

United States Government

Department of Energy

memorandumCarlsbad Field Office
Carlsbad, New Mexico 88221

DATE: August 1, 2002

REPLY TO
ATTN OF: CBFO:QA:MLC:GS:02-1241:UFC 2300.00

SUBJECT: Transmittal of Audit Report for Audit A-02-25

TO: John Lee, Westinghouse TRU Solutions

The Carlsbad Field Office performed Audit A-02-25 of Westinghouse TRU Solutions (WTS) on July 9-12, 2002. The audit team concluded that the overall status of the WTS Quality Assurance Program is adequate, satisfactorily implemented, and effective.

The details of the audit as well as conclusions are detailed within the attached audit report.

If you have any questions or comments, please contact me at (505) 234-7442.

M. Lea Chism //signature on file//
M. Lea Chism
Quality Assurance Specialist

Attachment

cc w/attachment:

A. Holland, CBFO	*ED
M. Lipscomb, WTS	*ED
A. Arceo, CTAC	*ED
T. Bowden, CTAC	*ED
M. Eagle, EPA	*ED
B. Walker, EEG	*ED
D. Winter, DNFSB	*ED
S. Zappe, NMED	*ED
P. Roush, WTS	
CBFO QA Record File	
CBFO M&RC	



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**U.S. DEPARTMENT OF ENERGY
CARLSBAD FIELD OFFICE**

AUDIT REPORT

OF

WESTINGHOUSE TRU SOLUTIONS (WTS)

CARLSBAD, NEW MEXICO

AUDIT NUMBER A-02-25

July 9 - 12, 2002

WTS QUALITY ASSURANCE PROGRAM



Prepared By: Amelia I. Arceo //signature on file//

Amelia I. Arceo
Audit Team Leader, CTAC

Date: 7/30/02

Approved By: Ava L. Holland //signature on file//

Ava L. Holland
CBFO QA Manager

Date: 8/1/02

1.0 EXECUTIVE SUMMARY

Carlsbad Field Office (CBFO) Audit A-02-25 was conducted to evaluate the adequacy, implementation, and effectiveness of selected Westinghouse TRU Solutions (WTS) Quality Assurance Program Document (QAPD) requirements in accordance with the CBFO QAPD and American Society of Mechanical Engineers (ASME) Nuclear Quality Assurance (NQA)-1, 1989 edition, criteria 4, 5, 7, 8, 9, and 13. The applicable sections of the WTS QAPD evaluated during the audit were sections 2.1 and 2.3 and the associated implementing procedures. The audit also evaluated continued effectiveness of corrective actions resulting from corrective action reports (CARs) generated during the previous audit. The audit was conducted at the Waste Isolation Pilot Plant (WIPP) site on July 9 - 12, 2002.

The audit team concluded that overall, the WTS Quality Assurance (QA) Program is adequate relative to the flow-down of requirements from the CBFO QAPD sections 2.1 and 2.3, and ASME NQA-1, 1989 edition, criteria 4, 5, 7, 8, 9, and 13, to the WTS QAPD and implementing procedures. In addition, the audit team concluded that the implementing procedures are satisfactorily implemented and are effective. The audit team also found that corrective actions continue to be effective for CARs previously generated.

The audit team identified three conditions adverse to quality resulting in the issuance of two CBFO CARs that require corrective actions. These CARs relate to criterion 5 - Instructions, Procedures, and Drawings, and criterion 7 - Control of Purchased Items and Services. Two isolated deficiencies requiring only remedial corrective actions were corrected during the audit (CDA). One Recommendation was offered for management consideration. The CARs, CDAs and Recommendation are described in Section 6.0.

2.0 SCOPE

The audit team evaluated the adequacy, implementation, and effectiveness of selected QA processes related to the WTS QA Program.

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

- Criterion 4 - Procurement Document Control
- Criterion 5 - Instructions, Procedures, and Drawings
- Criterion 7 - Control of Purchased Items and Services
- Criterion 8 - Identification and Control of Items
- Criterion 9 - Control of Processes
- Criterion 13 - Handling, Storage, and Shipping

The evaluation of the WTS QA documents for adequacy was based on the CBFO QAPD, CAO-94-1012, Rev. 3, November 1999, sections 2.1 and 2.3, and ASME NQA-1, 1989 edition, criteria 4, 5, 7, 8, 9, and 13.

