



**Department of Energy**

Carlsbad Area Office

P. O. Box 3090

Carlsbad, New Mexico 88221

**May 23, 2000**

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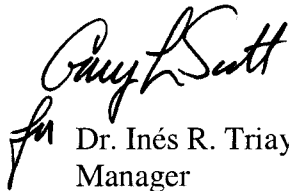
Steve Zappe, Project Leader  
Hazardous & Radioactive Material Bureau  
New Mexico Environment Department  
P.O. Box 26110  
Santa Fe, NM 87502-6110

**Subject:** Transmittal of the Carlsbad Area Office Audit of the Idaho National Engineering and Environmental Laboratory (INEEL)

Dear Mr. Zappe:

Enclosed is the Carlsbad Area Office (CAO) audit report for the audit conducted at INEEL near Idaho Falls, Idaho, on April 24-28, 2000. The report is being transmitted to you for information purposes as required by the WIPP Hazardous Waste Facility Permit, Attachment B6, Section B6-4.

Please contact Sam Vega, of my staff, at (505) 234-7424 if you have any questions or concerns.

  
Dr. Inés R. Triay  
Manager

cc:  
R. Kehrman, WID

CAO:QA:SAV:NM 00-0291 UFC 2300.00



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U.S. DEPARTMENT OF ENERGY  
CARLSBAD AREA OFFICE

AUDIT REPORT

OF THE

IDAHO NATIONAL ENGINEERING & ENVIRONMENTAL LABORATORY

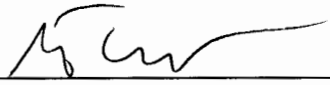
IDAHO FALLS, IDAHO

AUDIT NUMBER A-00-06

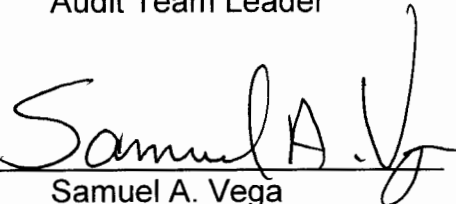
April 24-28, 2000

TRU WASTE CHARACTERIZATION, CERTIFICATION, AND  
TRANSPORTATION



Prepared By:   
Steven D. Calvert  
Audit Team Leader

Date: 5/19/00

Approved By:   
Samuel A. Vega  
CAO QA Manager

Date: 5/22/00

## 1.0 EXECUTIVE SUMMARY

Carlsbad Area Office (CAO) Audit A-00-06 was conducted to evaluate the adequacy, implementation, and effectiveness of Idaho National Engineering & Environmental Laboratory (INEEL) Transuranic (TRU) Waste Characterization, Transportation, and Certification activities. The audit was conducted at the INEEL facility April 24 through 28, 2000.

The audit team concluded that, overall, the INEEL technical and Quality Assurance procedures were adequate relative to the flow down of requirements from the CAO Quality Assurance Program Document (QAPD); WIPP Hazardous Waste Permit (WAP); Waste Acceptance Criteria (WAC); and TRUPACT-II Authorized Methods for Payload Control (TRAMPAC). The audit team also concluded that, overall, the defined QA Program was being satisfactorily implemented in accordance with the INEEL Quality Assurance Project Plan (QAPjP) and implementing procedures. The audit team determined that, except for the visual examination process, the INEEL technical areas were satisfactorily implemented and effective.

The audit team identified 14 conditions adverse to quality resulting in the issuance of three CAO Corrective Action Reports (CARs) that require corrective actions (i.e., visual examination, TRU Reporting Inventory Processing System, and quality assurance reporting). Fifteen isolated deficiencies requiring only remedial corrective actions were Corrected During the Audit (CDA). Three Observations were identified. Seven Recommendations are being offered for INEEL management consideration. The CARs, CDAs, Observations, and Recommendations are described in Section 6.0.

## 2.0 SCOPE

The audit team evaluated the adequacy, implementation, and effectiveness of technical and quality assurance processes related to the INEEL TRU Waste Characterization, Certification, and Transportation activities.

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

- Organization
- Qualification and Training
- Document Control
- Records Management
- Procurement
- Measuring and Test Equipment
- Assessments/Audits
- Control of Nonconforming Items
- Corrective Action
- Software Control
- QA Grading

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

- Sampling Design
- Sample Handling
- Headspace Gas Sampling and Analysis
- Nondestructive Assay (NDA)
- Real-Time Radiography (RTR)
- Visual Examination
- Hydrogen and Methane Analysis
- Data Generation and Validation
- WIPP Waste Information System (WWIS)

The following transportation technical elements were evaluated in accordance with the CAO 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 INEEL TRU Waste Characterization Program (TWCP) documents was based on current revisions of the following documents:

INEEL Site Project Office Quality Assurance Project Plan (QAPjP) for the Transuranic Waste Characterization Program, PLN-190, including the subtier Facility Implementation Plans

INEEL TRU Waste Characterization, Transportation, and Certification Quality Program Plan (QPP), PLN-182

