



United States Government

Department of Energy

memorandum

Carlsbad Field Office
Carlsbad, New Mexico 88221

DATE: April 16, 2001

REPLY TO
ATTN OF: CBFO:QA:MLC:VW:01-0687:UFC:2300SUBJECT: Audit Report A-01-05, Rocky Flats Environmental Technology Site (RFETS)
Characterization of Homogeneous Solid Waste

TO: Joseph Legare, Assistant Manager for Environment and Compliance, RFFO

The Carlsbad Field Office (CBFO) conducted an audit of the Rocky Flats Environmental Technology Site (RFETS) waste characterization activities. The audit was conducted on March 26-28, 2001. The audit team concluded that the RFETS technical and quality assurance programs for these activities were adequate in accordance with the WIPP Hazardous Waste Facility Permit and the CBFO QAPD. The audit team also concluded that the RFETS procedures were being satisfactorily implemented and the evaluated processes were effective.

No CBFO Corrective Action Reports (CARs) were generated as a result of the audit.

One (1) Observation and two (2) Recommendations were identified during the audit. Neither the Observation nor the Recommendations require a response.

If you have any questions or comments, please contact me at (505) 234-7423.


for Samuel A. Vega
Quality Assurance Manager

Attachment

010432



Joseph Legare

-2-

April 16, 2001

cc: w/attachment
L. Chism, CBFO
K. Watson, CBFO
B. Bennington, CBFO
J. Jefferies, RFFO
M. Eagle, EPA
S. Monroe, EPA
S. Zappe, NMED
B. Walker, EEG
D. Winters, DNFSB
C. Ferrera, RFETS
J. O'Leary, RFETS
T. Bowden, CTAC
C. Riggs, CTAC
M. Gerle, WTS – (Operating Record)

cc: w/o attachment
L. Steven, WTS



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

AUDIT REPORT

OF THE

ROCKY FLATS ENVIRONMENTAL TECHNOLOGY SITE

GOLDEN, COLORADO

AUDIT NUMBER A-01-05

March 26-28, 2001

**AUDIT REPORT OF WASTE CHARACTERIZATION OF HOMOGENEOUS
SOLID WASTES**



Prepared By: Charles L. Riggs
Charles L. Riggs
Audit Team Leader

Date: 4/4/01

Approved By: Samuel A. Vega
Samuel A. Vega
CBFO QA Manager

Date: 4/12/01

1.0 EXECUTIVE SUMMARY

Carlsbad Field Office (CBFO) Audit A-01-05 was conducted to evaluate the adequacy, implementation, and effectiveness of the Rocky Flats Environmental Technology Site (RFETS) transuranic (TRU) waste characterization activities for homogeneous solid waste relative to the requirements detailed in the Waste Isolation Pilot Plant (WIPP) Hazardous Waste Facility Permit (HWFP) and the Quality Assurance Program Document (QAPD).

The audit scope included Summary Category Group S3000 solid waste, in particular, activities for homogeneous solid salt and ash wastes that were not completed during CBFO Audit A-00-12. CBFO Audit A-00-12 had been performed at the RFETS Facility September 18-22, 2000.

The audit was conducted at the RFETS facility March 26-28, 2001. The audit team concluded that the overall adequacy of the RFETS technical and Quality Assurance (QA) programs, as applicable to audited activities, was satisfactory in meeting requirements. The audit team also concluded that the defined QA and technical programs for these activities were being implemented in accordance with the RFETS Quality Assurance Project Plan (QAPJP) and its implementing procedures and that the processes were effective.

The audit team did not identify any conditions adverse to quality. One Observation and two Recommendations were identified. The Observation and Recommendations are described in Section 6.0.

2.0 SCOPE AND PURPOSE

2.1 Scope

The audit team evaluated the adequacy, implementation, and effectiveness of the RFETS TRU waste characterization processes for homogeneous solid waste that were not evaluated during CBFO Audit A-00-12.

