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

OCT 7 2010


Mr. Jon E. Hoff, Manager
Quality Assurance
Washington TRU Solutions, LLC
P.O. Box 2078
Carlsbad, NM 88221 - 2078

Subject: Transmittal of Audit Report A-10-18, WTS Waste Handling Operations Program

Dear Mr. Hoff:

The Carlsbad Field Office (CBFO) performed Audit A-10-18 of the Washington TRU Solutions (WTS) Waste Handling Operations Program, September 14-16, 2010. The audit team concluded that the overall status of the WTS Waste Handling Operations Program is adequate, satisfactorily implemented, and effective. Three Corrective Action Reports (CARs) were generated as a result of the audit and have been transmitted under separate correspondence. The results of the audit and conclusions of the audit team are provided in detail in the enclosed report.

If you have any questions or comments, please contact me at (575) 234-7483.

Sincerely,

Martin P. Navarrete
Senior Quality Assurance Specialist

Enclosure

cc: w/ enclosure

| | | | |
|---|---|---|---|
| A. Holland, CBFO | *ED | R. Lee, EPA | ED |
| D. Gadbury, CBFO | ED | S. Zappe, NMED | ED |
| L. Chism, CBFO | ED | S. Holmes, NMED | ED |
| D. Miehls, CBFO | ED | T. Kesterson, DOE OB WIPP NMED | ED |
| F. Sharif, WTS | ED | D. Winters, DNFSB | ED |
| M. A. Mullins, WTS | ED | K. Martin, CTAC | ED |
| T. Peake, EPA | ED | P.Y. Martinez, CTAC | ED |
| M. Eagle, EPA | ED | WIPP Operating Record | ED |
| E. Feltcorn, EPA | ED | CBFO QA File | |
| R. Joglekar, EPA | ED | CBFO M&RC | |
| S. Ghose, EPA | ED | *ED denotes electronic distribution | |

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

## AUDIT REPORT

## OF

## AUDIT NUMBER A-10-18

## September 14 – 16, 2010

## WASHINGTON TRU SOLUTIONS (WTS)
## WASTE HANDLING OPERATIONS

## CARLSBAD, NEW MEXICO

**Prepared by:** Priscilla Y. Martinez **Date:** 10/5/10
P. Y. Martinez, CTAC
Audit Team Leader

**Approved by:** [signature] **Date:** 10/7/10
Ava Holland, CBFO
Quality Assurance Director

## 1.0 EXECUTIVE SUMMARY

Carlsbad Field Office (CBFO) Audit A-10-18 was conducted September 14 through 16, 2010, to evaluate the adequacy, implementation, and effectiveness of quality assurance (QA) and technical activities related to waste handling operations at the Waste Isolation Pilot Plant (WIPP). The activities were evaluated with respect to the requirements defined in DOE/CBFO-94-1012, *CBFO Quality Assurance Program Document* (QAPD); DOE/WIPP 02-3183, *CH Packaging Program Guidance;* DOE/WIPP 02-3184, *CH Packaging Operations Manual;* DOE/WIPP 02-3283, *RH Packaging Program Guidance;* DOE/WIPP 02-3284, *RH Packaging Operations Manual;* DOE/WIPP 02-3214, *RH TRU Waste Program Implementation Plan;* DOE/WIPP 02-3122, *Waste Acceptance Criteria;* and WP 13-1, *Washington TRU Solutions, LLC, Quality Assurance Program Description.*

The audit team concluded that overall, the WTS Waste Handling Operations Program continues to adequately address applicable upper-tier requirements and remains satisfactorily implemented and effective.

The audit team identified one condition adverse to quality (CAQ) during this audit related to contact-handled (CH) waste processing which resulted in the issuance of CAR 10-052. Two significant conditions adverse to quality (SCAQs) also identified during this audit resulted in the issuance of corrective action reports (CARs) 10-053 and 10-054 related to the CH waste processing. These CARs were identified as SCAQs during the audit, due to repeated attempts to resolve conditions adverse to quality that were unsuccessful. One deficiency requiring remedial corrective action was corrected during the audit (CDA 1). No Observations or Recommendations were identified during the audit. The CARs and the CDA are described in section 6.0.