Program Plan for Certification of INEEL Contact-Handled Stored Transuranic Waste (Cert Plan), PLN-579

TRUPACT-II Authorized Methods for Payload Control (TRAMPAC), PLN-577

Related INEEL and ANL-W technical and quality assurance implementing procedures

### 3.0 AUDIT TEAM AND OBSERVERS

#### AUDITORS/TECHNICAL SPECIALISTS

Samuel Vega	CAO QA Manager
Steve Calvert	Audit Team Leader, CTAC
Earl Bradford	Auditor, CTAC
Steve Davis	Auditor, CTAC
Mario Chavez	Auditor, CTAC
Jack Walsh	Auditor, CTAC
Dee Scott	Auditor, CTAC
Charlie Riggs	Auditor, CTAC
Pete Rodriguez	Auditor, CTAC
Karen Gaydosh	Technical Specialist, CTAC
Jim Bresson	Technical Specialist, CTAC
Mark Doherty	Technical Specialist, CTAC
B. J. Verret	Technical Specialist, CTAC
Trey Greenwood	Technical Specialist, CTAC
Dick Blauvelt	Technical Specialist, CTAC
Tom Ward	Technical Specialist, WID

#### OBSERVERS/INSPECTORS

Ines Triay	CAO Manager
George Dixon	DOE Headquarters
Tim Harms	DOE Headquarters
James Oliver	Inspector, EPA
Mike Eagle	Inspector, EPA
Howard Finkel	Inspector, ICF (EPA)
Ray Wood	Inspector, Trinity Engineering (EPA)
Dave Stuenkel	Inspector, Trinity Engineering (EPA)
William Volke	Inspector, TechLaw (EPA)
Gary Walvatne	Inspector, TechLaw (EPA)
Ivy Porpotage	Inspector, TechLaw (EPA)
Steve Zappe	Observer, NMED
Tim Chapmen	Observer, NMED
Connie Walker	Inspector/Observer, TechLaw (EPA/NMED)
Robert Thielke	Inspector, TechLaw (NMED)
Julie Shanahan	Observer, TechLaw (NMED)
June Dreith	Observer, TechLaw (NMED)
Pat Shanley	Observer, TechLaw (NMED)
Gary Koenig	Observer, TechLaw (NMED)
Ben Walker	Observer, EEG

## **4.0 AUDIT PARTICIPANTS**

INEEL individuals involved in the audit process are identified in Attachment 1. A preaudit meeting was held in the INEEL Engineering and Research Office Building (EROB) Conference Room 159 on April 24, 2000. Daily meetings were held with INEEL management and staff to discuss issues and potential deficiencies. The audit was concluded with a postaudit meeting held in the Radioactive Waste Management Complex (RWMC) Building Conference Room on April 28, 2000.

## **5.0 SUMMARY OF AUDIT RESULTS**

Attachment 2 provides a list of specific procedures audited.

### **5.1 Program Adequacy, Implementation, and Effectiveness**

The audit team concluded that, overall, the INEEL technical and Quality Assurance procedures were adequate relative to the flow down of requirements from the CAO Quality Assurance Program Document (QAPD); WIPP Hazardous Waste Permit (WAP); Waste Acceptance Criteria (WAC); and TRUPACT-II Authorized Methods for Payload Control (TRAMPAC). The audit team concluded that, overall, the defined QA Program (except for the areas identified in CAR 00-026) is being satisfactorily implemented in accordance with the INEEL Quality Assurance Project Plan (QAPjP) and implementing procedures.

The INEEL technical processes evaluated by the audit team were determined to be satisfactorily implemented and effective except for visual examination that was found to be marginally implemented and marginally effective (CAR 00-025).

### **5.2 QA Program Audit Activities**

Details of audit activities, including specific objective evidence reviewed, are contained within the audit checklists. The checklists are maintained as CAO QA records. CAR 00-026 was issued against the INEEL QA Program. See Section 6.0 for a description of the CARs.

### **5.3 Technical Activities**

Evaluations of applicable INEEL technical activities are summarized below.

#### **5.3.1 Nondestructive Assay (NDA)**

The SWEPP Gamma-Ray Spectrometer/Passive-Active Neutron (SGRS/PAN) NDA system was evaluated during the audit. The audit team reviewed data generated from the assay of a metals waste stream. The INEEL total measurement uncertainty methodology has been approved by an expert panel. Based on that approval and the documents examined before and during the audit, the assay procedures at INEEL were

determined to be adequate. The NDA processes evaluated were determined to be satisfactorily implemented and effective (see Observations 1 and 3 and Recommendation 1).

### **5.3.2 Data Generation and Validation**

The data generation and validation processes were evaluated at the Site Project Office (SPO), RWMC, and Argonne National Laboratory-West (ANL-W). The audit team examined data packages from the visual examination process. The data generation level verification and validation at ANL-W was found to be implemented and effective. The TRU waste project Site Data Validation Officer (SDVO) is responsible for the level 2 data validation. The evaluation included examination of the data packages to assure that generation and validation level reviews are occurring. The data generation and validation procedures were determined by the audit team to be adequate, satisfactorily implemented, and the processes were determined to be effective (see Recommendation 7).