3.0 AUDIT TEAM AND OBSERVERS

CBFO AUDIT TEAM

Amelia I. Arceo	Audit Team Leader, CTAC
Lea Chism	Auditor, CBFO
Norman Frank	Auditor, CTAC
Porf Martinez	Auditor, CTAC
Tommy Putnam	Auditor, CTAC

OBSERVERS/INSPECTORS

Mike Eagle	EPA Inspector
Jim Oliver	EPA Inspector
Ben Walker	EEG Observer

4.0 AUDIT PARTICIPANTS

Individuals contacted during the audit are identified in Attachment 1. A pre-audit conference was held in the WTS Engineering Building conference room on July 9, 2002. The audit was concluded with a post-audit conference held in the Skeen-Whitlock Building large conference room on July 12, 2002.

5.0 SUMMARY OF AUDIT RESULTS

5.1 Program Adequacy, Implementation, and Effectiveness

The audit team concluded that overall, the WTS QA Program is adequate relative to the flow-down of requirements from the ASME NQA-1, 1989 edition, criteria 4, 5, 7, 8, 9, and 13, and the CBFO QAPD to the WTS QAPD and implementing procedures. In addition, the audit team concluded that the implementing procedures are satisfactorily implemented and are effective. The audit team also found that corrective actions continue to be effective for CARs previously generated.

5.2 QA Program Audit Details

The evaluation to NQA-1 requirements started with the review of WTS procedures matrix, the CBFO and WTS QAPDs, and the WTS implementing procedures to ensure that NQA-1 requirements flowed into the implementing procedures. The WTS implementing procedures were found to be adequate in addressing NQA-1 requirements.

WTS implementing procedures included in the audit are identified in Attachment 2. The audit was conducted through interviews with key personnel, review of objective evidence, and observation of activities (as applicable). The results and audit conclusions are contained in the audit checklists maintained by CBFO as QA records.

5.2.1 Criterion 4 - Procurement Document Control

The audit team evaluated the WTS procurement process. The team conducted interviews with personnel including QA engineers, QA Administration (maintaining Quality Supplier List), Training, and Procurement. The evaluation included reviews of objective evidence including training files, procurement requests, nonconformance reports, CARs, quality supplier lists, statements of work, qualified supplier annual evaluation checklists, and requests for proposal. The procurement document control process was analyzed from the beginning to the end of a purchase request process. A concern was identified regarding a source QA inspection done with no reference documents, work packages, or procedures to indicate the acceptance criteria. The source QA inspection, documented on Quality Assurance Inspection Report 02-014, indicated dimensional checks, visual weld inspection, and load test of 40,000 lbs, with no deficiencies identified. This concern was resolved by locating the associated purchase order (P. O. 105810) that identified the reference documents and revising the inspection report to include the reference material. This concern was identified as corrected during the audit (CDA No.1).

The audit team verified continued implementation of corrective actions to CARs previously identified. The CARs reviewed were CBFO CARs 01-030, Inspection Instructions, 02-020, Supplier Qualification/Re-Qualification, and 02-039, Affirmative Procurement Requirements. Overall, the processes applicable to procurement were determined to be adequate, satisfactorily implemented, and effective.

5.2.2 Criterion 5 - Instructions, Procedures, and Drawings

The audit team evaluated the WTS implementing procedures to the requirements of Criterion 5 - Instructions, Procedures and Drawings. The evaluation to NQA-1 requirements started with the performance of a crosswalk between NQA-1, the CBFO and WTS QAPDs, and WTS implementing procedures to ensure NQA-1 requirements flowed into the implementing procedures. The WTS implementing procedures were found to be adequate in addressing the NQA-1 requirements. The audit team conducted interviews with personnel from Document Services, Maintenance, and Drafting. A sample of procedures was reviewed from the list of implementing procedures for procurement document control; instructions, procedures and drawings; control of purchased items and services; control of processes; and handling, shipping, and storage. Two concerns were identified regarding title page requirements identified in procedures WP 15-PS.1 and WP 15-PS.2 that were not being followed, and a reference to a non-existent step in procedure WP 15-PS3002. These concerns were combined and documented on CAR 02-072. Overall, the processes applicable to instructions, procedures, and drawings were determined to be adequate, satisfactorily implemented and effective.

