



Department of Energy
Carlsbad Field Office
P. O. Box 3090
Carlsbad, New Mexico 88221
July 3, 2002



Mr. Steve Zappe, Project Leader
Hazardous Waste Bureau
New Mexico Environment Department
2905 Rodeo Park Drive East, Bldg. 1
Santa Fe, New Mexico 87505-6303

Re: Transmittal of the Certification Audit Report for the Rocky Flats Environmental Technology Site (A-02-19)

Dear Mr. Zappe:

This letter transmits the Rocky Flats Environmental Technology Site Certification Audit Report for the processes performed to characterize and certify waste as required by Section II.C.2.c of the WIPP Hazardous Waste Facility Permit. The report contains the results of the audit performed for the characterization and certification of newly generated waste and a new mobile real-time radiography unit. The audit was conducted June 4-6, 2002.

I certify under penalty of law that this document and all enclosures were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fines and imprisonment for knowing violations.

Please contact the CBFO Quality Assurance Manager, Ava L. Holland, at (505) 234-7423 should you have any questions concerning this audit report.

Sincerely,

Dr. Ines R. Triay
Manager

Enclosure



Mr. Steve Zappe

-2-

July 3, 2002

cc w/o enclosure:

T. Harms, DOE-HQ

A. Holland, CBFO

K. Watson, CBFO

J. Schneider, RFFO

J. Kieling, NMED

J. Bearzi, NMED

L. Xuan, RFFO

R. Ballenger, RFETS

C. Ferrera, RFETS

G. O'Leary, RFETS

J. Lee, WTS

L. Greene, WTS

T. Bowden, CTAC

cc w/enclosure:

P. Roush, WTS

C. Walker, Techlaw

CBFO M&RC

U.S. DEPARTMENT OF ENERGY
CARLSBAD FIELD OFFICE

FINAL AUDIT REPORT

OF THE

ROCKY FLATS ENVIRONMENTAL TECHNOLOGY SITE

GOLDEN, COLORADO

AUDIT NUMBER A-02-19

June 4-6, 2002

FINAL AUDIT REPORT OF ADDITIONAL CHARACTERIZATION
ACTIVITIES IN ACCORDANCE WITH
THE HAZARDOUS WASTE FACILITY PERMIT

Newly Generated Waste and the Mobile Real-Time Radiography Unit



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

Date: 7/1/02

Approved By: Ava L. Holland
Ava L. Holland
Quality Assurance Manager

Date: 7/3/02

1.0 EXECUTIVE SUMMARY

Carlsbad Field Office (CBFO) Audit A-02-19 was conducted to evaluate the adequacy, implementation, and effectiveness of Rocky Flats Environmental Technology Site (RFETS) transuranic (TRU) waste characterization activities for Summary Category Group S5000 newly generated debris waste and a new mobile real-time radiography (RTR) characterization process relative to the requirements detailed in the Waste Isolation Pilot Plant (WIPP) Hazardous Waste Facility Permit (HWFP) and the CBFO *Quality Assurance Program Document* (QAPD). A set of B6 checklists used for assessing compliance of HWFP-related activities is included in Attachment 4.

The audit scope included Summary Category Group S5000 debris waste. The audit was a follow-up to CBFO Audit A-02-05, conducted November 2001, for newly generated waste. A new mobile RTR unit was also evaluated. The new unit will be used to characterize retrievably stored S5000 debris and S3000 homogeneous solid waste.

The audit was conducted at RFETS June 4-6, 2002. The audit team concluded that, overall, the adequacy of the RFETS technical and quality assurance (QA) programs, as applicable to audited activities, was satisfactory. The audit team also concluded that the defined QA and technical programs for these activities were being implemented in accordance with the *Rocky Flats Environmental Technology Site TRU Waste Characterization Program 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 (CAQs) requiring the issuance of a CBFO Corrective Action Report (CAR). Three isolated deficiencies requiring only remedial corrective actions were corrected during the audit (CDA). Four observations were identified, and four recommendations are being offered for RFETS management consideration. The CDAs are described in Section 6.0 and the observations and recommendations are presented in Section 7.0.

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 newly generated debris waste. A new mobile RTR unit was also examined. The new unit will be used to characterize retrievably stored S5000 debris and S3000 homogeneous solid waste.

The RFETS waste characterization processes were evaluated relative to the requirements contained in the HWFP Waste Analysis Plan (WAP), Attachments B through B6, as applicable. Compliance was documented by completing the HWFP Attachment B6 checklists for the applicable RFETS activities.