## 2.0 SCOPE

### 2.1 Scope

The scope of the audit included an evaluation of the WTS Waste Handling Operations Program procedures and records, and performance of quality affecting activities. The following areas were evaluated.

<u>Contact-handled (CH) and Remote-handled (RH) Waste Handling Operations</u>

- Waste Receipt
- Type B Package Processing
- Waste Handling (surface and underground)
- CH and RH Waste Emplacement
- WIPP Waste Information System (WWIS)/Waste Data System (WDS) Entry
- Personnel Training
- Procedure Adequacy
- Forklift Operations (surface and underground)
- Conveyance Car Operations (surface and underground)

- Measuring and Test Equipment (M&TE)

The following CBFO QAPD elements were used as reference for the areas evaluated.

1.2 Personnel Qualification and Training
1.3.2 Nonconformances
1.4 Documents
1.5 Records
2.1 Work Processes
2.4.6 Use and Control of M&TE

Evaluation of WTS procedures for adequacy was based on DOE/CBFO-94-1012, *CBFO Quality Assurance Program Document*, Rev. 11.

## 3.0 AUDIT TEAM

| | |
|---|---|
| Martin Navarrete | QA Management Representative, CBFO |
| P. Y. Martinez | Audit Team Leader, CBFO Technical Assistance Contractor (CTAC) |
| P. Gomez | Auditor, CTAC |
| T. Bowden | Auditor, CTAC |
| B. Pace | Auditor, CTAC |
| R. Castillo | Auditor, CTAC |
| T. Putnam | Technical Specialist, CTAC |
| B. J. Verret | Technical Specialist, CTAC |
| J. Willis | Technical Specialist, WTS |

## 4.0 AUDIT PARTICIPANTS

Individuals contacted during the audit are identified in Attachment 1. A pre-audit conference was held in the WTS Support Building large conference room on September 14, 2010. The audit was concluded with a post-audit conference in the WTS Support Building large conference room on September 16, 2010.

## 5.0 SUMMARY OF AUDIT RESULTS

### 5.1 Program Adequacy, Implementation, and Effectiveness

The audit team concluded that the applicable WTS Waste Handling Operations activities, as described in the associated WTS Waste Handling Operations implementing procedures, are satisfactory in meeting the requirements of the CBFO QAPD.

The following sections identify each of the quality program elements evaluated during the course of this audit. For each element, the audit team evaluated the associated implementing procedures to verify the adequate flow-down of upper-tier requirements, conducted interviews with responsible personnel, and reviewed randomly selected

records to determine the degree to which the WTS Waste Handling Operations Program is effectively implemented.

The audited areas are described below. Four concerns were noted and are described in the respective areas in which they were identified. Further details are included in section 6.0. Accordingly, the WTS Waste Handling Operations Program was determined to be adequate, satisfactorily implemented, and effective.

Attachment 1 identifies the personnel contacted during the audit, Attachment 2 is a list of the documents reviewed, and Attachment 3 is the summary of the audit results.

### 5.2 QA Program Audit Details

WTS implementing procedures included in the audit are identified in Attachment 2. Details of the audit are contained in the following sections.

#### 5.2.1 Waste Receipt

The audit team evaluated waste receipt for transuranic (TRU) waste received at WIPP. The evaluation included interviews with responsible personnel, examination of receipt documents, and personnel training and qualification records.

The contents of waste shipment receipt portfolio for IN100477 were reviewed, including:

- Attachment 1 (WP 08-NT3020)
- Copy of WIPP WWIS/WDS Shipment Summary Report (SSR)
- Copy of WWIS/WDS Shipment approval for arriving shipment
- Advance copy of the manifest

The following items were documented in Attachment 1:

- Shipment number
- Type of shipment (CH/RH)
- If it contained polychlorinated biphenyls (PCBs)
- Controlled Shipment
- LA154 or SQA154 (N/A)
- Packages containing the controlled waste
- Transportation Engineer sign-off
- Date and time of receipt

Overall, the audit team concluded that the requirements for TRU waste receipts are adequate, satisfactorily implemented, and effective. No concerns were identified.

