

# WASTE ISOLATION PILOT PLANT GENERATOR SITE TECHNICAL REVIEW PLAN



DOE/CBFO 16-3563  
Revision 0

June 2016

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

# WASTE ISOLATION PILOT PLANT GENERATOR SITE TECHNICAL REVIEW PLAN

Revision 0  
Effective June 16, 2016

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Date: 5/24/15

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## ACRONYMS

AKE	Acceptable Knowledge Expert
CBFO	Carlsbad Field Office
CCP	Central Characterization Program
CH-TRAMPAC	Contact-Handled Transuranic Waste Authorized Methods for Payload Control
DOE	U.S. Department of Energy
DSA	Documented Safety Analysis
GSTR	Generator Site Technical Review
ICE	Issue Collection and Evaluation
JON	Judgment of Need
M&O	Management and Operating
MAR	Material at Risk
MOA	Memorandum of Agreement
NTP	National TRU Program
NWP	Nuclear Waste Partnership LLC
P2AIR	Phase 2 Accident Investigation Report
RH-TRAMPAC	Remote-Handled Transuranic Waste Authorized Methods for Payload Control
TRAMPAC	Transuranic Waste Authorized Methods for Payload Control
TRU	Transuranic
TSTD	TRU Sites and Transportation Division
WAC	Waste Acceptance Criteria
WDS	Waste Data System
WIPP	Waste Isolation Pilot Plant

## DEFINITIONS

**Acceptable Knowledge Expert** – An individual qualified to compile, document, analyze and summarize information required by the Hazardous Waste Facility Permit Waste Analysis Plan. Acceptable Knowledge is defined as any information about the process used to generate waste, material inputs to the process, and the time period during which the waste was generated, as well as data resulting from the analysis of waste.

**Certified Program** – Certified Programs certify TRU waste containers to meet the WIPP Waste Acceptance Criteria disposal requirements prior to seeking shipment authorization. The Carlsbad Field Office (CBFO) Manager is the certification authority for Waste Isolation Pilot Plant (WIPP) certified programs. The programs undergo initial certification and annual recertification audits conducted by the CBFO. Currently the Certified Programs are the Central Characterization Program (CCP) by site, and the Contractor for the Advanced Mixed Waste Treatment Project (AMWTP).

**Central Characterization Program (CCP)** – The CCP, through contract with the (CBFO) National TRU Program (NTP), provides TRU waste characterization, certification and transportation resources to DOE site TRU Waste Management programs. The CCP may be utilized by large sites to increase throughput, or by small sites lacking equipment and other resources required to process and ship TRU waste.

**Site Documents** – The group which administers the document review process for the CBFO.

**WIPP Co-permittees** – The Carlsbad Field Office, as the owner of WIPP, and the WIPP Management and Operating (M&O) Contractor, as the operator of WIPP.

## Generator Site Technical Review Plan

### 1.0 INTRODUCTION

The Carlsbad Field Office (CBFO) and Nuclear Waste Partnership LLC (NWP) *Corrective Action Plans*, addressing the *Phase 2 Accident Investigation Report of the Radiological Release Event at the Waste Isolation Pilot Plant (P2AIR)*, on February 14, 2014, includes, as Judgment of Need (JON) 2, the need for the National TRU Program (NTP) to reevaluate and strengthen the transuranic (TRU) waste certification audit process across the U.S. Department of Energy (DOE) complex at all DOE generator sites. CBFO P2AIR corrective action JON 2.2 requires the development of a comprehensive review process to be implemented by CBFO and the Waste Isolation Pilot Plant (WIPP) Management and Operating (M&O) Contractor.

#### **CBFO P2AIR JON 2.2:**

*On behalf of the National TRU Program, co-permittees will develop a comprehensive review process based on the benchmarked evaluation report, with participation from the generator sites that includes the following elements:*

- *Evaluation of waste generator repackaging operations that prepare TRU waste for characterization;*
- *Implementation of waste generator site processes as they relate to TRU waste management;*
- *Verification that changes to processes are correctly incorporated into acceptable knowledge summary reports;*
- *Verification of effective implementation documentation and programs to ensure that waste generator activities comply with the generator site Resource Conservation and Recovery Act permit;*
- *Evaluation of local site office oversight of TRU waste operations; and*
- *Evaluation of waste generator site deferred maintenance in TRU waste program operations.*

This comprehensive review process has been entitled Generator Site Technical Review (GSTR). This review will focus primarily on the DOE self-regulated requirements which include but are not limited to the following: DOE 435.1, Radioactive Waste Management; DOE 422.2, Conduct of Operations; and DOE 226.1B, Department of Energy Oversight Policy. Since these reviews will be conducted by the co-permittees (CBFO and the WIPP M&O Contractor, as the owner and operator of WIPP, respectively), the review process will identify specific and separate responsibilities that each co-permittee will have when conducting these reviews. Both maintain independent authority to cease or suspend shipments until resolution to concerns are addressed.