The following elements were evaluated:

Technical

- Acceptable Knowledge (AK)
- Project Level Verification and Validation
- Waste Stream Profile Form

The evaluation of RFETS TRU waste activities and documents was based on current revisions of the following documents:

Waste Isolation Pilot Plant Hazardous Waste Facility Permit, October 27, 1999.

Quality Assurance Program Document, CAO-94-1012, Revision 3,
November 1999

RFETS Quality Assurance Project Plan TRU Waste Characterization Program, 95-QAPjP-0050, Revision 4, December 9, 1999

RFETS Transuranic (TRU) Waste Management Manual, 1-MAN-008-WM-001,
Revision 4, August 25, 2000

Related RFETS technical and quality assurance implementing procedures

2.2 Purpose

Audit A-01-05 was conducted to assess the level of compliance of RFETS 'Residue Wastes', homogeneous solids waste characterization activities that were not completed during CBFO Audit A-00-12.

3.0 AUDIT TEAM AND OBSERVERS

AUDITORS/TECHNICAL SPECIALISTS

| | |
|---------------|---------------------------|
| Charlie Riggs | Audit Team Leader, CTAC |
| Wayne Ledford | Auditor, CTAC |
| Porf Martinez | Auditor-in-Training, CTAC |

OBSERVERS

| | |
|---------------|--------------------------------------|
| Connie Walker | TechLaw, Inc. (NMED) |
| June Dreith | TechLaw, Inc. (NMED) |
| Ben Walker | Environmental Evaluation Group (EEG) |

4.0 AUDIT PARTICIPANTS

RFETS individuals contacted during the audit process are identified in Attachment 1. A pre-audit meeting was held at RFETS Building T130J on March 26, 2001. A daily meeting was held with RFETS management and staff to discuss the previous day's issues and potential deficiencies. The audit was concluded with a post-audit meeting held at RFETS Building T130J on March 28, 2001.

5.0 SUMMARY OF AUDIT RESULTS

5.1 Program Adequacy and Implementation

The audit team concluded that the applicable RFETS TRU waste characterization activities, as described in the associated RFETS implementing procedures, satisfactorily meet requirements. Audit activities, including objective evidence reviewed, are described below and in CBFO checklists and/or Objective Evidence Reviewed forms maintained as QA records. Attachment 3 contains a list of RFETS procedures included in the audit.

5.2 Technical Activities

The following sections describe the technical activities reviewed during the audit.

5.2.1 Acceptable Knowledge

The audit team reviewed the portions of the RFETS AK process that could not be completed during CBFO Audit A-00-12. The audit focused on homogeneous solid waste, in particular salt residues and ash. Results of confirmatory testing for salt and ash were reviewed.

The audit team completed its checklist for confirmatory testing. In addition, the audit team completed a traceability analysis for a container in the S3000 category as required by the HWFP.

The audit team recommended that the justification for the waste stream designation be specifically included in the AK Summary (see Recommendation 1).

Overall, the Acceptable Knowledge process was determined to be adequate, satisfactorily implemented, and effective.

5.2.2 Verification and Validation

Verification and validation (V&V) at the Project level was reviewed during the audit. Several batch data reports were reviewed to assess Site Project Office data review, verification, and validation.

The audit team noted that the case narrative for a sample that had exceeded the 14-day holding time did not describe the justification for the decision in sufficient detail (see Observation 1).

Overall, verification and validation were determined to be adequate, satisfactorily implemented, and effective.

5.2.3 Waste Stream Profile Forms

The audit team reviewed WIPP Waste Stream Profile Form (WSPF) RF 005.01. The audit team recommended that the Supplemental Documentation section of the WSPF contain either separate references or other statements directing the reader to the supplemental information examined (see Recommendation 2).

Overall, the Waste Stream Profile Forms process was determined to be adequate, satisfactorily implemented, and effective.