### 5.2.2 Waste Handling Equipment Preoperational Inspections

The audit team evaluated the completion of required pre-operational checks and inspections, including equipment associated with WTS RH and CH waste. Evaluations were performed through review of inspection forms, equipment operational logbooks, and observation of preoperational inspections as they were performed. Furthermore, the evaluations included verifications to confirm that personnel performing preoperational inspections are qualified and that the results of the inspections are documented and periodically reviewed. Checks and inspections were performed for the following.

- CH Surface Transuranic Mixed Waste Handling Area Inspection as prescribed by WIPP Procedure (WP) 05-WH1101
- RH Surface Transuranic Mixed Waste Handling Area Inspection as prescribed by WP 05-WH1744
- TRUDOCK Pre-Operational Checks as prescribed by WP 05-WH1002
- 13-Ton Electric Forklifts as prescribed by WP 05-WH1402
- Conveyance Loading Car as prescribed by WP 05-WH1406
- Adjustable Center of Gravity Lift Fixture (ACGLF) as prescribed by WP 05-WH1410
- RH Cask Preparation Station as prescribed by WP 05-WH1714
- Cask Unloading Room Shield Door as prescribed by WP 05-WH1717
- 25-Ton Cask Unloading Room Crane as prescribed by WP 05-WH1719

In addition to the logbooks and in-process inspection sheets, the audit team randomly selected inspections sheets previously completed and submitted to records to ensure accurate and consistent completion of required inspections. This also served to ensure that corrective actions instituted to address CBFO CAR 09-045, identified during the last waste handling audit (A-09-23), were effective. CAR 09-045 identified that inspections were being documented on obsolete forms. During the course of this review, the audit team found no similar conditions to those described in CAR 09-045. Therefore, it was determined that the corrective actions were adequate in resolving the condition.

Overall, the audit team concluded that the requirements for waste handling equipment operational checks and area inspections are adequate, satisfactorily implemented, and effective. No concerns were identified.

### 5.2.3 Packaging Operations

The audit team evaluated packaging/transportation operations for both CH and RH waste received at WIPP. The evaluation included interviews with responsible personnel, examination of receipt and empty shipping documents, examination of

M&TE to verify current calibration, verification of training of personnel and observation of WIPP transportation activities including payload removal, maintenance, and loading of the empty Type B containers (TRUPACT-II, HalfPACT, and RH-TRU 72-B).

Activities observed for CH waste included receipt of TRUPACT-II containers 145, 171, and 185 with TRU waste payloads, TRUPACT-II payload removal, TRUPACT-II maintenance, and empty TRUPACT-II loading activities.

RH 72-B trailer RH-002 unloading activities were observed on 09/14/2010, along with the removal of impact limiters. A previous unloaded cask had been transferred by remote control to the underground for cylinder emplacement. Empty shipment containing cask RH00-11 was placed on RH 72-B trailer RH011for outgoing shipment. Associated documentation was also examined for these activities.

Document reviews for both CH and RH activities were performed and included evidence for the calibration of associated M&TE, container maintenance, container loading and unloading, and personnel training and qualification records.

During the course of the packaging/transportation evaluation, four concerns were identified. One concern was corrected during the audit (CDA 1), one CAQ resulted in the issuance of CAR 10-052, and two SCAQs resulted in the issuance of CARs 10-053 and 10-054. These CARs were identified as SCAQs during the audit, due to repeated attempts to resolve conditions adverse to quality that were unsuccessful (see section 6.0).

- In the CH bay, the spare parts chest contained parts improperly labeled/packaged or expired for parts 2077-163-08 and 2077-156-18. These items were removed from the spare parts chest and returned to the Packaging Engineer, along with a cover e-mail, resulting in CDA 1.
- In the CH bay, Waste Handling personnel did not install a vacuum line or perform evacuation prior to rotation of the Outer Containment Vessel (OCV) lock ring during waste handling activities associated with TRUPACT-II 136. These steps are to be performed during the removal of the Outer Containment Assembly (OCA) lid (CAR 10-052).
- In the CH bay, Waste Handling personnel did not reposition the ACGLF counterweights to the prescribed positions of 180 and 000 degrees prior to lifting the ACGLF subsequent to placing the payload on the pallet during waste handling activities associated with TRUPACT-II 181 (CAR 10-053).
- In the CH bay, during the removal of the OCA lid for TRUPACT-II 190, the load cell indicated weight in excess of the 10,000-lb weight limit prescribed by the procedure (CAR 10-054).

