

United States Government

# memorandum

Carlsbad Field Office  
Carlsbad, New Mexico 88221

DATE: April 5, 2002

REPLY TO  
ATTN OF: CBFO:NTP:RK:GS:02-2198:UFC 1100.00

SUBJECT: Expansion of RFETS Certification Authority to Include SuperHENC, Drum TGS, and PADC

Barbara A. Mazurowski, Manager, Rocky Flats Field Office

The Carlsbad Field Office (CBFO) has completed the evaluation of the Rocky Flats Environmental Technology Site's (RFETS) SuperHENC, drum TGS, and PADC. The RFETS technical and QA programs were found to be in compliance with the Waste Analysis Plan (WAP) of the WIPP *Hazardous Waste Facility Permit* (HWFP), the *Quality Assurance Program Document (QAPD)*, *Waste Acceptance Criteria for the Waste Isolation Pilot Plant* (WIPP WAC), and other CBFO requirements and standards.

Previous RFETS certification authorities issued on May 24, 2001 (debris waste), June 5, 2001 (homogeneous solid waste), and December 5, 2001 (building 440 loading facility) is therefore expanded to include the use of the new systems and processes evaluated during audit A-01-12 (conducted May 14 – 18, 2001). See attachments for complete lists of certified procedures, documents, and systems. TRU waste characterization, certification, or transportation using significantly revised or new processes and systems must be evaluated by the CBFO prior to their implementation.



Dr. Inés R. Triay  
Manager

Attachments

020407



B. Mazurowski

-2-

April 5, 2002

cc w/attachments:

T. Harms, DOE-HQ  
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## RFETS CERTIFICATION PROGRAM STATUS

The CBFO Office of the National TRU Program Manager and Quality Assurance Manager have evaluated the documentation supporting the compliance and/or continued compliance of RFETS TRU waste programs. The recommendation to the CBFO Manager is that the RFETS certification authority be expanded to include RTR operations in buildings 569 and 664, VE operations in building 776, and the use of the following new NDA systems: Super high efficiency neutron Coincidence (SuperHENC) counter and the associated SuperHENC gamma energy analysis system (SGEAS) gamma-ray instrument; drum tomographic gamma scanner (TGS) in building 569; and the passive active drum counter (PADC) in building 569. Attachments 2 and 3 provide complete lists of applicable procedures and systems, including those evaluated during audit A-01-12. The specific procedures that were audited during audit A-01-12 are listed in Audit Report A-01-12.

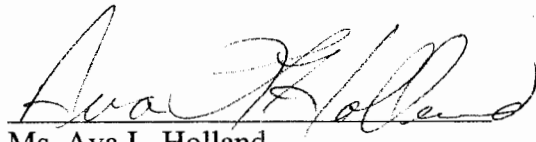
### STATUS

- All program elements remain complete
- The following RFETS required site documents have been revised, approved, and are currently that demonstrates how the site complies with the CBFO upper-tier documents and other CBFO requirements.
  - QAPjP – *Rocky Flats Environmental Technology Site TRU Waste Characterization Program Quality Assurance Project Plan*, 95-QAPjP-0050, Revision 6
  - GGTP QAPjP - *Rocky Flats Environmental Technology Site Gas Generation Testing Program Quality Assurance Project Plan*, RS-020-001, Revision 2
  - WCP – *Rocky Flats Environmental Technology Site Transuranic Waste Management Manual*, 1-MAN-008-WM-001, Revision 4
  - QAP – (Section 2.2.2 of WCP)
  - TRAMPAC and QA Plan – (Section 2.2.7 of WCP)
  - Packaging QA Plan – (Section 2.2.8 of WCP)
  - Standard operating procedures (see attachment 2 for complete procedure list)
- RFETS participation in the following performance demonstration programs (PDPs):
  - **RCRA PDP** -- Participation was satisfactory in cycle 7A (Memo CAO:NTP:MRB:VW:00-1187 dated September 20, 2000) & cycle 8A (Memo CBFO:NTP:MRB:VW:01-1012 dated May 9, 2001)
  - **NDA PDP SWBs** -- participation was satisfactory in cycle B1A for SWBs (Memo CBFO:NTP:MRB:VW:01-1079 dated July 30, 2001)
  - **NDA PDP Drums** – Participation was satisfactory in cycle 7A (Memo CBFO:MB:GS:00-1408 dated November 15, 2000) & 7B (Memo CBFO:NTP:MRB:VW:01-1052 dated June 20, 2001) & cycle 8A (Memo CBFO:NTP:MRB:VW:01-1781 dated November 20, 2001)
  - **HSG PDP** participation was satisfactory in cycle 15A (Memo CBFO:NTP:MRB:VW:01-0561 dated March 21, 2001)
- EPA inspection report dated December 18, 2001; CBFO response to EPA inspection report (CBFO:QA:MLC:GS:02-0611); and letter accepting responses to findings dated March 27, 2002.
- CBFO completed audit A-01-12 (conducted May 14 – 18, 2001). The procedures and systems evaluated in this audit were added to the list of previously certified procedures and systems. Complete lists of procedures and systems are provided in attachments 2 and 3.
- No significant CARs remain open from A-01-12.