Furthermore, the WIPP Documented Safety Analysis (DSA), Rev 5, now includes Chapter 18, *Waste Acceptance Criteria Compliance Program*, which established a Key Element to ensure WIPP WAC compliance by confirming the ability of the Certified Programs to ensure noncompliant materials are not present in waste containers, to limit the quantity of individual waste container material at risk (MAR), and to ensure individual waste container fissile material (i.e., fissile gram equivalent) is within mass limits in order to protect the initial conditions and assumptions of the safety analysis.

**WIPP DSA, Rev 5, Key Element 18-4:**

*The WIPP M&O Contractor performs Generator Site Technical Reviews, which are reviews of DOE Sites' and Certified Programs' implementation of WIPP requirements (excluding DOE activities).*

To fulfill the DSA Key element 18-4 and P2AIR JON 2.2, CBFO and WIPP M&O Contractor have developed this plan to perform a periodic review of the implementation of WIPP requirements at DOE site Waste Management Programs and Certified Programs. The review will confirm that appropriate processes and procedures governing the treatment, packaging certification and management of TRU waste are adequately implemented to ensure that TRU waste containers are compliant with WIPP requirements. The review will be performed jointly by CBFO and WIPP M&O Contractor, and will be limited to those facilities, programs and/or processes (shown as Site Waste Management Program(s) in Figure 1) that introduce TRU waste to the Certified Program.

The GSTR program is part of an integrated and comprehensive approach to TRU waste management oversight, as shown in Figure 1, and satisfies the requirements of Key Element 18-4 of the WIPP DSA. This program is not intended to duplicate or replace the WIPP TRU waste certification program audits or evaluations performed by other organizations, but is focused on the programs and processes that manage, treat, package and certify TRU waste.