With the exception of the four concerns described, the audit team concluded that the requirements for packaging/transportation operations for both CH and RH waste are adequate, satisfactorily implemented, and effective.

### 5.2.4 Contact-Handled Waste Handling Operations (Surface and Underground)

The audit team reviewed the CH waste handling procedures related to surface and underground activities and verified adequate flow-down of CBFO QAPD requirements.

The audit team evaluated surface and underground CH waste handling and processing activities, from entry of TRUPACT-II containers in the Waste Handling Building (WHB) through emplacement of the waste in the underground.

Procedural implementation was verified during CH waste handling operations conducted September 14, 2010. This verification activity commenced with observations of the preoperational briefings conducted at the WIPP Support Building. Logbooks containing documentation of preoperational checks for lifting and transporting equipment were reviewed and entries were determined to have been made and reviewed in accordance with procedure. The audit team verified that copies of continuous use procedures were available at the immediate work locations in the WHB and underground, along with approved forms for documenting work activities.

The audit team witnessed waste being moved from trailers using electric forklifts; waste being unpacked from TRUPACT-II containers; the use of the ACGLF; processing, including radiological surveys; and waste being palletized and placed on the conveyance loading car.

The audit team also witnessed underground waste handling operations for a CH shipment from the Idaho National Laboratory site conducted September 14, 2010. The audit team observed and verified the following: preoperational equipment checks; equipment logbook entries; palletized waste placed on a transporter; waste moved by electric forklift to processing; and final emplacement of the waste. Also observed during waste processing was the radiological control technician (RCT) conducting swipes and monitoring, handling of payloads, and use of additional equipment (e.g., ratchet straps, lifting pallets, bumper blocks, slip sheets). The audit team verified updating of the underground emplacement map, updating (including actual entries) of WWIS/WDS waste emplacement locations in panel 5, room 3, column 3, row 83, and column 2, row 84. Further, waste handling engineer (WHE) safety factor calculations for emplacement of the magnesium oxide (MgO) supersacks were also verified. All operations were performed in accordance with established procedures. Technician/operator/performer, reviewer, and validator signatures were verified, as well as individual personnel training and qualification records.

Overall, the audit team concluded that the requirements for surface and underground CH waste handling operations and processes were adequate, satisfactorily implemented, and effective. No concerns were identified.

### 5.2.5 Remote-Handled Waste Handling Operations (Surface and Underground)

The audit team reviewed RH waste handling procedures related to the surface and underground activities and verified flow-down of CBFO QAPD requirements.

The team also evaluated surface and underground RH waste handling and processing activities, from placement of an RH-TRU 72-B in the WHB, through emplacement of the waste in the underground.

Procedural implementation was verified during RH waste handling operations conducted September 14, 2010. The audit team verified this activity through interviews, documentation, and observation. All applicable procedures and work instructions at the work stations were verified to be the current revisions. The audit team observed empty cask preparation for shipment activities for the RH-TRU 72-B. All impact limiters and ICV and OCV closure lid serial numbers were compared and verified with the cask body serial numbers.

The audit team observed underground waste handling operations, including facility cask transfer to the emplacement room in panel 5. Observation included preoperational equipment checks, facility cask installation, emplacement of the alignment fixture assembly, and canister emplacement ,including installation of the shield plug. The audit team verified the correct use of Attachment 1, RH Waste Processing Data Sheet, and verified that it was reviewed by the WHE. The audit team observed the transfer of the canister from the waste handling shaft to the emplacement location, panel 5, room 2, borehole BH086. Radiological technicians were observed performing the surveys required by the procedure. Subsequent to emplacement activities, the audit team verified the completion of WH1025 Attachment 1 in accordance with the procedure and verified that it was forwarded to the facility shift manager (FSM) as required.

No RH activities were being performed using the CNS 10-160B at the time of this audit.