### **5.3.4 Real-Time Radiography**

The audit team observed Real Time Radiography (RTR) operations at the INEEL Radioactive Waste Management Complex (RWMC). The audit team also reviewed data packages (hardcopy printouts from the Transuranic Reporting and Information Process System (TRIPS) and audio/video tapes from radiography operations. A concern was noted that the audio/video recording was paused during examination of a drum to consult with a Technical Supervisor on the identification of an item in the drum. This was documented as a Recommendation to record the entire radiography examination and, if the recording is paused, a summary of the discussions that took place while paused (including names of personnel consulted) to be recorded when taping resumes. RTR activities performed at INEEL incorporate all CAO and WAP requirements. The INEEL RTR procedures were found to be adequate and satisfactorily implemented. RTR activities performed in accordance with these procedures were determined to be effective (see Recommendation 4).

### **5.3.5 Visual Examination**

Visual examination (VE) operations and records were reviewed at ANL-W. Several concerns were documented based on the review of this program. Data package review revealed data was input into the electronic system without evidence that the raw data existed. During observation of procedure HFEF-OI-6890, it was noted that not all of the VE process was being recorded on the audio/videotape. Data package review showed that, during examination of a drum, a prohibited item was dispositioned before a nonconformance report (NCR) was generated. This was contrary to what is required by the procedure. The audit team reviewed documentation used to establish the site-specific miscertification rate. This rate was calculated based on historical data that was not collected under the new requirements of the WAP (including verification and validation), and was therefore determined to be unacceptable. The audit team

determined the procedures to be adequate. The team concluded that the visual examination process was marginally implemented and marginally effective (see CAR 00-025 and Observation 2).

### **5.3.6 Hydrogen and Methane Analysis**

Laboratory analysis and data review activities were evaluated to ensure effective performance. The processes were observed and applicable documentation reviewed to support the evaluation. The quantitative determinations of hydrogen and methane in gas samples are made by gas chromatography with thermal conductivity detection using nitrogen as a carrier gas. Procedure ACMM-9930 is used for analysis of gas VOCs. The VOCs in headspace gas samples are determined by using the gas chromatography/mass spectrometry method. INEEL procedures for these processes were determined to be adequate, satisfactorily implemented, and the processes were determined to be effective for hydrogen, methane, and gas VOCs analyses.

### **5.3.7 Sample Handling and Chain-of-Custody**

The process for sample handling was evaluated at the Environmental Chemistry Laboratory (ECL). The evaluation established that handling of samples in these facilities was performed in accordance with the procedures. The samples are stored correctly after receipt and are tracked as they move through the analysis processes. It was concluded that the sample handling procedures are adequate and satisfactorily implemented and the process is effective. The chain-of-custody process at ECL was examined for samples coming from RWMC to the laboratory facility. The overall chain-of-custody program and procedures were determined to be adequate and satisfactorily implemented and the process is effective.

### **5.3.8 Sampling Design**

The activities being implemented to comply with specific container selection, sampling, examination, and data analysis requirements for transuranic waste were reviewed. INEEL procedures that address these activities were determined to be adequate and satisfactorily implemented and the process is effective.

### **5.3.9 Headspace Gas Sampling**

The procedures used for the sampling of volatile constituents in headspace gas were evaluated and determined to be adequate. The activities are being performed at the Stored Waste Examination Pilot Plant (SWEPP). The procedures for the manual gas sampling system were found to be adequate. The audit team determined the manual process for sampling, using SUMMA canisters, to be satisfactorily implemented and effective.



### **5.3.10 INEEL Transportation**

The transportation program was evaluated by reviewing applicable documentation and procedures. The auditors observed payload assembly and TRUPACT-II operations and determined that INEEL has made significant improvements in knowledge, communication, teamwork, job control, and conduct of operations. The audit team observed transportation personnel performing payload certification, payload assembly, loading, inspection, testing activities, material control, and maintenance associated with the TRUPACT II container and determined that the procedures are adequate. The audit team concluded that the transportation process was satisfactorily implemented and effective (see Exemplary Practice).

### **5.3.11 Software**

Implementation of requirements for the development, procurement, maintenance and use of computer software used for processing, controlling, measuring, and inventory of radioactive waste materials was evaluated. The evaluation included a review of the development and control of software baselines. The documentation reviewed for RWMC systems included the Passive Active Neutron (PAN) System, SWEPP Assay (sub) System (SAS), the SWEPP Gamma-Ray Spectrometer System (SGRS), VAXGAP subsystem, the Drum Vent System (DVS), and the Nondestructive Assay Methodology (NDAM). The PAN and SGRS systems share a single Software Verification and Validation Plan (SVVP), which was also evaluated. Six of the eleven software configurations were reviewed with no concerns. One Recommendation was issued to investigate the MCNP model and determine its applicability to the INEEL Software QA program. The software procedures are adequate, satisfactorily implemented and effective.

