X	X	
Perry, Jeff	DOE-ID	X	X	X
Peters, Kevin	CCP		X	
Porter, Larry	WTS	X		
Provencher, Rick	DOE-ID	X		
Raish, Scott	BBWI	X		

**PERSONNEL CONTACTED DURING AUDIT A-05-12**

<b>NAME</b>	<b>ORG</b>	<b>PREAUDIT MEETING</b>	<b>CONTACTED DURING AUDIT</b>	<b>POST AUDIT MEETING</b>
Rodgers, Alan	CWI			X
Romo, Abraham	WTS	X	X	X
Russo, Frank	BBWI			X
Saxton, Allan	GTI	X		
Sharif, Farok	Mgr. CCP	X		X
Simpson, Kenneth	MCS	X	X	
Smallhouse, Kevin	Eberline	X		
Staymates, Geneine	CWI	X		
Streeper, Kevin	CWI	X		
Stepzinski, Charles	CCP	X	X	X
Stroble, J.R.	CCP	X	X	
Thielke, Robert	EPA	X		
Tisdale, Walter	CWI			X
Uptergrove, Joe	BBWI	X		X
Utley, Patricia	AMWTP		X	
Walker, L.J.	CCP	X	X	
Walker, Rebecca	CCP	X	X	
Walter, Eddie	CCP		X	
Wells, Jerry	BEA		X	
Williams, Rob	Antech		X	
Wilson, Marilee	WTS	X	X	
Ziemianski, Ed	DOE-ID			X

**Personnel Contacted During the Audit by Area**

Nonconformances	A. J. Fisher
Training	Rebecca Walker
Records	Sheila Pearcy
Acceptable Knowledge	Barbara Broomfield David Haar Jeff Harrison Kevin Peters Lisa Frost Jerry Wells Rick Chavez Mark Pearcy
Headspace Gas & Gas VOCs Sampling and Analysis	Harvey Padilla Adela Cantu Kevin O'Neill Eddy Walters Beverly Medlin Charles Stepzinski
Real-Time Radiography	Kenneth Simpson Larry Lamb Thad Hasselstrom
Visual Examination	Abraham Romo L. J. Walker Barbara Broomfield
Solid Sampling	Abraham Romo Keith Fournier
WIPP Waste Information System (WWIS Data Entry)	J. R. Stroble
Waste Certification/Project Level & Data Generation Level Data Validation & Verification	Mark Pearcy Christine Gomez Paul Gomez

<b>LISTING OF AUDITED DOCUMENTS</b>			
	<b>Document No.</b>	<b>Rev. No.</b>	<b>Document Title</b>
1	CCP-PO-001	11	CCP-QAPjP
2	CCP-PO-024	2	ICP/CCP Interface Document
3	CCP-PO-025	1	CCP WIPP/RCRA Field Sampling and Analysis Plan for the Accelerated Retrieval Project for a Described Area Within Pit 4
4	CCP-QP-002	16	CCP Training and Qualification Plan
5	CCP-QP-005	9	CCP TRU Nonconforming Item Reporting and Control
6	CCP-QP-008	10	CCP Records Management
7	CCP-QP-028	5	CCP Records Filing, Inventorying, Scheduling, and Dispositioning
8	CCP-TP-001	11	CCP Project Level Data Validation and Verification
9	CCP-TP-002	14	CCCP Reconciliation of DQOs and Reporting Characterization Data
10	CCP-TP-003	14	CCP Sampling Design and Data Analysis for RCRA Characterization
11	CCP-TP-005	15	CCP Acceptable Knowledge Documentation
12	CCP-TP-006	3	CCP Visual Examination Technique for INL Newly Generated TRU Waste Retrieved from Pits
13	CCP-TP-008	3	CCP Solids Sampling Procedure
14	CCP-TP-011	16	Radiography Inspection Operating Procedure
15	CCP-TP-028	2	CCP Radiographic Test and Training Drum Requirements
16	CCP-TP-030	15	CCP TRU Waste Certification and WWIS Data Entry
17	CCP-TP-053	3	CCP Standard RTR Inspection Procedure
18	CCP-TP-056	3	HSG Performance Demonstration Plan
19	CCP-TP-082	5	CCP Preparing and Handling Waste Drums for Headspace Gas Sampling
20	CCP-TP-085	1	TRU VE Facility Operations
21	CCP-TP-090	8	CCP Headspace Gas Sampling Using the Automated Manifold System
22	CCP-TP-091	3	CCP HSG Data Generation and Batch Data Reporting
23	CCP-TP-093	6	CCP Sampling of TRU Waste Containers
24	CCP-TP-102	6	CCP RTR #2 Radiography Inspection Operating Procedure
25	CCP-TP-106	3	CCP Headspace Gas Sampling Batch Data Report Preparation

WIPP #	Process/Equipment Description	Applicable to the Following Waste Streams/Groups of Waste Streams	Currently Approved by NMED
<b>NEW PROCESSES OR EQUIPMENT</b>			
14HG-A1	Headspace Gas Procedure – CCP-TP-090 Description – HSG-05-Agilent 6890 – HGAS-05	Solids (S3000) Soils (S4000) Debris (S5000)	NO
14VE1	Visual Examination Procedure – CCP-TP-006 Description – Visual Examination Technique(VET)	Solids (S3000) Soils (S4000) Debris (S5000)	NO
14RR1	Nondestructive Examination Procedure – CCP-TP-102 Description – MCS Real-time Radiography (RTR) Mobile Characterization (RTR-2) System	Solids (S3000) Soils (S4000) Debris (S5000)	NO
N/A	Acceptable Knowledge	Solids (S3000) Soils (S4000) Debris (S5000)	NO
N/A	Solids/ Soil and Gravel Sampling and Custody	Solids (S3000) Soils (S4000)	NO
N/A	SUMMA HSG Sampling and Custody	Solids (S3000) Soils (S4000) Debris (S5000)	NO
N/A	Data Verification and Validation	Solids (S3000) Soils (S4000) Debris (S5000)	NO
N/A	WWIS	Solids (S3000) Soils (S4000) Debris (S5000)	NO
<b>PREVIOUSLY APPROVED PROCESSES AND EQUIPMENT</b>			
None – This is an initial certification audit.			