Overall, the audit team concluded that the requirements for surface and underground RH waste handling operations and processes were adequate, satisfactorily implemented, and effective. No concerns were identified.

### 5.2.6 Waste Data System

The audit team evaluated the adequacy of WTS Procedure WP 05-WH.02, Rev. 0, *WIPP Waste Handling Operations WDS User's Manual*, with respect to the CBFO QAPD and DOE/WIPP-09-3427, Rev. 0, *Waste Data System User's Manual*, and determined that the procedure contains adequate flow-down of upper-tier requirements. Interviews were conducted with a WHE qualified for both RH and CH waste, and documents related to container receipt and emplacements were examined. The audit team verified that the WHE entered container receipt data into WDS. The audit team verified that emplacement locations and MgO calculations were entered into the WDS by the WHE. The audit team verified entered data by review of a WDS Waste

Emplacement Report and determined that WDS data entry of receipt and emplacement data is performed adequately and in accordance with procedure.

Overall, the audit team concluded that the Waste Data System process was adequate, satisfactorily implemented, and effective. No concerns were identified.

### 5.2.7 Magnesium Oxide

The audit team evaluated the MgO procurement process at the WIPP as controlled by WP 05-1105, Rev. 3, *Magnesium Oxide Sample Record Management.* The WTS MgO Subcontract Technical Representative (STR) was interviewed and documents were reviewed, including Subcontract Purchase Order (PO) 403037 and PO 410778. The audit team verified the MgO Sample Tracking Spreadsheet and determined it contained all required information. The audit team also reviewed a Certificate of Analysis (COA) from the MgO supplier (Martin Marietta), a Request for Analysis (ROA) for Supplier Shipment No. SL585611, and Reactivity Testing Results provided to the MgO STR as required. All documents were found to be acceptable.

The audit team verified continued corrective actions for CARs 09-046 and 09-047 and determined that corrective actions are still in place.

Overall, the audit team concluded that the MgO process was adequate, satisfactorily implemented, and effective. No concerns were identified.

### 5.2.8 Training and Qualifications

The audit team verified training records for selected waste handling personnel and were determined to by adequately trained for CH and RH waste handling operations. The audit team determined that personnel performing surface and underground CH and RH waste handling operations are adequately trained and qualified in accordance with DOE/WIPP 02-3183, Rev. 6, *CH Packaging Program Guidance*, and DOE/WIPP 02-3283, Rev. 3.1, *RH Packaging Program Guidance.*

Overall, the audit team concluded that the Training and Qualifications processes were adequate, satisfactorily implemented, and effective. No concerns were identified.

### 5.2.9 Control of Measuring and Test Equipment

Personnel interviews were conducted and objective evidence was examined to verify compliance with the requirements for the control of M&TE. A review was performed on the M&TE used during CH and RH waste handling activities. The equipment was determined to have been properly controlled, calibrated, and maintained.

Overall, the audit team concluded that the M&TE process was adequate, satisfactorily implemented, and effective. No concerns were identified.

### 5.2.10 Nonconformances

The audit team evaluated nonconformance reports (NCRs) associated with CH and RH waste handling processes. The audit team verified that NCRs FY2010-39, FY2010-42, FY2010-31, and FY2010-34 were processed as required by the WTS QAPD and WP 13-QA3004, Revision 11, *Nonconformance Report*.

Overall, the audit team concluded that the NCR process was adequate, satisfactorily implemented, and effective. No concerns were identified.

### 5.2.11 Records

The audit team evaluated the records control process associated with CH and RH waste handling processes. Objective evidence examined to verify compliance with the requirements for records included records submittals, retrieval requests, transmittal/receiving forms, the Records Inventory and Disposition Schedule (RIDS), records inventory worksheets, and operational logbooks/notebooks. Records storage arrangements were evaluated to verify compliance with requirements for the preservation of in-process and completed records. Further, records were reviewed to verify accuracy, completion, legibility, and appropriate annotations for corrections when necessary.

Overall, the audit team concluded that the Records process was adequate, satisfactorily implemented, and effective. No concerns were identified.