Site Project Office (SPO) software consisted of spreadsheet macros and small software code written for commercial off-the-shelf statistical analysis software. Five of the ten routines were reviewed. The software procedure is adequate and the control process is satisfactorily implemented and effective. Environmental Control Laboratory (ECL) software consisted of spreadsheet macros and a small Access database code written for GC/MS analysis. Eight of the sixteen packages were reviewed. One concern was Corrected During the Audit (CDA). The software procedure is adequate and the control process is satisfactorily implemented and effective (see Recommendation 8).

### **5.3.12 Transuranic Reports, Inventory, and Processing System (TRIPS)**

The TRIPS Software QA program was evaluated to the requirements the INEEL Site Procedures for TRIPS Software Development and Configuration Management. The lifecycle documentation reviewed for the TRIPS system included the requirements, design, implementation, test and installation documents. The audit team determined the TRIPS procedures to be adequate. The TRIPS process was determined to satisfactorily implemented and effective. Because of the importance of the implementation review and the number of items Corrected During the Audit, a CAR was issued to ensure that all generated documentation receives a thorough review for each lifecycle phase (see CAR 00-027).

### **5.3.13 WIPP Waste Information System (WWIS)**

The WWIS data entry process was evaluated to the requirements of the INEEL Site Organization Procedures for the data entry and reporting into the WWIS. The evaluation included a demonstration of manual data transfer to the WWIS. It was demonstrated that data could be successfully transferred to the WIPP site. The WWIS electronic entry was evaluated as part of the TRIPS Software Quality Assurance (SQA) testing process, which demonstrated previous data transfers to the WWIS Test environment. The procedures are adequate and satisfactorily implemented. Implementation of the TRIPS/WWIS data transfer could not be demonstrated, the effectiveness of that WWIS interface is indeterminate at this time.

### **5.3.14 Acceptable Knowledge**

Acceptable knowledge (AK) activities were evaluated to determine compliance with the requirements of the WAP, QAPjP, and internal implementing procedures. The team examined documentation to verify that the collection, review, and management of AK information was being handled as required by established procedure. The team also examined the processes for confirmation, resolution, and reevaluation of AK information. These activities were performed in accordance with procedure requirements. The audit team concluded that the AK procedures are adequate and the AK process to be satisfactorily implemented and effective (see Recommendations 2, 5, and 6).

## **6.0 CARs, OBSERVATIONS, RECOMMENDATIONS, and EXEMPLARY PRACTICE**

### **6.1 Corrective Action Reports**

#### **6.1.2 CARs Initiated as a Result of CAO Audit A-00-06:**

The following three CARs, initiated as a result of Audit A-00-06, have been transmitted to INEEL under separate cover. A brief description of each CAR is provided below.

#### **6.1.2.1 CAO CAR 00-025**

The following issues related to visual examination were identified during the audit:

- The miscertification rate in place at INEEL has not been calculated in accordance with the requirements listed in the WIPP WAP.
- The raw data for drum 032356 were not entered on the visual examination record sheet.
- The Independent Technical Review of VE was not completed for drum 032256.
- Liquid was found and absorbent added, at SPO direction, before an internal deficiency report (IDR) was initiated.
- The complete visual examination process is not being recorded on audio/video tape.

Objective evidence to correct the last four issues was presented during the audit. However, because the issues were related, investigative action, root cause determination, and action to preclude recurrence are required to correct the addressed concerns.

#### **6.1.2.2 CAO CAR 00-026**

The following QA program issues were identified during the audit:

- INEEL Surveillance SPO-L1-99-02 was conducted in November 1999 and identified conditions adverse to quality, however, the results were not issued to responsible management until April 4, 2000.
- Semiannual reports were not issued to the Site Project Manager in 1999.
- Quarterly Level 1 surveillances were not conducted in 1999.
- Training on procedure NT-AP-04, Revision 4, "QA Requirements Implementation" and NP-AP-09, Revision 2, "TWCP VEE Functions and Process" has not been conducted and documented for applicable ANL-W personnel.

#### **6.1.2.3 CAO CAR 00-027**

The following TRIPS issues were identified during the audit:

- The TRIPS Change Request (TCR) did not identify which Mini Design or Business Process Requirement is impacted by the modification.

- There was no review of the TRIPS implementation phase (i.e., a review of the source code against the design).
- The number of TCRs identified in the INEEL/INT-99-00710 TRIPS Software Test Report Abstract did not match the number in the TRIPS TCR Test Summary Log
- The Version numbers for the Operating System, Oracle Application Software, and the Uniface Application software were not documented as configuration items and were not reported as part of the test configuration.
- The TRIPS Build Scripts were not identified on the CI list or mapped to the proper configuration management method.

## **6.2 Deficiencies Corrected During the Audit (CDA)**

Seventeen deficiencies, requiring remedial action only, were identified during the audit. All were corrected before the completion of the audit. These are identified on the completed audit checklists and documented on the "Corrected During the Audit Forms," which are maintained as CAO QA records.

