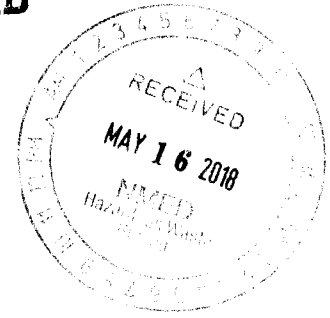




ENTERED

Department of Energy
Carlsbad Field Office
P. O. Box 3090
Carlsbad, New Mexico 88221
MAY 16 2018



Ms. Mary McDaniel, Manager
Quality and Contractor Assurance
Nuclear Waste Partnership LLC
P.O. Box 2078
Carlsbad, NM 88221-2078

Subject: Issuance of Report for Surveillance S-18-28, Enhanced Acceptable Knowledge Surveillance for ORNL CCP Waste Stream OR-REDC-CH-HET

Dear Ms. McDaniel:

The Carlsbad Field Office (CBFO) conducted Surveillance S-18-28, Enhanced Acceptable Knowledge Surveillance for ORNL CCP Waste Stream OR-REDC-CH-HET May 1 – 2, 2018. The surveillance report is enclosed. The surveillance was conducted to verify that all requirements of DOE/WIPP-07-3372, *Waste Isolation Pilot Plant Documented Safety Analysis*, Revision 5b, and DOE/WIPP-02-3122, Revision 8.0, *Transuranic Waste Acceptance Criteria for the Waste Isolation Pilot Plant*, Appendices I and H (H.5) as applicable, have been implemented, specifically for waste stream OR-REDC-CH-HET.

The surveillance team concluded that the applicable requirements of DOE/CBFO-94-1012, *Quality Assurance Program Document*, DOE/WIPP-02-3122, DOE/WIPP 07-3372, and related quality assurance and technical implementing procedures specific to OR-REDC-CH-HET waste containers repackaged at the Transuranic Waste Processing Center have been met in regards to the enhanced Acceptable Knowledge process.

If you have any questions concerning the surveillance, please contact me at (575) 234-7483.

Sincerely,

Martin Navarrete, Acting Director
CBFO, Office of Quality Assurance

Enclosure



cc: w/enclosure
 J. Carswell, CBFO *ED
 D. Miehl, CBFO ED
 M. Stapleton, CBFO ED
 N. Castaneda, CBFO ED
 T. Carver, CBFO ED
 B. Covert, NWP ED
 J. Britain, NWP ED
 M. Percy, NWP/CCP ED
 R. Lee, NWP/CCP ED
 B. Pace, NWP/CCP ED
 J. Harvill, NWP/CCP ED
 J. Carter, NWP/CCP ED
 J. Knox, NWP/CCP ED
 R. Martin, NWP/CCP ED
 C. Tyler, NWP ED
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 S. Saiz, NWP ED
 A. Boyea, NWP ED
 J. Walsh, EPA ED
 J. Ellis, EPA ED
 T. Peake, EPA ED
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 T. Runyon, CTAC ED
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 D. Harvill, CTAC ED
 G. White, CTAC ED
 CBFO QA File
 CBFO M&RC
 *ED denotes electronic distribution

CBFO SURVEILLANCE REPORT

Surveillance Number: S-18-28 **Date of Surveillance:** May 1 – 2, 2018

Surveillance Title: Enhanced Acceptable Knowledge Surveillance for ORNL CCP
Waste Stream OR-REDC-CH-HET

Organization: National TRU Program (NTP), Carlsbad Field Office (CBFO)
Nuclear Waste Partnership LLC (NWP) Central Characterization
Program (CCP)

Surveillance Team:¹

Martin Navarrete	CBFO Office of Quality Assurance Representative
Ricardo Chavez	Surveillance Team Leader, CBFO Technical Assistance Contractor (CTAC) NQA-1 Auditor
Dick Blauvelt	Team Member, Technical Specialist, CTAC – Acceptable Knowledge
Randy Fitzgerald	Team Member, Technical Specialist, CTAC – Acceptable Knowledge

Surveillance Scope:

In accordance with DOE/WIPP-07-3372, Revision 5b, *Waste Isolation Pilot Plant Documented Safety Analysis*, Section 18.1, CBFO Quality Assurance conducted an independent assessment. This independent assessment is a smaller assessment of a specific activity; therefore, Surveillance S-18-28 was conducted.