The following RFETS program elements were evaluated in accordance with the HWFP:

Quality

Control of nonconforming items
Personnel qualification and training
Documents and records

Technical

Acceptable knowledge (AK)
Verification and validation (V&V)
Mobile real-time radiography (RTR)

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, with applicable modifications

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

Rocky Flats Environmental Technology Site TRU Waste Characterization Program Quality Assurance Project Plan, 95-QAPjP-0050, Rev. 6, March 11, 2002

RFETS Transuranic (TRU) Waste Management Manual, 1-MAN-008-WM-001, Rev. 5, April 19, 2002

Related RFETS technical and quality assurance implementing procedures

2.2 Purpose

Audit A-02-19 was conducted to assess the level of compliance of RFETS newly generated debris waste characterization activities and characterization activities associated with the new mobile RTR unit.

3.0 AUDIT TEAM AND OBSERVERS

AUDITORS/TECHNICAL SPECIALISTS

| | |
|-----------------|------------------------------------|
| Charlie Riggs | Audit Team Leader, CTAC |
| Annabelle Axinn | Auditor, CTAC |
| Steve Davis | Auditor, CTAC |
| Wayne Ledford | Auditor/Technical Specialist, CTAC |
| Patrick Kelly | Technical Specialist, CTAC |
| Dick Blauvelt | Technical Specialist, CTAC |

OBSERVERS

| | |
|----------------|--|
| Steve Holmes | New Mexico Environment Department (NMED) |
| Will Fetner | NMED |
| Ben Walker | Environmental Evaluation Group (EEG) |
| Scott Webb | EEG |
| Reinhard Knerr | CBFO |

INSPECTORS

| | |
|---------------|----------------|
| Ed Feltcorn | EPA |
| Ray Wood | EPA Contractor |
| Connie Walker | EPA Contractor |
| Bob Thielke | EPA Contractor |

4.0 AUDIT PARTICIPANTS

RFETS individuals contacted during the audit are identified in Attachments 1 and 2. A pre-audit meeting was held at RFETS Building 460 on June 4, 2002. 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 460 on June 6, 2002.

5.0 SUMMARY OF AUDIT RESULTS

5.1 Program Adequacy and Implementation

The audit was performed to assess the adequacy, implementation, and effectiveness of the RFETS TRU waste characterization processes for newly generated debris waste. A new mobile RTR unit was also examined. The new mobile RTR unit will be used to characterize retrievably stored S5000 debris and S3000 homogeneous solid waste.

The audit team concluded that the applicable RFETS TRU waste characterization activities for the new processes audited, as described in the associated RFETS implementing procedures, satisfactorily meet the requirements contained in the HWFP. Details of audit activities, including specific objective evidence reviewed for those activities approved by CBFO as a result of this audit, are described below and in the attached supplemental B6 checklists. The B6 checklists identify the RFETS program documents and procedures where WAP requirements are met and lists the objective evidence used to evaluate the implementation. Enclosure 2 contains examples of the objective evidence that was reviewed during the audit.

5.2 Technical Activities

Each technical area audited is discussed in detail in the following sections. The method used to select objective evidence is discussed, the objective evidence that was used to

assess compliance with the WAP is cited briefly (and in detail on the checklist), and the results of that assessment are provided.

If a question could not be satisfactorily answered, an audit concern was identified. No concerns requiring the issuance of a CAR were identified during the audit. A CAR allows CBFO to track RFETS' efforts to remediate the deficiency identified in the CAR. There were no WAP-related CARs as a result of this audit. Concerns that were corrected during the audit (CDA) are discussed in Section 6.2.

5.2.1 Table B6-1 WAP Checklist

This audit was performed to assess RFETS' ability to characterize newly generated debris waste and a new mobile RTR unit that will be used for both S5000 debris waste and S3000 solids waste.

The audit team reviewed the following batch data reports in support of these activities:

VV-771-00014
WIPP-IPAN-5691P1-DP-111501
5691P1-DP-111601
HGAS-DP-00088
HGAS-DP-00089
MT0003
MT0005

The audit team noted that minor errors were found in the records center QA checklist. These were corrected during the audit (see CDA 1). In addition, there were some clarifying documents included in the data package regarding the pre- and post-May 17 requirements on the project level checklist that actually added confusion. These were modified at the suggestion of the audit team during the audit (see CDA 2).