## **6.3 Observations**

The following three Observations were identified during the audit:

1. Gamma isotopic ratio measurements are performed to determine mass ratios of plutonium isotopes in weapons grade plutonium relative to Pu-239. The actual measurement results need to be reported and forwarded to the acceptable subject matter expert on a consistent basis. All supplementary AK information needs to be processed using the established AK process.
2. The qualifications for the Visual Examination Expert (VEE) are no more stringent than Waste Certification Operator (WCO) qualifications. The qualification requirements for the VEE should be upgraded to assure the necessary level of expertise.
3. All associated uncertainties should be reported at the 95% confidence level. NDA requirements for data transferred to TRIPS for transmittal to the WWIS state that data shall be reported at one standard deviation. No further calculations are applied to the data to make it WAC compliant prior to transfer to WWIS. INEEL received inaccurate guidance from CAO regarding this issue. A CAR was generated and issued to CAO (00-024) to correct this issue.

## **6.4 Recommendations**

The following eight Recommendations are presented for INEEL management consideration:

1. When an NDA measurement for one of the ten critical isotopes yields no measurable quantity, the site should indicate that a measurement was made and that the result was below detectable limits. The field should not be blank.
2. Information from the AK record should not be considered the best available until the waste stream profile form is completed. It is recommended that this information be included on the waste stream summary form prior to confirmation.
3. The system used for numbering waste items during the visual examination process is confusing. It is recommended that a simplified numbering system be developed.
4. When audio/video recording is paused during RTR examination, a description of what occurred while the tape was not running should be provided.
5. Implementing procedures for AK should contain more detail. Summary information category groups and correlation to verification requirements should be incorporated into AK documents in preparation for characterization of solids.
6. Two accuracy reports prepared by RWMC should be combined into one document and updated on a regular basis. It is suggested that method accuracy be tracked rather than only tracking the hazardous waste number (HWN) and waste material code (WMC) changes to provide more useful trending information.
7. The footnotes on the Site Data Summary Report should provide justification and rationale for the selection of transformation methods chosen. The footnotes should reference the WAP.
8. The MCNP software model should to be evaluated for software QA control along with any other models currently being used.

## **6.5 Exemplary Practice**

An Exemplary Practice was identified during the audit in relation to the development and use of "Go-No-Go Gages". The gages allow INEEL to quickly determine the diameter of drum containers and the payload assembly. This system will benefit all TRU waste generating sites. Photographs of the "Go-No-Go Gages" are being distributed to all TRU waste generating sites.

## **7.0 LIST OF ATTACHMENTS**

Attachment 1: Personnel Contacted During the Audit  
Attachment 2: INEEL Procedures Audited

**PERSONNEL CONTACTED DURING THE AUDIT**

<b>PERSONNEL CONTACTED</b>				
<b>NAME</b>	<b>TITLE/ORG</b>	<b>PREAUDIT MEETING</b>	<b>CONTACTED DURING AUDIT</b>	<b>POST AUDIT MEETING</b>
Abbott, Preston	Operator, BBWI		X	
Aki, Francis	Secretary, ANL-W		X	
Allred, James	Calibration Supervisor, BBWI	X	X	
Anderson, Molly	SQAO Designee, BBWI		X	X
Anderson, Troy	Rad Con Tech, BBWI		X	
Arbon, Rod	Site Project Manager	X	X	X
Austin, Toni	Department Manager, BBWI			X
Bagley, Julia	Technical Supervisor, BBWI		X	
Balsmeier, Eugene	Director, Operations, BBWI	X	X	
Barnes, Jim	Maintenance, BBWI		X	
Barnes, Richard	Production Manager, BBWI	X		X
Bastar, Jim	Operator, BBWI		X	
Baxter, Don	Procedures, BBWI	X	X	X
Beausoleil, Geoffrey	DOE-ID	X	X	X
Bengholz, Warren	DOE-ID			X
Berrett, Kim	Transportation, BBWI		X	
Bishoff, Jim	Operations, BBWI	X	X	
Blackwood, Larry	Scientist, BBWI		X	
Blattner, Delisa	Document Control, BBWI		X	X

<b>PERSONNEL CONTACTED</b>				
<b>NAME</b>	<b>TITLE/ORG</b>	<b>PREAUDIT MEETING</b>	<b>CONTACTED DURING AUDIT</b>	<b>POST AUDIT MEETING</b>
Boulter, Nola	TRIPS, BBWI		X	
Bright, David	Operations Manager, BBWI	X	X	X
Broers, Galyn	CAR Coordinator, BBWI	X	X	X
Brown, Anthony	BBWI	X		
Brown, Dennis	DB Associates	X	X	
Carter, John	QA, BBWI	X		
Cline, T. D.	NDA, BBWI	X	X	
Coburn, Klayne	Group Leader, ANL-W		X	
Conlon-Empey, Karen	TRIPS, BBWI		X	
Contreras, Paul	DOE-ID	X	X	X
Cook, Beverley	DOE-ID	X		
Christensen, Dale	TRIPS, BBWI		X	
Crossley, David	QA, BBWI		X	
Crowder, Catherine	Technical Lead, BBWI	X	X	X
Custer, Gerald	SWEPP Foreman, BBWI	X	X	
David, Ron	Technical Lead, BBWI		X	
Davis, Darrin	Sr. Operator, BBWI		X	
Davis, Kurt	RTR System Engineer, BBWI	X	X	X
Davis, Robert	DOE-ID	X		
Denier, Donald	Instructional Designer, BBWI		X	