**RECOMMENDATION**

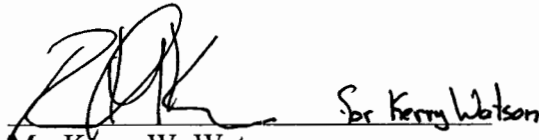
The recommendation to the CBFO Manager is to expand the RFETS transportation and waste certification authority to include the SuperHENC, drum TGS, and PADC. It is recommended that this additional authority be limited to those systems and processes audited during Audit A-01-12. Attachments 2 and 3 are lists of systems and procedures that constitute the bounds of the RFETS transportation and waste certification authority.

**CONCURRENCE**



Ms. Ava L. Holland  
Manager  
Quality Assurance

4/2/02  
Date



Mr. Kerry W. Watson  
Assistant Manager  
National TRU Program

4/2/02  
Date

## RFETS CERTIFIED SYSTEMS

| WIPP #                       | Site Equipment #       | Site Description                | Components                                                                                            | Software                                                  |
|------------------------------|------------------------|---------------------------------|-------------------------------------------------------------------------------------------------------|-----------------------------------------------------------|
| <b>Headspace Gas</b>         |                        |                                 |                                                                                                       |                                                           |
| 5HG1                         |                        | Headspace Gas GC/MS             | GC/MS (Method described in procedure L-4111)                                                          | HVOC12                                                    |
| <b>Non-destructive Assay</b> |                        |                                 |                                                                                                       |                                                           |
| 5TC1                         | 371-STGS-01 (skid)     | TGS Can Counter                 | Integrated tomographic gamma scan and gamma-ray spectrometry measurement.                             | LANL DAC-TGS, LANL ARC-TGS, PC/FRAM                       |
| 5TC2                         | 371TGS02               | TGS Can Counter                 | Integrated tomographic gamma scan and gamma-ray spectrometry measurement.                             | ANTECH MasterScan, ANTECH MasterAnalysis, PC/FRAM         |
| 5TC3                         | 371TGS03               | TGS Can Counter                 | Integrated tomographic gamma scan and gamma-ray spectrometry measurement.                             | ANTECH MasterScan, ANTECH MasterAnalysis, PC/FRAM         |
| 5TC4                         | 371TGS05               | TGS Can Counter                 | Integrated tomographic gamma scan and gamma-ray spectrometry measurement.                             | ANTECH MasterScan, ANTECH MasterAnalysis, PC/FRAM         |
| 5NM1                         | 371NMCC01/371T RIFID01 | Neutron multiplicity counter    | Neutron multiplicity counter operated in coincidence mode and separate gamma-ray spectrometry system. | Canberra Neutron Assay Software (NAS), TRIFID             |
| 5NM2                         | 371NMCC02/371T RIFID01 | Neutron multiplicity counter    | Neutron multiplicity counter operated in coincidence mode and separate gamma-ray spectrometry system. | Canberra Neutron Assay Software (NAS), TRIFID             |
| 5TD1                         | 371TGS01(DRUM)         | TGS Large Package Counter       | Integrated tomographic gamma scan and gamma-ray spectrometry measurement.                             | LANL DAC-TGS, LANL ARC-TGS, PC/FRAM                       |
| 5TD2                         | 569TGS04               | TGS Large Package Counter       | Integrated tomographic gamma scan and gamma-ray spectrometry measurement.                             | ANTECH MasterScan, ANTECH MasterAnalysis, PC/FRAM         |
| 5SD1                         | 371SGSDC01             | TGS Large Package Counter       | Integrated segmented gamma scan and gamma-ray spectrometry measurement.                               | Genie PC Gamma Waste Assay System (Genie PC/GWAS), TRIFID |
| 5PD1                         | 569PADC01              | PADC Large package counter      | Passive-active drum counter and separate gamma-ray spectrometry system.                               | BNFL PADC/IPAN, PC/FRAM                                   |
| 5SH1                         | 440SHENC01             | SuperHENC Large package counter | High efficiency neutron counter and separate gamma-ray spectrometry system.                           | BNFL SuperHENC SGEAS, LANL SuperHENC/Neutron Analysis     |
| 5C01                         | AR02                   | Calorimeter/Gamma Spectrograph  | Calorimeter                                                                                           | ANTECH Air Bath Calorimeter Control Software              |
| 5C02                         | AR03                   | Calorimeter                     | Calorimeter                                                                                           | ANTECH Air Bath Calorimeter Control Software              |
| 5C03                         | AR04                   | Calorimeter                     | Calorimeter                                                                                           | ANTECH Air Bath Calorimeter Control Software              |
| 5C04                         | AR05                   | Calorimeter                     | Calorimeter                                                                                           | ANTECH Air Bath Calorimeter Control Software              |
| 5C05                         | AR06                   | Calorimeter                     | Calorimeter                                                                                           | ANTECH Air Bath Calorimeter Control Software              |
| 5C06                         | AR07                   | Calorimeter                     | Calorimeter                                                                                           | ANTECH Air Bath Calorimeter Control Software              |
| 5C07                         | AR09                   | Calorimeter                     | Calorimeter                                                                                           | ANTECH Air Bath Calorimeter Control Software              |
| 5C08                         | P1                     | Calorimeter                     | Calorimeter                                                                                           | ANTECH Air Bath Calorimeter Control Software              |
| 5C09                         | P2                     | Calorimeter                     | Calorimeter                                                                                           | ANTECH Air Bath Calorimeter Control Software              |
| 5C10                         | P3                     | Calorimeter                     | Calorimeter                                                                                           | ANTECH Air Bath Calorimeter Control Software              |
| 5C11                         | P4                     | Calorimeter                     | Calorimeter                                                                                           | ANTECH Air Bath Calorimeter Control Software              |