5.2.2 Table B6-2 Solids and Soils/Gravel Sampling Checklist

This audit was performed to assess RFETS' ability to characterize newly generated debris waste and a new mobile RTR unit that will be used for both S5000 debris waste and S3000 solids waste. RFETS has not changed the solids and soils/gravel sampling process since audit A-02-07, the last recertification audit; therefore, there is no supplemental information to add to the B6-2 checklist. RFETS continues to satisfactorily meet the HWFP WAP solids and soils/gravel sampling requirements.

5.2.3 Table B6-3 Acceptable Knowledge Checklist

The audit team reviewed the entire RFETS AK process, beginning with the collection and review of AK records and the assignment of required waste matrix codes, waste material parameters, hazardous waste numbers and other relevant/required AK

information. The AK procedure had been judged adequate prior to the audit and had been considered in light of this year's changes to the CBFO requirements documents.

The primary focus for the audit team was in demonstrating that the AK records regarding possible hazardous contaminants included the most recent activities in the process area (e.g., boxline) that could influence the makeup of the newly generated waste. The auditors also examined the information available regarding upcoming environmental restoration (ER) projects and an observation was presented that a closer link be made through the development of documentation similar to the Waste Stream and Residue Identification and Characterization (WSRIC) document (see Observation 1). Other areas of the AK process examined included supplemental information, reassessment procedures, and records and databases. A few other minor issues were identified with respect to the AK for newly generated debris waste (see Recommendations 1 through 4). Traceability analyses were conducted for several wet combustible drums that had been all the way through the process, including confirmatory testing and project level V&V.

5.2.4 Table B6-4 Headspace Gas Checklist

This audit was performed to assess RFETS' ability to characterize newly generated debris waste and a new mobile RTR unit that will be used for both S5000 debris waste and S3000 solid waste. RFETS has not changed the headspace gas sampling and analysis processes since Audit A-02-07, the last recertification audit; therefore, there is no supplemental information to add to the B6-4 checklist. RFETS continues to satisfactorily meet the HWFP WAP headspace gas sampling and analysis requirements.

5.2.5 B6-5 Radiography Checklist

The audit team reviewed the operation of the new mobile RTR unit at RFETS. This review included witnessing operations, a walk-through of the RTR unit, review of batch data reports and test drum videotapes, and verification that the RTR operators were qualified in accordance with the requirements of the WIPP HWFP.

Although RFETS had updated the body of procedure 5-NDT-TC-1A, *Training, Qualification, and Certification of Nondestructive Personnel*, to reflect the new training required for qualification on the mobile RTR unit, Appendix 1 of the procedure, which lists the training requirements for the new unit, had not been updated. RFETS corrected this during the audit (see CDA 3). All qualified operators had received the required training.

Drums are transported outside the buildings in which they are stored and taken to the mobile RTR unit. An observation was made to RFETS that they add a caution to the operating procedure to remind the operators not to leave drums outside in freezing weather for extended periods. If liquids freeze in the drums they become more difficult

to detect (see Observation 2). RFETS incorporated this observation into their procedure prior to the end of the audit.

Unlike the two currently certified systems at RFETS, the mobile RTR unit can inspect waste in drums with lead liners. RFETS had examined three drums of waste with lead liners in the initial batch reports reviewed during the audit. CBFO clarification CAO-00-019, Rev. 1, allows lead-lined drums to be examined with RTR as long as the lead does not prevent full examination of the drum contents. NMED personnel present at the audit did not agree with the interpretation presented in CAO-00-019, Rev. 1. An observation was written suggesting that examination of lead-lined drums not be performed until NMED and CBFO could resolve the issue (see Observation 3). RFETS issued NCRs on the three lead lined drums examined, to date and suspended RTR of lead lined drums in response to this Observation.

RFETS has developed a default weight to be used for lead liners. This weight has a significant effect on the calculated waste weight. RFETS should continue efforts to refine the default weights for lead liners, including liners of different thicknesses, and add these to the lookup table in the operating procedure. This was documented as an observation during the audit (see Observation 4).

5.2.6 B6-6 Visual Examination (VE) Checklist

This audit was performed to assess RFETS' ability to characterize newly generated debris waste and a new mobile RTR unit that will be used for both S5000 debris waste and S3000 solids waste. RFETS has not changed the visual examination process since Audit A-02-07, the last recertification audit; therefore, there is no supplemental information to add to the B6-6 checklist. RFETS continues to satisfactorily meet the visual examination requirements.