<b>PERSONNEL CONTACTED</b>				
<b>NAME</b>	<b>TITLE/ORG</b>	<b>PREAUDIT MEETING</b>	<b>CONTACTED DURING AUDIT</b>	<b>POST AUDIT MEETING</b>
Downs, Jerry	State of Idaho	X		
Dreyfus, Dennis	ESH&Q, BBWI	X		
Divjak, Paul	Operations, BBWI	X		
Drussel, Sandra	Engineer, BBWI			X
Dunhour, Fred	FQAO, ANL-W	X	X	X
Dumas, Elvin	FQAO, BBWI	X	X	X
Dwight, Carla C.	TDWP Manager, ANL-W	X	X	X
Emanuelson, Kay	Quality Engineer, BBWI		X	
Evans, Robert	Lab Technician, BBWI		X	
Ferguson, Byron	Maintenance, BBWI		X	
Fife, Cindy	Facility QA, BBWI	X	X	X
Fink, R. K.	TRIPS, BBWI	X		
Ford, Bryant	3100 Project Manager	X		
Framer, Carl	BBWI	X		
Francis, Stacey	BBWI	X		
Friedel, Denise	Rad Con, BBWI		X	
Fritz, Lori	DOE-ID	X	X	X
Frost, Lisa	SDVO, BBWI	X	X	X
Galbraith, Steve	Engineer, BBWI	X		X
Gilman, Janice	Document Control, BBWI	X	X	X
Grant, Gary	Issues Manager, BBWI		X	
Gray, Daniel	Maintenance, BBWI	X	X	



<b>PERSONNEL CONTACTED</b>				
<b>NAME</b>	<b>TITLE/ORG</b>	<b>PREAUDIT MEETING</b>	<b>CONTACTED DURING AUDIT</b>	<b>POST AUDIT MEETING</b>
Green, Lisa	DOE-ID	X		X
Guenzlan, Bob	State of Idaho	X		
Hailey, Sheila	AK Expert/SDVO, BBWI		X	X
Hand, Rodney	Manager, Analytical Labs.	X		
Harker, Yale	Physicist, BBWI		X	
Hartley, Diane	TRIPS, BBWI		X	
Hawley, Connie	QA Engineer, BBWI		X	
Herring, Catherine	TRIPS, BBWI		X	
Hollenback, Dennis	TRIPS Engineer, BBWI	X	X	
Holzmer, Mark	DOE-CH	X		
Huckaba, Chuck	Training Coordinator, BBWI		X	
Ingle, Steven	Material Coordinator, BBWI	X	X	
Johnson, Ronda	Rad Con Tech, BBWI		X	
Johnson, Tom	Document Control, BBWI		X	X
Jenkins, Allea	Mechanic, BBWI		X	
Jorgenson, Kendall	Operator, BBWI		X	
Kendrick, Randy	Training Coordinator, BBWI		X	
Krusch, Susan	TRIPS Engineer, BBWI		X	X
Kuck, Ann	Operator, BBWI		X	
LaFreniere, Mike	DOE-ID	X	X	X

<b>PERSONNEL CONTACTED</b>				
<b>NAME</b>	<b>TITLE/ORG</b>	<b>PREAUDIT MEETING</b>	<b>CONTACTED DURING AUDIT</b>	<b>POST AUDIT MEETING</b>
Landis, Joe	Procurement, BBWI		X	
Lee, Denise	Operator, BBWI		X	
Lent, Dave	Training Coordinator, BBWI	X	X	
Lewis, Larry	Systems Engineer, BBWI	X	X	
Leyva, Elida	Rad Con Tech		X	
Logue, Ken	BBWI	X		
Long, Gaylen	Operator, BBWI		X	
Lowman, B. D.	Document Control , BBWI		X	
Lundquist, Kevin	Technical Supervisor, BBWI		X	
Mayberry, John	SASC			X
McBath, Bill	ESH&Q, BBWI	X		X
McCarthy, Kevin	SWEPP Operator, BBWI		X	
McFarlane, Harold	Manager, ANL-W		X	X
Maechum, Teresa	Scientist, BBWI		X	
Menkhaus, Dan	Systems Engineer, BBWI	X	X	X
Millhouse, Albert	BBWI	X		
Moncur, Blair	Receiving, BBWI		X	
Monk, Thomas	Site Project Manager, BBWI	X	X	X
Moody, David	Consultant, Wastren	X	X	
Moody, Harry	Manager, Metrology Lab, BBWI		X	