### 5.2.12 Work Processes

Personnel interviews were conducted and various WTS Waste Handling Operations Program implementing procedures were examined to verify compliance with work process requirements. Work was verified to be performed under controlled conditions using approved instructions and procedures. Equipment used for the processing of the waste was verified to be correctly calibrated and/or maintained.

Overall, the audit team concluded that Work Processes were adequate, satisfactorily implemented, and effective. No concerns were identified.

## 6.0 SUMMARY OF DEFICIENCIES

### 6.1 Corrective Action Reports (CARs)

During the audit, the audit team may identify Conditions Adverse to Quality (CAQ) and document such conditions on Corrective Action Reports (CARs).

Condition Adverse to Quality (CAQ) – An all-inclusive term used in reference to any of the following: failures, malfunctions, deficiencies, defective items, nonconformances, and technical inadequacies.

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

Three CARs, described below, were initiated as a result of this audit. The CARs were transmitted to WTS under separate cover. CAR 10-053 and 10-054 were identified as SCAQs during the audit, due to repeated attempts to resolve conditions adverse to quality that were unsuccessful.

**CAR 10-052**

Requirement(s)

WP 05-WH1011, Rev. 39, *CH Waste Processing*, section 2.3.8, "Connect vacuum line to vent port tool," and Section 2.3.9, "Start vacuum pump and evacuate 3-in to 15-in Hg (mercury) vacuum gauge."

Condition

In the CH bay, Waste Handling personnel did not install vacuum line or evacuate prior to rotation of the OCV lock ring during waste handling activities associated with TRUPACT-II 136. These steps are to be performed during the removal of the OCA lid.

**CAR 10-053**

Requirement(s)

WP 05-WH1011, Rev. 39, *CH Waste Processing*, CAUTION statements at sections 2.3.13 and 2.4, "To prevent weight from shifting, Operator must ensure that the two ACGLF counterweights are at 180 degrees and 000 degrees (± 2 degrees) **BEFORE** lifting ACGLF or lid."

Condition

In the CH bay, Waste Handling personnel did not reposition the ACGLF counterweights to the prescribed positions of 180 and 000 degrees prior to lifting the ACGLF subsequent to placing the payload on the pallet during waste handling activities associated with TRUPACT-II 181.

**CAR 10-054**

Requirement(s)

WP 05-WH1011, Rev. 39, *CH Waste Processing*, CAUTION statement at section 2.3.14, "To avoid shearing of lid lift pins, load cell reading MUST NOT exceed 7500 lb when weight of ACGLF is zeroed out, or 10,000 lb when weight of ACGLF is included."

Condition

In the CH bay during the removal of the OCA lid for TRUPACT-II 190, the load cell indicated weight in excess of the 10,000-lb weight limit prescribed by the procedure.

### 6.2 Deficiencies Corrected During the Audit (CDAs)

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

During the audit, the audit team may identify CAQs. The audit team members and the Audit Team Leader (ATL) evaluate the CAQs to determine if they are significant. 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 isolated requiring only remedial action and therefore can be Corrected During the Audit (CDA). Deficiencies that can be classified as CDA are those isolated deficiencies that do not require a root cause determination or actions to preclude recurrence, and those for which correction of the deficiency can be verified prior to the end of the audit.

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.

One isolated deficiency as described below was identified and corrected during the audit.

**CDA 1**

In the CH bay, two items in the TRUPACT-II spare parts locker to were not appropriately labeled. The two items were segregated and returned to the Packaging Engineer. These actions were verified by e-mail correspondence with the Packaging Engineer.

## 7.0 SUMMARY OF OBSERVATIONS AND RECOMMENDATIONS

During the audit, the audit team may identify conditions that warrant input by the audit team to the audited organization regarding potential problems or suggestions for program improvement. The audit team members, in conjunction with the ATL, evaluate these conditions and classify them as observations or recommendations (using the following definitions). Once a determination is made, the audit team members, in conjunction with the ATL, categorize the conditions appropriately.

Observation – A condition that is determined not to be a violation of procedure or requirement at the time but, if not controlled or addressed, may result in a CAQ during future activities.

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

### 7.1 Observations

No Observations were identified during the course of this audit.

### 7.2 Recommendations

No Recommendations were provided to WTS Management during the course of this audit.