6.0 SUMMARY OF DEFICIENCIES

6.1 Corrective Action Reports

During the audit, the audit team may identify conditions adverse to quality (CAQ) and document them on 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 – 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.

No WAP-related concerns requiring issuance of a CAR were identified during the audit.

6.2 Deficiencies Corrected During the Audit

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, using the following definitions. 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 an isolated case requiring only remedial action and therefore can be corrected during the audit (CDA). 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.

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. A significant condition adverse to quality is one which, if uncorrected, could have a serious effect on safety, operability, waste isolation, TRU waste site certification, regulatory compliance demonstration, or effective implementation of the QA program.

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

CDA 1

During review of data packages for newly generated waste, an error was discovered on the QA record review checklist for an item that deals with supplemental information attached to the data package. In all cases, when no supplemental information is attached the appropriate response is "N/A". One reviewer marked "NO" each time.

RFETS reviewed 1,200 batch data reports and determined that all the errors had been made by one reviewer. The errors were corrected and the Waste Records Center staff was provided refresher training.

CDA 2

There are single page notes in the data packages that attempt to clarify the replicate requirements pre- and post-May 17, 2002. They simply add confusion to the package.

DCF-CHG-01 was issued to RFETS procedure PRO-940-WIPP-010, Rev. 14, *WIPP TRU Waste Characterization Project Level Data Review and Reporting*, to clarify when it is appropriate to use these single page notes.

CDA 3

The body of RFETS procedure 5-NDT-TC-1A, Rev. 2, *Training, Qualification, and Certification of Nondestructive Testing Personnel*, had been updated to include training required for qualification to operate the mobile RTR unit, but Appendix 1, *TWCP Training Requirements*, had not been updated to include the required training.

DCF-CHG-01 was issued to RFETS procedure 5-NDT-TC-1A to correct Appendix 1.

7.0 SUMMARY OF OBSERVATIONS AND RECOMMENDATIONS

7.1 Observations

Observations document marginally acceptable conditions that, if not controlled, might later escalate into deficiencies.

Observation 1

There is no link between item description codes (IDCs) and WSRIC codes for combustible waste that may be generated from operable units (OUs) and the historical characterization/process information the ER staff have compiled for the OUs.

RFETS extended the retrievably stored characterization WSRIC/Waste Generating Instructions (WGIs) process to include remediation waste generated at OUs. While this extension was well documented for decontamination and decommissioning (D&D) waste, it is unclear whether this will work for remediation waste generated at OUs. For example, under the retrievably stored WSRIC/WGI process, the WSRIC information included relatively detailed process information specific to waste generation at a particular site. However, OU-related WSRIC processes are a “one-liner” indicating that remediation waste will be generated, without equivalent WSRIC process details shown for retrievably stored waste. Also, OU-related activities typically involve a spectrum of support documentation (e.g., remedial investigation (RI) work plans, RI reports, corrective measure studies (CMSs)), from which a tremendous amount of waste characterization data can be derived. It is unclear whether the current process will allow optimal linkage between existing waste characterization activities performed via OUs and the WSRIC/WGI activities. Examination of the newly generated waste characterization process as applied to remediation waste is considered indeterminate at this time, and should be re-examined in the future to ensure that the approval process can be adequately translated to OU waste.

Observation 2

When using the mobile RTR system, drums are transferred from the heated storage area to the RTR machine using a forklift. This transfer involves moving the drums outdoors. RFETS should put a statement in the operating procedure to limit the drums'

exposure to outdoor temperatures during freezing weather. If liquids freeze in the drums, they become more difficult to detect.

Observation 3

NMED and CBFO are discussing the interpretation of HWFP Section B1-3a, "Containers with lead liners or other containers whose contents prevent full examination of the remaining contents, shall be subject to visual examination." CBFO Clarification Number CAO-00-019, Rev. 1, Item 6, allows RTR of drums with lead liners. NMED personnel have expressed concern that the plain language of the permit requires that drums with lead liners be visually examined. The new mobile RTR unit can discern waste items in drums with lead liners (the currently certified RTR systems at RFETS do not have this capability). Several drums with lead liners have been processed through the mobile RTR system. RFETS should stop processing drums with lead liners or revise their procedures to require that nonconformance reports (NCRs) be written on such drums until this issue is resolved between NMED and CBFO. The lead-lined drums that have been processed to date should be controlled via the NCR system. RFETS suspended RTR of lead lined drums and issued NCRs on the lead lined drums examined to date, as a result of this Observation.