<b>PERSONNEL CONTACTED</b>				
<b>NAME</b>	<b>TITLE/ORG</b>	<b>PREAUDIT MEETING</b>	<b>CONTACTED DURING AUDIT</b>	<b>POST AUDIT MEETING</b>
Muehleip, Craig	Operator, BBWI		X	
Murphy, Dennis	QA Manager, BBWI	X	X	X
Nelson, Sherrie	State of Idaho		X	X
Oesterling, Rich	TRIPS, BBWI	X	X	
Park, Lori	Secretary, BBWI	X	X	X
Peters, Kevin	Consultant, Wastren	X	X	
Peterson, Barbara	TRIPS Project Manager,	X		
Phippen, Rod	Engineer, BBWI			X
Pound, Don	Transportation Certification Officer,	X	X	X
Preston, Tim	Site Quality Assurance Officer, BBWI	X	X	X
Reidle, Martha	Training Administrator, BBWI		X	X
Riedesel, Ann	BNFL	X		
Riggs, Trent	Analyst, BBWI	X	X	
Rogers, N.	Department Manager, BBWI	X	X	X
Ruska, Max	Transportation, BBWI		X	
Sabel, Frances A.	Lab Technician, BBWI		X	
Sailer, Shelly	ALD QA Officer, BBWI	X	X	X
Scaeffe, Steve	TRIPS, BBWI		X	
Sharp, Michelle	Document Control, BBWI		X	

<b>PERSONNEL CONTACTED</b>				
<b>NAME</b>	<b>TITLE/ORG</b>	<b>PREAUDIT MEETING</b>	<b>CONTACTED DURING AUDIT</b>	<b>POST AUDIT MEETING</b>
Sherick, Mark	Characterization PM, BBWI	X	X	X
Simerly, Paula	Chemist, BBWI	X	X	
Simonds, Jim	Manager, BBWI	X	X	X
Slade, Sonja	Specialist, BBWI		X	
Smith, A. J.	BBWI	X		
Stanley, Cliff	Engineer Lead, BBWI	X	X	X
Stallman, Robert	DOE-ID	X		
Stiger, Susan	Environmental, BBWI	X		
Stromberg, Howard	QA, BBWI	X		
Sygitowicz, Lee	Program Manager, BBWI	X	X	X
Tedford, Gina K.	Waste Certification Official, BBWI	X	X	X
Teller, Steve	TRIPS QA, BBWI	X	X	X
Twedell, Gary	Engineer, BBWI	X	X	
Wagner, Kurt	TRIPS, BBWI		X	
Walters, Eddy	Operator, BBWI		X	
Watkins, Lee	BBWI	X		
Watts, Mark	BBWI	X	X	
Wells, Jerry	DOE-ID	X	X	X
Wells, Rita	TRIPS, BBWI	X	X	
Wenczel, Victor	Procurement QA, BBWI	X	X	

<b>PERSONNEL CONTACTED</b>				
<b>NAME</b>	<b>TITLE/ORG</b>	<b>PREAUDIT MEETING</b>	<b>CONTACTED DURING AUDIT</b>	<b>POST AUDIT MEETING</b>
<b>Whitehead, Marie</b>	<b>Independent Reviewer, BBWI</b>		<b>X</b>	
<b>Wilde, Terry</b>	<b>Administrator</b>		<b>X</b>	
<b>Williams, Jeff</b>	<b>DOE-ID</b>		<b>X</b>	

<b>INEEL PROCEDURES AUDITED IN A-00-06</b>		
<b>NUMBER</b>	<b>PROCEDURE NUMBER</b>	<b>TITLE</b>
1.	ACLP 4.10	Determination of Method Detection Limits for Gas Analysis
2.	ACLP 4.20	Sample and QA Nomenclature Conventions for TWCP
3.	ACLP 4.25	Sample Receiving, Custody, and Storage
4.	ACLP 4.30	Standards Preparation, Documentation and Storage
5.	ACLP 4.40	Summa Canister Cleaning
6.	ACLP 4.45	Gas Transfer Manifold Systems
7.	ACLP 4.50	Equipment Maintenance
8.	ACMM-9910	Analysis of Gas Samples for Alcohols and Ketones by GC/FID
9.	ACMM-9920	Analysis of Gas Samples for Hydrogen/Methane by GC/TCD
10.	ACMM-9930	Analysis of Gas Samples for VOCs by GC/MS
11.	EDF-363	SWEPP Certified Waste Sampling Plan
12.	HFEF-OI-6810	Transuranic Report Inventory Processing System
13.	HFEF-OI-6890	Waste Characterization
14.	MCP-196	Assessor/Lead Assessor Qualification
15.	MCP-533	Stop Work Authority
16.	MCP-538	Control of Nonconforming Items
17.	MCP-540	Graded Approach & Quality Level Assignment
18.	MCP-590	Procurement Quality Requirements
19.	MCP-591	Evaluated Supplier Program
20.	MCP-592	Acquisition of Goods and Services
21.	MCP-598	Process Deficiency Resolution
22.	MCP-1755	TRU Project Control and Implementation of WIPP Requirements
23.	MCP-1757	Management Assessments for TWCP
24.	MCP-1783	TRUPACT II Container Maintenance Program
25.	MCP-1785	TRIPS Data Management
26.	MCP-1800	Contact Handled Waste Certification
27.	MCP-1803	Configuration Control of RWMC Hardware/Software
28.	MCP-1805	Document Preparation, Review, Control, and Release
29.	MCP-1815	RWMC/SWEPP Level I Data Validation
30.	MCP-1819	TRUPACT II Receipt, Inspection, and Shipment
31.	MCP-2001	Control of Analytical Methods and Procedures
32.	MCP-2006	Analytical Lab Dept Training and Qualification Program
33.	MCP-2008	Analytical Data Recording, Review and Reporting
34.	MCP-2009	Analytical Software Control
35.	MCP-2011	Analytical Logbooks
36.	MCP-2391	Calibration Program
37.	MCP-2489	Supplier Surveillance
38.	MCP-2492	Standards and Calibration Lab Operations
39.	MCP-2502	Standards and Calibration Lab Calibration Intervals
40.	MCP-2517	Data Flow and Reporting
41.	MCP-2518	Duties of INEL Site Personnel
42.	MCP-2519	Project Files
43.	MCP-2520	QA Records Management
44.	MCP-2521	Site Project Data Base
45.	MCP-2527	DQO Reconciliation at SPO Level
46.	MCP-2528	Computer Software Control
47.	MCP-2532	Independent Assessment
48.	MCP-2533	Reports to Management
49.	MCP-2534	Level I Surveillances