5.2.4 Evaluation of RFETS CARs

The audit team evaluated selected RCRA-related CARs identified by RFETS during self-audits and submitted to CBFO as required by Section B6-4 of the HWFP. The following CARs [referred to as Corrective Action Plans (CAPs) at RFETS] were evaluated:

2000-000367
2000-000407
2000-000454
2000-000463
2000-000649
2000-000473
2000-000476
2000-000706
2000-000692
2000-001362

Additionally, the listing of all CAPs processed by RFETS TWCP was reviewed, and selected CAPs were evaluated to verify that RCRA-related CAPs had been submitted to CBFO.

Overall, RFETS HWFP-related internal CARs were determined to be adequate, satisfactorily implemented, and effective.

6.0 OBSERVATIONS and RECOMMENDATIONS

6.1 Observations

An Observation documents marginally acceptable conditions that, if not controlled, might later escalate into a deficiency.

Observation 1

The case narrative for SVOA-DP-23 describes a problem with exceeding the 14-day holding time for sample 01W0071-047.001. Although the sample was correctly dispositioned as usable with an 'H' flag, the case narrative should describe the justification for this decision in more detail. RFETS should ensure that the rationale for use of data effected by nonconformances is clearly documented.

6.2 Recommendations

Recommendation 1

Recommend that justification for the waste stream designation should be specifically included in the AK Summary.

Recommendation 2

Recommend that the Waste Stream Profile Form:

- Include, Under Supplemental Documentation, either separate references or other statements directing the reader to the supplemental (i.e., back-up) information examined. Entering "N/A" in the blank next to a bullet implies that no information other than the mandatory information on the previous page was examined, when in truth a substantial body of supplemental data were examined.
- Include with respect to Table 1, Newly Generated Waste Sampling Results, a revised footnote to better explain how repackaged waste is addressed (i.e., it is characterized the same as newly generated waste, so random sample selection, etc., actually do apply). Alternatively, include a brief explanation regarding the repackaged waste characterization process used to generate the WSPF (i.e., why RFETS assessed control charting, etc.). This explanation also might help clarify why RFETS sometimes perform radiography on waste and why other waste is visually examined (via VE technique).
- Include, in all appropriate footnotes, a statement that states: "even if no sample results are presented, analyses were performed for all analytes on the listing" (may want to explain why no data are reported).

- Include a check-off box indicating when composite headspace gas samples are collected.
- Include a reference to Tentatively Identified Compounds (TICs) documentation that assesses TIC assignments and calculations.

7.0 LIST OF ATTACHMENTS

Attachment 1: Personnel Contacted During the Audit

Attachment 2: Summary Table of Audit Results

Attachment 3: Table of Audited RFETS Implementing Procedures

PERSONNEL CONTACTED DURING THE AUDIT

| RFETS PERSONNEL CONTACTED DURING AUDIT A-01-05 | | | | |
|---|---|-------------------------|-------------------------------|---------------------------|
| NAME | ORG/TITLE | PREAUDIT MEETING | CONTACTED DURING AUDIT | POST-AUDIT MEETING |
| Ballenger, R. J. | TRU Program; Manager Residues, Audit Program | X | X | X |
| D'Amico, Eric | TRU Program; Environmental Scientist | X | X | X |
| Dahl, David | MS; QA/NDA | X | | X |
| Davis, Robert E. | MS QA Manager | X | | |
| Eschenbaum, R. A. | TRU Program; WIPP Audit Lead | X | | X |
| Ferguson, Jim | GTSD/TRU Project; Engineer | X | | |
| Ferrera, Carol | KH TWCP QAO | X | X | X |
| Fulks, L. K. | Measurements; Project Engineer | | X | |
| Grady, Frank | RMRS/TRU Waste Projects; TRU Project Engineer | X | | |
| Guthrie, David | LATA; Rad Labs | | X | |
| Henderson, K. K. | LAB/QA; QA Officer | | X | |
| Jennings, Mike | KH/TRU Programs | X | | |
| Johnson, Mickey | Salt Residue; SME | X | | |
| Kangas, Mark | TRU Program, SME F-Test | | X | |
| Kirschenmann, Harley | SMQA; Staff Engineer | X | | X |
| Martin, E. Ray | Material Stewardship; Mgr | | X | |
| Moody, David | Wastren; Project Level V&V | | X | X |
| O'Leary, Jerry | KH/TRU Waste Project Manager | X | X | X |