Observation 4

The mobile RTR system is capable of discerning waste items in drums with lead liners. The default weight of the lead liner can have a significant effect on the calculated waste weight. RFETS should continue to refine the default weights for these liners, including liners of different thicknesses, and add these to the lookup tables in PRO-1520-Mobile-RTR, Rev. 0, *Mobile Real-Time Radiography Testing of Transuranic and Low-Level Waste*.

7.2 Recommendations

The following are the WAP-related recommendations provided to RFETS management during the audit.

Recommendation 1

The audit team recommends that RFETS Procedure PRO-484-WIPP-003, Rev. 4, *Collection, Review, and Confirmation of Acceptable Knowledge Documentation*, be changed to appropriately use the terms "supplemental AK information" and "matrix parameter category."

Recommendation 2

RFETS uses the WSRIC/WGI process for documenting waste-generation instructions, waste-generation processes, and waste content. This process was approved by regulatory agencies (such as the Environmental Protection Agency (EPA) and NMED)

for use when characterizing retrievably stored waste, as it links waste-generation processes within buildings (AK) to waste-generation activities for subsequent linkage to waste characterization/confirmation. RFETS has extended this process to newly generated D&D waste, linking the D&D processes to WSRIC activities/buildings and associated related D&D documentation (e.g., reconnaissance-level characterization reports and decommissioning operations plans). In an example waste stream examined, D&D combustible waste was integrated into the larger “combustible” waste stream that now includes both newly generated and retrievably stored waste. While the process used to characterize retrievably stored waste appears to adequately extend to newly generated D&D waste, additional explanation of the newly generated waste characterization process, which integrates additional AK/data sources not considered for retrievably stored waste, is recommended to better document the newly generated waste characterization process. The audit team recommends that RFETS consider modification of appropriate documentation to include this explanation. The audit team also recommends that RFETS ensure that D&D-related documentation supporting AK is included in the AK record or is appropriately referenced for ready access by the Acceptable Knowledge Expert (AKE).

Recommendation 3

The audit team recommends that RFETS ensure that batch data reports include adequate explanation of information presented. For example, NDA results are sometimes changed and while these changes are appropriately dated and initialed, the reason for the changes are unclear, based on presented information. Also, identification of newly generated vs. retrievably stored containers would facilitate review to ensure that appropriate characterization was performed (e.g., that visual verification (V²) was performed on a newly generated container).

Recommendation 4

The Waste and Environmental Management System (WEMS) report does not allow determination of drum status with respect to retrievably stored vs. newly generated waste, and contains confusing information with respect to whether or not containers undergo RTR. Specifically, for the three newly generated waste containers examined, it appears that two of the three actually underwent RTR after V², but in one case the WEMS does not identify this. The third container had a WEMS RTR date, but never underwent RTR. The audit team recommends that the WEMS report better document actual activities and drum “status.”

8.0 LIST OF ATTACHMENTS

- Attachment 1: Personnel Contacted During the Audit
- Attachment 2: Personnel Contacted During the Audit by Area
- Attachment 3: Table of Audited RFETS Implementing Procedures
- Attachment 4: WIPP Hazardous Waste Facility Permit B6 Checklist

9.0 LIST OF ENCLOSURES

Enclosure 1: RFETS Audited Implementing Procedures

Enclosure 2: Objective Evidence and Content Map

PERSONNEL CONTACTED DURING THE AUDIT

RFETS PERSONNEL CONTACTED DURING AUDIT (A-02-19)

| NAME | ORG/TITLE | PREAUDIT MEETING | CONTACTED DURING AUDIT | POST-AUDIT MEETING |
|----------------------|---|------------------|------------------------|--------------------|
| Armour, Faith | Records; Trg Programs | X | X | X |
| Baldwin, Chuck | Measurements; ITR | | X | |
| Ballenger, R. J. | KH; TRU Program | X | X | |
| Bradford, Jeff | Measurements; Manager | X | | |
| Carson, Pete | TRU Programs; Engineer | X | X | X |
| Clapham, Martin | Measurements; Sr. Physicist | X | X | |
| Dahl, David | MSQA | X | X | |
| Dreher, David | NDA OPS, Manager | X | X | X |
| Durel, Med | MS; Measurements | X | | |
| Eschenbaum, R. A. | TRU Program; WIPP Audit Coordinator | X | | X |
| Ferrera, Carol | KH TWCP QAO | X | X | X |
| Gilbreath, Chris | KH; 771 Env. Manager | | X | |
| Gillespie, Doye | KH; Quality Program Rep | X | | X |
| Grady, Frank | RMRS/TRU Waste Projects; TRU Project Engineer | X | X | X |
| Green, Rick | NDA; HRT | | X | |
| Harrison, Jeff | Wastren/TRU Programs; Engineer | X | X | |
| Hodgson, Rick | NDA; Technical Supervisor | | X | |
| Hubbard, Laura | TRU Project Data Validation; Data Validator | | X | |
| Hyman, Patricia | Measurements Technical Basis; Sr. Prin. Scientist | | X | |
| Kirschenmann, Harley | SMQA; Acting Manager | X | | X |