The surveillance team evaluated Oak Ridge National Laboratory Central Characterization Program (ORNL/CCP) preparations to ship waste from ORNL/CCP waste stream OR-REDC-CH-HET, contact handled (CH) Summary Category Group S5000 for compliance to the applicable requirements of DOE/WIPP-02-3122, Revision 8.0, *Transuranic Waste Acceptance Criteria for the Waste Isolation Pilot Plant (WAC)*, Appendices I and H (H.5) as applicable.

Surveillance Results:

The surveillance team evaluated waste stream OR-REDC-CH-HET for compliance with the WAC Appendices I and H (H.5) as applicable. Section H.5 of appendix H and all of appendix I were selected because this surveillance applies only to the previously certified containers of OR-REDC-CH-HET, which have an AKA associated with them. The surveillance team verified that

¹ All of the team members and technical specialists were selected on the basis of meeting the technical qualifications and knowledge of the item and/or process being assessed.

ORNL/CCP had completed each applicable requirement and the CBFO NTP had approved each requirement as applicable for waste stream OR-REDC-CH-HET. The specific requirement and the activities evaluated are detailed below.

Activities Evaluated:

Appendix I – Previously Certified Waste Preclusion of Shipments

- Certified Program will implement an enhanced AK process including an enhanced chemical compatibility evaluation for the waste streams, or waste stream sub-populations, and submit to CBFO for review.

The surveillance team reviewed the Chemical Compatibility Evaluation Memorandum (CCEM) along with the signed CBFO Document Review Record (DRR) and the CCP internal DRR for the waste stream OR-REDC-CH-HET, source document CCE008. The CCEM was generated in accordance with CCP-TP-005, *CCP Acceptable Knowledge Documentation*, Revision 29. The surveillance team also reviewed Attachment 1 – SPM Chemical Compatibility Evaluation Review Checklist, from CCP procedure CCP-TP-200, *Enhanced Acceptable Knowledge Review*, Revision 4, for OR-REDC-CH-HET.

- Certified Programs will implement the Basis of Knowledge document in the AK process for evaluating oxidizing chemicals in TRU waste streams to determine acceptability or need for treatment.

The surveillance team reviewed the CCP Basis of Knowledge (BoK) memorandum, BoK002, for waste stream OR-REDC-CH-HET CP:18:01068. The BoK memorandum was generated in accordance with CCP-TP-005, *CCP Acceptable Knowledge Documentation* Revision 29.

- CBFO will concur with enhanced chemical compatibility evaluation and implementation of the Basis of Knowledge for the evaluated waste stream.

The surveillance team reviewed the CBFO *Concurrence and Approval for Chemical Compatibility Evaluation Memorandum for Waste Streams OR-REDC-CH-HET and OR-RED-RH-HET Waste Containers Repackaged at the Transuranic Waste Processing Center (TWPC)* memorandum CBFO:ONTP:NCD:JRS:RB:18-0584:UFC 5900.00 along with the associated CBFO Forms 4.15-1 and 4.15-2 from CBFO MP 4.15, *Review of TRU Waste Acceptable Knowledge Documents*, Revision 2.

The surveillance team reviewed the *Concurrence of the Basis of Knowledge (BoK) Evaluation for OR-REDC-CH-HET containers Not Subject to Basis of Knowledge Criteria (BoK002)*, CBFO memorandum CBFO:ONTP:NTP:KEP:RB:18-0613:UFC 5900.00.

- CBFO will approve waste streams with acceptable enhanced chemical compatibility evaluation documentation provided by the Certified Programs.

The surveillance team reviewed the CBFO *Recommendation to Commence Shipments and Emplacement of Waste Stream OR-REDC-CH-HET with Approved enhanced Acceptable knowledge with and Associated Acceptable Knowledge Assessment from Oak Ridge National Laboratory* memorandum CBFO:ONTP:KEP:PG:18-0623:UFC 5900.00., dated April 23, 2018. This approval applies to the waste stream subpopulation that has an associated AKA date in the Waste Data System (WDS) and does not apply to any containers that have an Interface Waste Management Document List date.