| RFETS PERSONNEL CONTACTED DURING AUDIT A-01-05 | | | | |
|---|--|-------------------------|-------------------------------|---------------------------|
| NAME | ORG/TITLE | PREAUDIT MEETING | CONTACTED DURING AUDIT | POST-AUDIT MEETING |
| Papp, Michael J. | Waste Systems (AK); Principal Engineer | X | X | X |
| Peters, Kevin | Waste Systems; Waste Reassessment | X | X | |
| Phillips, Karen | SSOC/TRU Waste; Senior Principal Engineer | | X | |
| Reynolds, Joe | B559 Labs; LPQAO | | X | |
| Robbins, Elver | DOE/RFFO/QPD | | | X |
| Schafer, Steve | Wastren/RMRS/Waste Systems; Env Scientist | X | X | X |
| Sendelweck, Vivian | TRU Programs; AK Engineer | X | X | X |
| Smart, Kim | KH/IRM; Manager | X | | X |
| Stanfield, Sean | Canberra; Associate Scientist | X | | X |
| Stewart, Judith | NDA; QA | X | | X |
| Tressell, John | MSQA; TRU Waste QA, PQAO Alternate | X | X | X |
| Wolfe, Mike | SOM; Waste Records Center Manager | X | | X |
| Xuan, Lam | DOE/RFFO/ERWM; WIPP Coordinator | X | | X |

Summary Table of Audit Results

| Documents | Concern Classification | | | | QA Evaluation | | Technical |
|---------------------------------|------------------------|------|-----|-----|---------------|----------------|---------------|
| | CARs | CDAs | Obs | Rec | Adequacy | Implementation | Effectiveness |
| Activity | | | | | | | |
| ACCEPTABLE KNOWLEDGE | | | | 1 | A | S | E |
| WSPF | | | | 2 | A | S | E |
| VERIFICATION AND VALIDATION | | | 1 | | A | S | E |
| EVALUATION OF RFETS CARS (CAPS) | | | | | A | S | E |
| TOTALS | 0 | 0 | 1 | 2 | A | S | E |

Definitions

E = Effective
S = Satisfactory
I = Indeterminate
M=Marginal

CAR = Corrective Action Report
CDA = Corrected During Audit
NE = Not Effective

Obs = Observation
Rec = Recommendation
A = Adequate
NA = Not Adequate

| RFETS PROCEDURES AUDITED FOR A-01-05 | | |
|---|--------------------------------------|--|
| No. | Procedure Number | Title |
| 1. | PRO-484-WIPP-003, Revision 2 | Collection, Review, and Confirmation of Acceptable Knowledge Documentation |
| 2. | RF/RMRS-97-018, Revision 7 | RFETS TRU Waste Acceptable Knowledge Supplemental Information |
| 3. | RMRS-WIPP-98-100, Revision 9 | Acceptable Knowledge TRU/TRM Waste Stream Summaries |
| 4. | WIPP-010, Revision 6 | WIPP TRU Waste Characterization Project Level Data Review and Reporting |
| 5. | PRO-944-WIPP-008, Revision 2 | Completion of Waste Stream Profile Form for Waste to be Disposed of at WIPP |
| 6. | 95-QAPjP-0050, Revision 4, Chg 02 | TRU Waste Characterization Program Quality Assurance Project Plan (TWCP QAPjP) |