| RFETS PERSONNEL CONTACTED DURING AUDIT (A-02-19) | | | | |
|---|--|-------------------------|-------------------------------|---------------------------|
| NAME | ORG/TITLE | PREAUDIT MEETING | CONTACTED DURING AUDIT | POST-AUDIT MEETING |
| Kranker, Scott | NDT; Manager | X | X | X |
| Lee, Chris | 771 Waste; Manager | | X | |
| McGavin, Andrew | Source One; Manager | X | | |
| Melick, George | MS-RTR Operations; NDTRTR Technician | | X | |
| Morales, Bart | NDA;, Scientist | | X | |
| O'Leary, Jerry | KH/TRU Waste Project Manager | X | | X |
| Papp, Michael J. | Waste Systems (AK); Project Manager | | X | |
| Pigeon, Paul | Material Stewardship; TWCP Training Officer | X | X | X |
| Renslow, Jack | MS-RTR Operations; NDTRTR Technician | | X | |
| Rodgers, Alan | KH/WM; Mgr. | | | X |
| Schafer, Steve | Wastren/Waste Systems; Project Manager | | X | |
| Schneider, John | DOE/RFFO; Acting AM Requirements | X | | X |
| Sendelweck, Vivian | TRU Programs; AK Engineer | X | X | X |
| Smart, Kim | KH/IRM; Manager | X | | X |
| Springer, Joe | DOE/RFFO/FC/WM | X | | |
| Stewart, Judith | NDA QA; NDA Audit Coordinator | X | X | X |
| Tallman, Steve | NDT; Waste Manager | X | X | |
| Torres, Randy | NDA; HRT | | X | |
| Wolfe, Mike | SOM; Waste Records Manager | X | | X |

| RFETS PERSONNEL CONTACTED DURING AUDIT (A-02-19) | | | | |
|---|---------------------------------|-------------------------|-------------------------------|---------------------------|
| NAME | ORG/TITLE | PREAUDIT MEETING | CONTACTED DURING AUDIT | POST-AUDIT MEETING |
| Xuan, Lam | DOE/RFFO/ERWM; WIPP Coordinator | X | | X |
| Zeigler, Marion | 771; Validator | | X | |

Personnel Contacted During Audit A-02-19 by Area

| | |
|-----------------------------------|--|
| Verification and Validation | Faith Armour Laura Hubbard Chris Gilbreath Chris Lee Michael J. Papp Carol Ferrera |
| Acceptable Knowledge | Vivian Sendelweck Jeff Harrison Carol Ferrera Steve Schafer Roger Ballenger |
| Mobile Real-Time Radiography Unit | Scott Kranker Steve Tallman Jack Renslow George Melick Carol Ferrera Frank Grady Paul Pigeon |

RFETS PROCEDURES AUDITED FOR A-02-19

| No. | Procedure Number | Title |
|-----|----------------------------|--|
| 1. | PLN-97-007, R9 | TRU Waste Characterization Program Training Implementation Plan |
| 2. | PRO-940-WIPP-010, R14 | WIPP TRU Waste Characterization Project Level Data Review and Reporting |
| 3. | 95-QAPjP-0050, R6 | TRU Waste Characterization Program Quality Assurance Project Plan (TWCP QAPjP) |
| 4. | 1-MAN-008-WM-001, R5 | Transuranic (TRU) Waste Management Manual (TWMM) |
| 5. | 5-NDT-TC-1A, R2 | Training, Qualification & Certification of Nondestructive Testing Personnel |
| 6. | PRO-1520-Mobile-RTR, R0 | Mobile Real-Time Radiography Testing of Transuranic and Low-Level Waste |
| 7. | PRO-484-WIPP-003, R4 | Collection, Review, and Confirmation of Acceptable Knowledge Documentation |