5.2.3 Criterion 7 - Control of Purchased Items and Services

The audit team evaluated the control of purchased items and services. The audit team conducted interviews with personnel from Warehouse Inventory Control, Training, and

Quality Assurance Inspection. The team evaluation of objective evidence included purchase requests, statements of work, source/receipt inspection verification sheets, nonconformance reports, CARs, training files, store stock requests, material control inventory data listings report, and the warehouse annual inventory. The processes for control of purchased items and services were analyzed from the time an item was received until it was sent to the requestor. Three concerns were identified in this area, and were combined and documented on CBFO CAR 02-073. Overall, the processes applicable to control of purchased items and services were determined to be adequate, satisfactorily implemented, and effective:

5.2.4 Criterion 8 - Identification and Control of Items

The audit team evaluated the identification and control of items. The team observed work by warehouse personnel, maintenance personnel, and TRUPACT-II personnel, focusing on identification and control of items. All items were identified by vendor's markings prior to receipt acceptance and by bar code and segregation after acceptance. Identification was retained during preventive maintenance activities. TRUPACT-II-ready parts were verified as being kept in the unloading area in a locked cabinet in their original packaging, with bar code identification. One recommendation regarding enhancing WP 10-2, Rev. 12, was provided for WTS management consideration. The recommendation is identified in Section 6.4. Overall, the processes for identification and control of items were determined to be adequate, satisfactorily implemented, and effective.

5.2.5 Criterion 9 - Control of Processes

The audit team evaluated control of processes, including special processes, applied at WTS for performing work at the WIPP facility. The evaluation included reviews of source inspection reports, work orders, training records, qualification cards, logbooks, and interviews with responsible personnel. Maintenance operations and nondestructive examination processes were observed and procedure implementation was verified. The audit team observed maintenance personnel performing preventative maintenance on fire panels and alarms, and valve refurbishment in accordance with the associated work orders. Equipment logbooks were reviewed to ensure that maintenance processes were documented and accomplished. The audit team also observed receipt inspection personnel performing source inspection of O-rings. A concern was identified regarding source inspection activities performed on two separate and different items identified in the source inspection logbook with the same report number (Report No. 02-011). A source inspector failed to log an inspection with a report number from the logbook. The inspection report with duplicate Report No. (02-011) was issued a new Report No. (02-020) and the inspection report form was corrected and logged into the inspection logbook. This was reported as CDA No. 2.

The audit team also reviewed personnel training and qualification files of waste handlers to verify the continued implementation of corrective actions to CBFO CAR 01-024.

The control of processes, including special processes, was determined to be adequate, satisfactorily implemented, and effective.

5.2.6 Criterion 13 - Handling, Storage, and Shipping

The audit team evaluated the identification and control of items. The audit team observed warehouse activities, empty TRUPACT-II shipping activities, preventive maintenance activities, and TRUPACT-II unloading activities. There were no items in the warehouse or used by maintenance at WTS that required special handling, storage, or shipping. Empty TRUPACT-II shipping is handled by the Transportation Coordinator. Manifests and bills of lading were prepared as appropriate prior to each shipment, along with checklists for completion. Handling, storage, and shipping processes were determined to be adequate, satisfactorily implemented, and effective.

6.0 CARs, CDAs, OBSERVATIONS, RECOMMENDATIONS, AND EXEMPLARY PRACTICES

6.1 Corrective Action Reports

6.1.1 CARs Initiated as a Result of CBFO Audit A-02-25

The following CARs were initiated as a result of Audit A-02-25 and have been transmitted to WTS under separate cover. A brief description of each CAR is provided below.

6.1.1.1 CBFO CAR 02-072

Several procedures do not have "Reviewer Organizations" on the title page, as required by WP 15-PS.1, *Management Control Procedure Writer's Guide*, Rev. 1, Section 2.8, and WP 15-PS.2, *Technical Procedure Writers Guide*, Rev. 1, Section 2.8. WP 15-PS3002, *WTS Controlled Document Processing*, Rev. 12, Attachment 2, Key Steps (page 3 of 4) refers to WP 15-PS3002, step 2.27; however, there is no step 2.27 in the procedure.

6.1.1.2 CBFO CAR 02-073

Two of the warehouse personnel responsible for performing section 3.2 of procedure WP15-PM3517 had not received training in identifying suspect/counterfeit items. There has been no continuing training in this area for any personnel. Quality records (required reading files) documenting training requirements were not properly controlled.

6.2 Deficiencies Corrected During the Audit (CDA)

Two deficiencies, requiring remedial action only, were identified during the audit. All were corrected before the completion of the audit. These CDAs are identified below, in the completed checklists, and documented on the CDA forms, which are maintained as CBFO QA records.

6.2.1 CDA No. 1

A source QA inspection was done with no reference documents, work packages, or procedures to indicate the acceptance criteria. The source QA inspection, documented on Quality Assurance Inspection Report 02-014, indicated dimensional checks, visual weld inspection and load test of 40,000 lbs, with no deficiencies identified. This concern was resolved by providing the associated purchase order (P. O. 105810) that identified the reference documents and revising the inspection report to include the reference material.