## 8.0 LIST OF ATTACHMENTS

Attachment 1: Personnel Contacted During the Audit

Attachment 2: WTS Implementing Procedures Evaluated

Attachment 3: Summary Table of Audit Results

| PERSONNEL CONTACTED DURING THE AUDIT | | | | |
|---|---|---|---|---|
| **NAME** | **ORGANIZATION/ DEPARTMENT** | **PRE-AUDIT MEETING** | **CONTACTED DURING AUDIT** | **POST-AUDIT MEETING** |
| Allen, Bill | WTS/Quality Assurance Integration Manager | | X | |
| Batchelder, Terry | WTS/CH Waste Handling | | X | |
| Bellows, H. W. | WTS/Deputy Operations Manager | X | | X |
| Billett, Bob | WTS/R&DC Manager | X | | |
| Bradford, Brad | WTS/CH Waste Handling Ops | | X | |
| Britain, Randy | WTS/Integrated Ops. Manager | X | X | X |
| Chism, Gary | WTS/Waste Handling Engineer/WWIS/WDS | | X | |
| Cooper, Andy | WTS/RH Waste Handling Manager | | X | |
| Dziamski, Mark | WTS/Waste Operations Manager | | | X |
| Gumm, Brian | WTS/Waste Handling Ops | | X | |
| Hoff, Jon | WTS/QA Manager | X | | X |
| Johnson, Angela | WTS/Transportation Manager | X | | |
| Keathley, Martin | WTS/QA Programs Manager | X | | X |
| McGary, Edward | WTS/Waste Handling Ops./MgO STR | | X | |
| Meeker, Corry | WTS/Waste Handling/Secretary/ Records Coordinator | | X | |
| Mullins, Mary Ann | WTS/Quality Assurance Sr. Staff Assistant | X | X | X |
| Navarrete, Martin | CBFO/Senior QA Specialist | X | X | X |
| Navarrete, Pete | WTS/RH Waste Handling Ops | | X | |
| Nieman, Robert | WTS/Transportation Engineer | | X | |
| Proctor, Mike | WTS/CH Waste Handling Manager | | X | |
| Proctor, Tricia | WTS/QA Lead Auditor | X | | X |
| Ripley, David | WTS/RH Waste Handling Manager | X | X | |
| Rogers, Mike | WTS/HR/Training Manager | | X | |
| Salazar, Ezequiel | WTS/I&H | | X | |
| Suggs, Craig | WTS/Deputy Manager, Waste Operations | X | X | X |
| Valenzuela, Raymond | WTS/Waste Handling Operations Manager | X | X | |
| Waters, Jim | CBFO/Site Operations | | X | |
| Wiedenhoeft, David | WTS/QA Specialist | | X | |