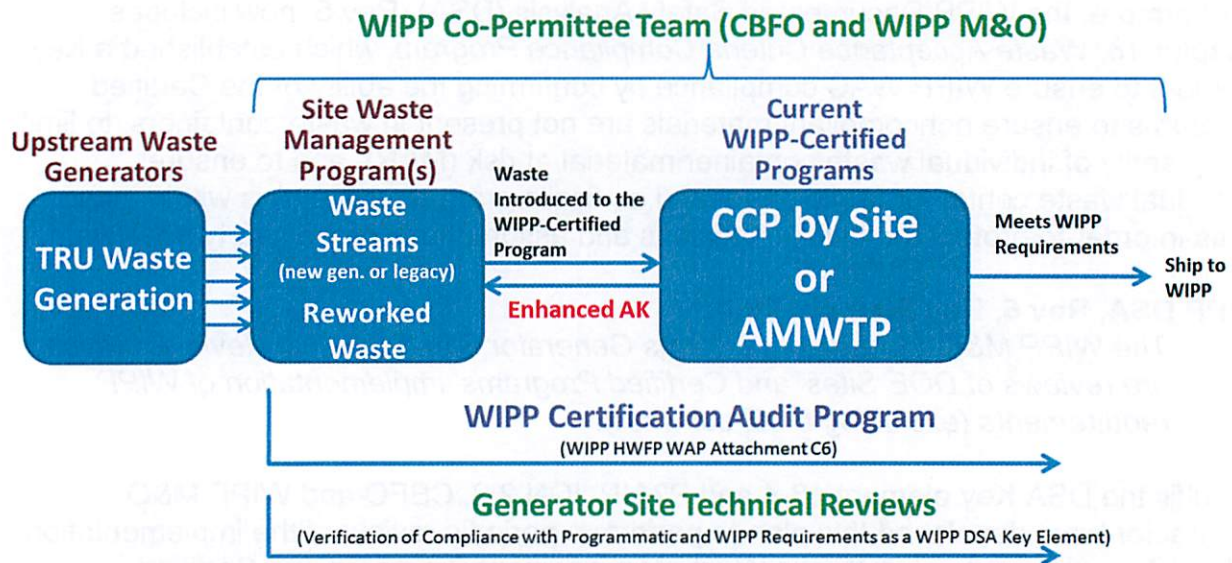


Figure 1. National TRU Program Integrated Oversight Program

## 2.0 SCOPE

The GSTR program is a review of DOE sites' Waste Management Program and Certified Program processes that govern TRU waste packaging, treatment, certification and management. The review will ensure that necessary and sufficient processes and procedures are in place and are implemented to assure TRU waste containers meet WIPP WAC requirements prior to transfer or re-entry into the Certified Program, and that deficiencies are detected and corrected prior to shipment to WIPP.

The GSTR program will review the following DOE site Waste Management Programs:

- Quality assurance program, including training for waste generators
- Performance assurance program and issues management system
- Conduct of operations, including verification that changes to existing procedures and processes related to TRU waste management are incorporated into acceptable knowledge
- Federal oversight at the DOE site (CBFO only)
- TRU waste management programs at the DOE site that result in the following:
  - Waste generation, treatment, and packaging processes
  - Resource Conservation and Recovery Act (RCRA) permitting and implementation
  - Hazardous waste determinations
- Deferred maintenance (i.e., potential impacts to TRU waste processes)



### **3.0 RESPONSIBILITIES**

#### **3.1 CBFO Manager**

- Establish and maintain the GSTR Program
- Approve Memorandum of Agreement (MOA) to establish roles, responsibilities, authorities and accountabilities for conducting the GSTR
- Designate the GSTR Coordinator
- Resolve disputes
- Submit GSTR reports

#### **3.2 WIPP M&O Contractor President/Project Manager**

- Designate the GSTR Team Leader
- Resolve disputes
- Submit GSTR reports

#### **3.3 GSTR Team Leader**

- Work with the GSTR Coordinator to maintain this plan and the GSTR procedure
- Maintain the GSTR review schedule
- Maintain the GSTR issues tracking system
- Work with the GSTR Coordinator to establish/approve the scope for each review
- Work with the GSTR Coordinator to develop a review plan for each review
- Designate team members to address WIPP M&O Contractor priorities for the review
- Execute GSTR review
- Prepare/approve GSTR reports
- Train GSTR team members, including retraining and refresher training
- Approve GSTR team member checklists

#### **3.4 GSTR Coordinator**

- Serve as the federal representative on the GSTR team
- Coordinate with the site/organization to be reviewed
- Provide WIPP M&O Contractor personnel access to the DOE site Waste Management Program through the establishment of MOA's

- Work with the GSTR Team Leader to maintain this plan and the GSTR procedure
- Work with the GSTR Team Leader to establish/approve the scope for each review
- Work with the GSTR Team Leader to develop a review plan for each review
- Designate CBFO team members to address CBFO priorities for the review
- Identify observers from WIPP regulatory agencies requesting participation
- Prepare/approve GSTR reports

### **3.5 GSTR Team Members**

- Participate in GSTR team meetings in preparation for reviews
- Develop checklists to address GSTR objectives using site documents
- Attend site visits as scheduled by the GSTR Team Leader
- Conduct portions of the GSTR, as assigned
- Prepare assigned written sections or summaries of the review for use in the report

## **4.0 IMPLEMENTATION**

The GSTR Team Leader and the GSTR Coordinator will identify DOE site facilities and site waste management organizations that generate, treat, manage, and/or handle TRU waste, or that conduct processes that have the ability to affect TRU waste physical properties or final form based on the TRU waste shipping schedule, TRU Waste Corporate Board recommendations, current waste processing activities, planning meetings between the DOE site and the TRU Sites and Transportation Division (TSTD). Identified DOE generator site facilities/organizations will be included in plans for future evaluations.

Prior to conducting a review, the GSTR Coordinator will ensure the established MOA addresses roles, responsibilities, authorities and accountabilities for conducting the GSTR.

### **4.1 GSTR Planning**

DOE site Waste Management Programs that generate TRU waste destined for disposal at WIPP will require periodic evaluation from the WIPP GSTR team to ensure the organization has adequately implemented upper-tier programs to control the generation, treatment, packaging, and characterization of the waste.

The GSTR Team Leader, in coordination with the GSTR Coordinator, will identify organizations that generate, treat, manage, and/or handle TRU waste, or that conduct

processes that have the ability to affect TRU waste physical properties or final form. The GSTR Team Leader will generate a schedule for site reviews. The schedule will be modified as necessary to reflect changing priorities, availability of team members, and/or the ability of sites to host the review.