6.2.2 CDA No. 2

Source inspection activities performed on two separate and different items were identified in the source inspection logbook with the same report number (Report No. 02-011). A source inspector failed to log an inspection with a report number from the logbook. The inspection report with the duplicate number (Report No. 02-011) was issued a new number (Report No. 02-020), and the inspection report form was corrected and logged into the inspection logbook.

6.3 Observations

No observations were identified.

6.4 Recommendations

This following recommendation is presented for WTS management consideration.

WP 10-2, Rev. 12, covers item and material staging for maintenance activities. Section 5 of WP 10-2 could be improved by including the details from the QAPD concerning identification, control, and handling of items and material.

7.0 LIST OF ATTACHMENTS

Attachment 1: Personnel Contacted During the Audit

Attachment 2: WTS Implementing Procedures

PERSONNEL CONTACTED DURING THE AUDIT

WTS PERSONNEL CONTACTED

NAME	ORGANIZATION	PREAUDIT MEETING	CONTACTED DURING AUDIT	POST AUDIT MEETING
Beth Aldrich	L&M/ Document Services	X	X	X
Bannister, Gary	WTS/I & C Tech III		X	
Beeman, Bob	WTS/Configuration Mgmt.		X	
Brewer, Danny	WTS/Maintenance Eng Tech III		X	
Bostick, Leroy	WTS/ Ops. Deputy Mgr.	X		
Cobb, Billy	WTS/I & C Tech III		X	
Cox, Nikki	WTS QA	X	X	X
Cullum, Bob	WTS/CM Mgr.			X
Darrah, Kyle	WTS/Waste Handling Ops Tech		X	
Donner, Anthony	WTS/AB Regulatory Analyst	X		
Eggleston, Rick	WTS/Maintenance		X	
Fox, Michael	L&M/PRS Manager	X	X	
Flynn, Ed	WTS/I & C Maint. Mgr.	X	X	X
Garcia, John	WTS/Deputy Ops Mgr.	X		
Gilbert, Dennis	WTS/Maint. Rep	X	X	
Guillermo, Koreen	WTS/AB Regulatory Analyst	X		
Hoff, Jon	WTS/QA Programs Mgr.	X	X	X
Holland, Ava	CBFO/QA Manager	X		X
Hollen, Patty	WTS/AB Regulatory Analyst	X		
Irion, Adam	L&M/Program Manager	X	X	
Jierre, Candice	WTS/ES&H Manager	X		
Kearney, Michael	D/AGM-Programs	X		
Kirkes, Billy	WTS/HR Training Acting Mgr	X	X	
Legarreta, Jose	WTS/Proc. & Property Mgr	X		
Lichty, Thomas	WTS/Training Coordinator		X	X
Lipscomb, Mike	WTS/QA Analyst	X		X
McCormick, Shawn	WTS/ RH Ops Tech		X	
Nieman, Robert S.	WTS/Transportation Engr		X	

PERSONNEL CONTACTED DURING THE AUDIT

WTS PERSONNEL CONTACTED

NAME	ORGANIZATION	PREAUDIT MEETING	CONTACTED DURING AUDIT	POST AUDIT MEETING
Nesser, Cathy	WTS/QA Adm. Spec.		X	
Padilla, Kenny	WTS/ RD Ops Engr.		X	
Phillips, James	WTS/ Maint Ops Eng Tech		X	
Prentiss, Bob	WTS/Procurement SB Coor		X	
Reber, David	WTS/ AGM Ops.	X		
Sanders, Curt	WTS/QA Insp Svcs. TL		X	
Suggs, Craig	WTS/RH Ops Engr.		X	
Tanner, Steve	WTS/QA Inspector		X	
Vasquez, Joe	L&M/Inventory Control Mgr.	X	X	X
Will, Lisa	WTS/ QA Analyst	X		X
Wilis, Joe	WTS/Tech. Coor.			X
Winkel, Jeff	WTS/Transportation Mgr.	X	X	
Youngerman, Steve	WTS/Maintenance	X		
Youngman, Ron	WTS/QA Insp Svcs Sr Engr		X	