| WTS Implementing Procedures Evaluated | | |
|---|---|---|
| **Number** | **Doc. Number** | **Applicable WTS Document** |
| 1 | 05-WH.02 | WIPP Waste Handling Operations WDS User's Manual |
| 2 | 05-WH1002 | TRUDOCK Operation 41-T-152 41-T-153 |
| 3 | 05-WH1004 | Facility and TRUPACT-II Pallet Handling |
| 4 | 05-WH1005 | CH Packaging Trailer Loading |
| 5 | 05-WH1010 | Container Overpacking |
| 6 | 05-WH1011 | CH Waste Processing |
| 7 | 05-WH1015 | Preparation of CH Packaging for Empty Shipment |
| 8 | 05-WH1025 | Ch Waste Downloading and Emplacement |
| 9 | 05-WH1058 | CH Waste Handling Abnormal Operations |
| 10 | 05-WH1083 | CH Packaging Operations |
| 11 | 05-WH1083 | CH Packaging Operations |
| 12 | 05-WH1101 | CH Surface Transuranic Mixed Waste Handling Area Inspections |
| 13 | 05-WH1105 | Magnesium Oxide Sample Records Management |
| 14 | 05-WH1402 | 13-Ton Electric Forklifts |
| 15 | 05-WH1406 | Conveyance Loading Car |
| 16 | 05-WH1410 | Adjustable Center of Gravity Lift Fixture |
| 17 | 05-WH1412 | CH Waste Handling Toyota Forklifts |
| 18 | 05-WH1601 | 20-Ton Diesel Forklift 52-H-125 |
| 19 | 05-WH1602 | 41-Ton Diesel Forklift 52-H-005A |
| 20 | 05-WH1603 | CH TRU Underground Transporter, 52-H-008 A, B, & C |
| 21 | 05-WH1700 | Horizontal Emplacement and Retrieval Equipment Assembly |
| 22 | 05-WH1701 | Road Cask Transfer Car Operation |
| 23 | 05-WH1703 | RH TRU Emplacement Machinery Disassembly |
| 24 | 05-WH1704 | Facility Cask Transfer Car (41-H-003) Operation |
| 25 | 05-WH1705 | RH Canister Transfer System |
| 26 | 05-WH1706 | Preparation of an Empty RH-TRU 72-B Cask for Shipment |
| 27 | 05-WH1707 | RH-TRU 72-B Trailer Loading |
| 28 | 05-WH1709 | RH-TRU 72-B Trailer Unloading |
| 29 | 05-WH1710 | 72-B RH Processing |
| 30 | 05-WH1711 | 6-Ton Toyota Forklift 52-H-007C |
| 31 | 05-WH1714 | RH Cask Preparation Station 41-Z-076 |
| 32 | 05-WH1717 | Cask Unloading Room Shield Door Operation |
| 33 | 05-WH1719 | 25-Ton Cask Unloading Room Crane |
| 34 | 05-WH1720 | Empty 72-B Retrieval from Transfer Cell |

| WTS Implementing Procedures Evaluated | | |
|---|---|---|
| **Number** | **Doc. Number** | **Applicable WTS Document** |
| 35 | 05-WH1725 | RH Downloading and Emplacement |
| 36 | 05-WH1727 | RH-TRU 72-B Cask Uprighting Trailer Loading |
| 37 | 05-WH1729 | RH-TRU 72-B Cask Uprighting Trailer Unloading |
| 38 | 05-WH1744 | Surface RH Transuranic Mixed Waste Handling Area Inspections |
| 39 | 05-WH1757 | RH Closed-Circuit TV System |
| 40 | 05-WH1810 | Underground TRU Mixed Waste Disposal Area Inspections |
| 41 | 05-WH4401 | Waste Handling Operator Event Response |
| 42 | 08-NT3020 | TRU Waste Receipt |
| 43 | 08-PT.03 | WIPP QA Program Plan for Type "B" Packaging |
| 44 | 08-PT.11 | RH-TRU 72-B Cask Trailer Operation and Maintenance Manual |
| 45 | 10-AD3028 | Calibration and Control of Measurement and Test Equipment |
| 46 | 12-HP1314 | Remote-Handled Waste Service Room |
| 47 | 13-1 | Washington TRU Solutions, LLC, Quality Assurance Program Description |
| 48 | 13-QA3004 | Nonconformance Report |
| 49 | 14-TR.01 | WIPP Training Program |
| 50 | 15-RM | WIPP Records Management Program |

# Summary Table of Audit Results

| Audit Elements | Concern Classification | | | | QA Evaluation | | |
|---|---|---|---|---|---|---|---|
| | CARs | CDAs | Obs | Rec | Adequacy | Implementation | Effectiveness |
| Waste Data System | | | | | A | S | E |
| MgO | | | | | A | S | E |
| Records/NCRs/Qualification and Training | | | | | A | S | E |
| M&TE/CH & RH Surface Inspections | | | | | A | S | E |
| CH Surface Waste Processing | 3 | 1 | | | A | S | E |
| CH Underground Waste Processing | | | | | A | S | E |
| RH Surface Waste Processing | | | | | A | S | E |
| RH Underground Waste Processing | | | | | A | S | E |
| **TOTALS** | **3** | **1** | | | **A** | **S** | **E** |

**Definitions**

A = Adequate
I = Indeterminate
NA = Not Adequate
S = Satisfactory

E = Effective
M = Marginal
NE = Not Effective

CAR = Corrective Action Report
CDA = Corrected During Audit
Obs = Observation
Rec = Recommendation