Initial reviews will be performed prior to a site shipping waste to WIPP. Follow-up reviews will be scheduled based on site activities since the last review.

Based on the activities and programs identified at the site, the CBFO GSTR Coordinator and the GSTR Team Leader will develop the review scope and will assign responsibilities for conducting reviews of specific areas in Section 2, to GSTR team members. Initial reviews will be Level 1 reviews that are designed to ensure the DOE site Waste Management Programs and Certified Programs have a comprehensive waste management program in place. After a Level 1 review has been performed, a Level 2 review can be performed to monitor ongoing performance, and review new processes or waste streams. After a Level 1 review has been performed, subsequent reviews (Level 1 or Level 2) will be conducted periodically, at the direction of the CBFO TSTD Director.

Level 1 review will include initial review and reviews that are broad in scope. Examples include:

- Initial DOE generator site TRU waste operations
- Restart of dormant TRU waste operations
- Review of the results of site corrective actions following significant findings in the waste management area (e.g., from CBFO certification audit results, or GSTR results)
- Or as directed by the CBFO Manager or WIPP M&O Contractor President/Project Manager

Level 2 reviews are primarily follow-on reviews that are tailored to new or updated process review, corrective action follow-up, and/or other general areas of interest to WIPP. Examples include:

- New processes
- Indications of adverse trends or conditions (e.g. from local site office issues tracking, or CBFO certification audit results)
- Significantly revised treatment or packaging processes (e.g., from Acceptable Knowledge Expert (AKE), TSTD TRU Certification Manager, or CBFO reviews)
- Periodic updates after the Level 1 review

The scope will determine the size and composition of the GSTR review team. Sufficient team members will be selected such that the scope of the review can be completed during the scheduled visit (typically within one week). GSTR team members will be selected in consideration of the functional areas to be assessed. The GSTR Team Lead will request relevant documents from the selected organization that define the activities and programs identified in the review scope.

GSTR team members will review the documents assigned to them by the GSTR Team Leader and prepare checklists to address the review scope. They will submit the checklists to the GSTR Team Leader for review and approval.

## **4.2 GSTR Scheduling**

Once the facilities and site waste management organization that generate transuranic waste have been identified and the GSTR Coordinator has made initial contact with that facility or organization has been made, the GSTR Team Leader will establish a viable date for the review. That date will take into consideration the ability of the organization to support the review, availability of GSTR team members, and the time required to prepare checklists for the review.

If necessary, the GSTR Coordinator and the GSTR Team Leader (or designees) may travel to the facility to discuss the review and the potential scope. The TRU Waste Corporate Board meetings are also suitable venues for discussions of future reviews.

The GSTR Coordinator will transmit a letter to the organization to formalize the date and identify the expected scope of the review.

## **4.3 GSTR Process**

### **4.3.1 DOE Site Waste Management Program Visit**

The GSTR Team Leader will conduct a briefing with members of the selected organization prior to the start of the review. The selected organization will be provided the opportunity to describe site expectations, logistics, points of contact, or other information they deem relevant to the scope of the review.

Individual team members will perform the review by working through the lines of inquiry identified on their checklists. Should the review identify other areas of interest, the team members can add items to the checklists to include those new areas. At the close of the review, the GSTR Team Leader will provide an exit briefing to site/organization management, if necessary.

### **4.3.2 GSTR Assessment Report**

The review will result in a report that identifies the DOE site Waste Management Program or Certified Program processes and procedures that were reviewed by the GSTR team. Program documents and procedures evaluated during the review will be

identified by document number or implementing procedure number and revision. The report will include reference to objective evidence that was reviewed (such as reports, plans, procedures, characterization data packages, or waste packaging records).

Assessment reports will consist of:

- Executive summary
- Review scope
- Identification of team members
- Identification of personnel contacted
- Programs reviewed
- Documents reviewed
- Objective evidence reviewed
- Work performance observed or personnel interviewed
- Results of the review
- Issues categorized based on their relative importance and the assessed risk the issue has on the sites ability to prepare TRU waste for shipment to WIPP.

Should there be an issue that cannot be resolved by the GSTR Team Leader and the GSTR Coordinator, the issue will be raised to the WIPP M&O Contractor President/Project Manager, and the CBFO Manager.