<b>INEEL PROCEDURES AUDITED IN A-00-06</b>		
<b>NUMBER</b>	<b>PROCEDURE NUMBER</b>	<b>TITLE</b>
50.	MCP-2535	Level II Data Processing by the SDVO
51.	MCP-2537	Activities Conducted by the SDVO
52.	MCP-2542	Preparation of Waste Profile Forms
53.	MCP-2544	WWIS Data Transfer
54.	MCP-2546	Visual Examination Process
55.	MCP-2988	Confirmation, Resolution, and Re-evaluation of Acceptable Knowledge Information
56.	MCP-2989	Collection, Review, and Management of Acceptable Knowledge Documentation
57.	MCP-2990	Radioassay Total Uncertainty Process Using Modified Statistical Sample Approach
58.	MCP-2991	Radioassay Total Uncertainty Process Using Statistical Sampling Approach
59.	MCP-2992	QA Program Surveillances
60.	MCP-2993	TWCP Action Tracking and Trend Analysis
61.	MCP-2995	Project Level Electronic Data V and V By the SDVO
62.	MCP-2996	Electronic Data Review By the SDVO
63.	MCP-2997	SQAO Electronic Data Review Checklists
64.	MCP-3491	Acceptance of Procured Items and Services
65.	NT-AP-01	Documents and Records Management
66.	NT-AP-03	ANL-W TWCP Data Generation Level Review
67.	NT-AP-04	QA Requirements Implementation
68.	NT-AP-05	TWP Training Plan
69.	NT-AP-08	TWCP Data Input and QA Release for TRIPS
70.	NT-AP-09	TWCP VEE Functions and Process
71.	PLN-182	INEEL TRU Waste Characterization, Certification, and Transportation Quality Program (QPP)
72.	PLN-190	Quality Assurance Project Plan (QAPjP)
73.	PLN-498	TWP Software QA Plan
74.	PLN-577	TRUPACT II Authorized Methods for Payload Control Compliance Plan (TRAMPAC)
75.	PLN-579	Program Plan for Certification of INEEL Contact-Handled Stored Transuranic Waste (Certification Plan)
76.	PLN-582	TRIPS Software Configuration Management Plan
77.	PLN-583	TRIPS Software QA Plan
78.	PLN-584	TRIPS Software Verification and Validation Plan
79.	PLN-585	TRIPS Software Test Plan
80.	PLN-587	Training Implementation Plan for TWCP
81.	PLN-600	Analytical Laboratory Department QA Plan for the TWCP
82.	QTP-002	RTR System
83.	QTP-004	Qualification Test Procedure (PAN)
84.	QTP-011	Qualification Test Procedure (SGRS)
85.	QTP-021	RTR Digital Video Encoding Test
86.	QTP-023	TRIPS Test Procedure
87.	TPR-1572	Operating the RTR System
88.	TPR-1573	PAN Drum Assay System
89.	TPR-1576	SWEPP Weight Station
90.	TPR-1584	Drum Venting Operations
91.	TPR-1588	Gamma Ray Spectrometer System
92.	TPR-1625	WMF-635 Dispositioning and Container Integrity
93.	TPR-1632	Transportation Certification Using TRIPS
94.	TPR-1642	Needle Assembly
95.	TPR-1648	TRUPACT II Payload Assembly

## INEEL PROCEDURES AUDITED IN A-00-06

NUMBER	PROCEDURE NUMBER	TITLE
96.	TPR-1649	TRUPACT II Loading
97.	TPR-1652	Helium Leak Detector
98.	TPR-1719	Calibration of Gamma Assay/System
99.	TPR-1728	Manual Gas Sampling
100.	TPR-4960	Receiving Inspections