- WIPP M&O Contractor Payload Engineers will evaluate TRUCON codes to ensure compliance with the enhanced chemical compatibility evaluation.

The surveillance team reviewed DOE/WIPP-01-3194, *CH-TRU Waste Content Codes (CH-TRUCON)*, Revision 62. In this document, a chemical compatibility evaluation was completed for the following CH-TRUCON code/waste stream combinations:

CH-TRUCON Code	Waste Stream(s)
OR 125/225 OR 129/229	OR-REDC-CH-HET

- The WIPP M&O Contractor will implement additional checks in the WDS for each container before those containers can be used to populate payloads in WDS.

The CBFO Office of Quality Assurance (OQA) has previously evaluated the additional checks in WDS associated with the enhanced AK process in surveillances S-17-07 and S-17-32 and found the additional checks in WDS to be complete and compliant. The surveillance team also reviewed the AKA for waste stream OR-REDC-CH-HET and confirmed that all containers associated with this surveillance have been assigned to the AKA.

- The WIPP M&O Contractor will obtain written approval from CBFO prior to release of waste streams for shipment.

The surveillance team reviewed the *Approval to Ship and Emplace Waste Stream OR-REDC-CH-HET with Approved Enhanced Acceptable Knowledge with an Associated Acceptable Knowledge Assessment* memorandum CBFO:OOM:JMC:RMS:18-630:UFC 5900.00 dated April 25, 2018. The memorandum was issued and approved by CBFO and addressed to the WIPP Management and Operating (M&O) contractor.

- The WIPP M&O Contractor will verify each container requested is part of a CBFO-approved waste stream and authorizes shipment in WDS.

The surveillance team reviewed the Waste Stream Profile Form (WSPF) for OR-REDC-CH-HET, CP:10:01017. The WSPF was approved on April 21, 2009, and no revisions have taken place. If the currently approved WSPF is revised to add additional TRU Waste Content Codes (TRUCON), the WSPF will need to be approved in accordance with CCP-TP-002, *CCP Reconciliation of DQOs and Reporting Characterization Data*. The Surveillance team also reviewed WDS container status reports provided by the WDS data administrator to verify WDS authorizes shipments with an approved waste stream. The process to upload AK data into WDS was evaluated and determined to be adequate in Surveillance S-18-21, *Transportation Authorization Surveillance for the LANL/CCP Waste Stream LA-OS-00-01.001*.

Appendix H – Enhanced Acceptable Knowledge

Certified Program Acceptable Knowledge Assessments

The surveillance team examined Acceptable Knowledge Assessment (AKA) AKA002 for waste steam OR-REDC-CH-HET. The AKA review included an examination of the document itself along with selected supporting AK source documentation. In addition, the surveillance team verified documentation of the site project manager (SPM) review of the AKA including Attachment 2 – SPM Acceptable Knowledge Assessment Review Checklist, from CCP procedure CCP-TP-200, *Chemical Compatibility Evaluation Memorandum and Acceptable Knowledge Assessment Review*, Revision 2.

Corrective Actions:

Corrective Action Reports/Deficiencies Corrected During the Surveillance

No Corrective Action Reports/Deficiencies were produced as a result of this surveillance.

Observations

No Observations were produced as a result of this surveillance.

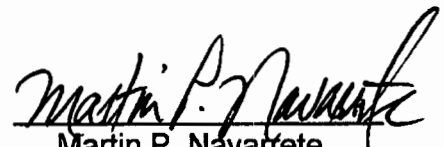
Recommendations

No Recommendations were produced as a result of this surveillance.

Surveillance Team Conclusions:

The surveillance team concluded that the applicable requirements of DOE/CBFO-94-1012, *Quality Assurance Program Document*, DOE/WIPP-02-3122, *Transuranic Waste Acceptance Criteria for the Waste Isolation Pilot Plant*, DOE/WIPP 07-3372, *Waste Isolation Pilot Plant Documented Safety Analysis*, and related quality assurance and technical implementing procedures specific to OR-REDC-CH-HET waste containers stored at ORNL have been met in regards to the enhanced AK process.

Surveillance Team Leader:  Date: 05/16/18
Ricardo Chavez, CTAC

CBFO OQA Director Approval:  Date: 5-16-18
Martin P. Navarrete