The GSTR Team Leader and GSTR Coordinator will review and approve the report and provide it to the CBFO Manager and WIPP M&O Contractor President/Project Manager for transmittal to the DOE site Waste Management Program and Certified Program. The CBFO Manager will also distribute the report to the CBFO Quality Assurance Director, and the responsible AKE.

The GSTR review results will be entered into the CBFO Issue Collection and Evaluation (ICE) system in the Operational Awareness Module by the GSTR Coordinator.

All identified issues in initial Level 1 reviews must be addressed prior to approval to ship TRU waste certified after DSA Revision 5 implementation to WIPP.

A clearly defined deadline will be established for addressing issues identified during follow-up Level 1 or Level 2 review commensurate the assessed risk of the issue. If issues are not adequately addressed prior to the deadline, the approval to release shipments through the Waste Data System (WDS) will be suspended until the issues are resolved. The CBFO Manager and WIPP M&O Contractor will issue a letter notifying the DOE site Waste Management Program or Certified Program of the suspension and lifting of the suspension once the issues have been resolved. Copies of letters transmitted to the DOE site Waste Management Program or Certified Program

to suspend or restore approval to ship must be sent to the WDS administrator in order to execute the action in WDS.

Once all issues have been addressed, the GSTR Team Leader will prepare a letter for approval by the CBFO Manager and WIPP M&O Contractor for transmittal to the DOE site Waste Management Program or Certified Program stating the GSTR is complete and any identified issues have been satisfactorily addressed.

#### 4.3.3 Issue Tracking

Should the team identify conditions adverse to quality or nonconforming conditions during the review, they will inform the host organization, who will then manage the issue under their own quality assurance program.

Issues identified by the GSTR team that require follow-up actions after the team leaves the site will be tracked by the GSTR Team Leader. Tracking will be performed using a process that records the following:

- Organization assessed
- Date of review
- Nature of the issue
- Name of the identifying team member
- Names of host organization personnel involved in discussion regarding the issue
- Proposed or expected resolution of the issue and a proposed date by which the issue will be resolved
- Subsequent correspondence regarding the issue
- Resolution of the issue.

WIPP M&O Contractor personnel responsible for maintaining the tracking system will contact the host organization periodically for a status update should the issue resolution process take an extended period of time. The GSTR Team Leader will evaluate the adequacy of responses to issues identified, and ensure appropriate corrective actions are taken. Final results of issue resolution will be reported to the GSTR Coordinator for inclusion in the ICE system.

All identified issues in initial Level 1 review must be resolved prior to site approval to ship TRU waste to WIPP.

#### 4.4 GSTR Team Member Training

GSTR team members will be trained to perform GSTR reviews. Training will consist of completing the required reading of the documents listed in the GSTR Plan, assigned by the GSTR Team Leader. GSTR team member training may be tailored, as appropriate, to the area the GSTR team member is assigned to review. A GSTR team member is qualified once the required reading is completed and documented.

The following documents shall be included in the GSTR Plan as required reading for GSTR team members:

- DOE 435.1, *Radioactive Waste Management*
- DOE 422.2, *Conduct of Operations*
- DOE 226.1B, *Department of Energy Oversight Policy*
- Hazardous Waste Permit NM4890139088-TSDF, WIPP Waste Analysis Plan (WAP)
- DOE/WIPP-02-3122, *Transuranic Waste Acceptance Criteria for the Waste Isolation Pilot Plant*
- DOE/WIPP-02-3214, *Remote-Handled Waste Characterization Program Implementation Plan (WCPIP)*
- DOE/CBFO-94-1012, *Quality Assurance Program Document (QAPD)*
- *Contact-Handled Transuranic Waste Authorized Methods for Payload Control (CH-TRAMPAC)*
- *TRUPACT-III Transuranic Waste Authorized Methods for Payload Control (TRUPACT-III TRAMPAC).*
- *Remote-Handled Transuranic Waste Authorized Methods for Payload Control (RH-TRAMPAC)*
- GSTR Plan
- GSTR Procedure

GSTR Team Leader will be responsible for ensuring GSTR team members have read the most recent revision of procedure/plan prior to participating in reviews.

## **5.0 RECORDS**

The following documents generated as a result of implementing this plan shall be processed and maintained as Quality Assurance records in accordance with established CBFO records management procedures.

- Correspondence, including issue resolution
- GSTR notification letter
- GSTR report
- GSTR close out letter