WTS Implementing Procedures Included In Audit A-02-25	
Activities	Applicable WTS Documents
<p>Criterion 4 - Procurement Document Control Criterion 7 - Control of Purchased Items and Services (CBFO QAPD Section 2.3 - 2.3.2.9 D.4 and WTS QAPD 2.3 - 2.3.4 D)</p>	<p>13-QA.04/6, Quality Assurance Department Administrative Program 13-QA1003/8, Quality Assurance Receipt Inspections 13-QA1006/2, Quality Assurance Plant Inspections 13-QA3005/5, Graded Approach to Application of QA Controls 13-QA3012/9, Supplier Evaluation/Qualification 15-PC3041/2, Approval/Variance Report Processing 15-PC3605/0, Proposal, Competition, Identification, Selection, Evaluation, and Award 15-PC3609/8, Preparation of Purchase Requisitions and Purchase Requisition change Notices 15-PM3517/13, Stores Inventory Control MP 1.34/1, WTS Procurement and Property Program WP 09/8, Engineering Conduct of Operations</p>
<p>Criterion 5 - Instructions, Procedures, and Drawings (CBFO QAPD 2.1.2 - 2.1.2C; WTS QAPD 2.1.2 - 2.2.2)</p>	<p>10-2/12, Maintenance Operations Instruction Manual 10-WC3010/5, Maintenance PM/MWI Controlled Document Processing 15-PR/5, WIPP Records Management Program 15-PS.1/1, Management Control Procedure Writer's Guide 15-PS.2/0, Technical Procedure Writers Guide 15-PS3002/12, WTS Controlled Document Processing</p>
<p>Criterion 8 - Identification and Control of Items (CBFO QAPD 2.1.3 - 2.1.3.B.5; WTS QAPD 2.1.3 - 2.1.3.1.E)</p>	<p>08-NT3020/3, TRU Waste Receipt 08-NT3040/0, Empty Type-B Package Receipt 09-CN3021/4, Component Indices 13-1/22, WTS Quality Assurance Program Description 13-QA.05/1, Suspect/Counterfeit Items Program 13-QA1006/2, Quality Assurance Plant Inspections 13-QA3005/5, Graded Approach to Application of QA Controls 15-PM3517/13, Stores Inventory Control DOE/WIPP 02-3183/0, CH Packaging Program Guidance</p>
<p>Criterion 9 - Control of Processes (CBFO QAPD 2.1 - 2.1.1 D, 2.1.4 - 2.1.4.B.2; WTS QAPD 2.1 - 2.1.1.D, 2.1.4 - 2.1.4.B)</p>	<p>05-WH1601/2, 20 Ton Diesel Forklift, 52-H-125 05-WH1602/2, 41 Ton Diesel Forklift, 52-H-005A 05-WH1741/1, 50/25 Ton Remote Handling Crane 41-T-001 10-AD3028/3, Calibration and Control of Measurement and Test Equipment 10-AD3029/4, Calibration and Control of Monitoring and Data 10-WC3011/9, Maintenance Process Qualification Cards: WH004-50/25 Ton Crane B-19-20 Ton Forklift B-20-41 Ton Fork Lift B-01-RH Road Cask 13-QA.04/6, Quality Assurance Department Administrative Program 13-QA.06/3, Quality Assurance Department Nondestructive Examination Program 13-QA1001/3, Liquid Penetrant Examination 13-QA1002/3, Visual Inspection 13-QA1003/8, Quality Assurance Receipt Inspections 13-QA1004/3, Magnetic Particle Examination 13-QA1005/1, WIPP Review of RTR Tapes 13-QA1080/1, TRUPACT-II Assembly Verification Leak Tests 13-QA1082/2, TRUPACT-II Container Integrity Leak Test</p>

WTS Implementing Procedures Included In Audit A-02-25	
Activities	Applicable WTS Documents
Criterion 13 - Handling, Storage, and Shipping (CBFO QAPD 2.1.5 - 2.1.5.F; WTS QAPD 2.1.5 - 2.1.6)	02-RC3108/1, Request for Disposal 04-AD3011/2, Equipment Tagout/Lockout 05-WH1410/3, Adjustable Center of Gravity Lift Fixture 08-NT.12/1, WTS Transportation Program 08-NT3020/3, TRU Waste Receipt 08-NT3030/2, Empty Type-B Package Shipment 08-NT3040/0, Empty Type-B Package Receipt 08-NT3102/0, Shipment of Hazardous Materials by Air 08-NT3103/2, Shipment of Nonradioactive Waste 08-NT3110/1, Shipment of Radioactive Materials 08-PT.03/0, WIPP Quality Assurance Plan for Type "B" Packaging 09-CN3021/4, Component Indices 13-1/22, WTS Quality Assurance Program Description 15-PM3517/13, Stores Inventory Control EA15PM3525-1.0/4, Shipping Authorization DOE/WIPP 02-3183/0, CH Packaging Program Guidance