| WIPP #                             | Site Equipment # | Site Description                        | Components                                                      | Software                                                  |
|------------------------------------|------------------|-----------------------------------------|-----------------------------------------------------------------|-----------------------------------------------------------|
| 5C12                               | P5               | Calorimeter                             | Calorimeter                                                     | ANTECH Air Bath Calorimeter Control Software              |
| 5C13                               | P6               | Calorimeter                             | Calorimeter                                                     | ANTECH Air Bath Calorimeter Control Software              |
| 5C14                               | P7               | Calorimeter                             | Calorimeter                                                     | ANTECH Air Bath Calorimeter Control Software              |
| 5C15                               | P8               | Calorimeter                             | Calorimeter                                                     | ANTECH Air Bath Calorimeter Control Software              |
| 5C16                               | P9               | Calorimeter                             | Calorimeter                                                     | ANTECH Air Bath Calorimeter Control Software              |
| 5C17                               | P10              | Calorimeter                             | Calorimeter                                                     | ANTECH Air Bath Calorimeter Control Software              |
| 5C18                               | P11              | Calorimeter                             | Calorimeter                                                     | ANTECH Air Bath Calorimeter Control Software              |
| 5GS1                               | GPC1             | Gamma-ray Spectrometer                  | Gamma-ray Spectrometer                                          | ANTECH TRIFID                                             |
| 5GS2                               | T4               | Gamma-ray Spectrometer                  | Gamma-ray Spectrometer                                          | ANTECH TRIFID                                             |
| 5GS3                               | T5               | Gamma-ray Spectrometer                  | Gamma-ray Spectrometer                                          | ANTECH TRIFID                                             |
| 5S01                               | 371SGSCS01       | SGS Can counter                         | Integrated segmented gamma scan and gamma isotopic measurement. | Genie PC Gamma Waste Assay System (Genie PC/GWAS), TRIFID |
| 5S02                               | 371SGSCS02       | SGS Can counter                         | Integrated segmented gamma scan and gamma isotopic measurement. | Genie PC Gamma Waste Assay System (Genie PC/GWAS), TRIFID |
| 5S03                               | 371SGSCS03       | SGS Can counter                         | Integrated segmented gamma scan and gamma isotopic measurement. | Genie PC Gamma Waste Assay System (Genie PC/GWAS), TRIFID |
| 5S04                               | 371SGSCS04       | SGS Can counter                         | Integrated segmented gamma scan and gamma isotopic measurement. | Genie PC Gamma Waste Assay System (Genie PC/GWAS), TRIFID |
| 5S05                               | 707SGSCS02       | SGS Can counter                         | Integrated segmented gamma scan and gamma isotopic measurement. | Genie PC Gamma Waste Assay System (Genie PC/GWAS), TRIFID |
| 5S06                               | 707SGSCS03       | SGS Can counter                         | Integrated segmented gamma scan and gamma isotopic measurement. | Genie PC Gamma Waste Assay System (Genie PC/GWAS), TRIFID |
| 5S07                               | 707SGSCS04       | SGS Can counter                         | Integrated segmented gamma scan and gamma isotopic measurement. | Genie PC Gamma Waste Assay System (Genie PC/GWAS), TRIFID |
| 5S08                               | 707SGSCS05       | SGS Can counter                         | Integrated segmented gamma scan and gamma isotopic measurement. | Genie PC Gamma Waste Assay System (Genie PC/GWAS), TRIFID |
| 5S09                               | 707SGSCS06       | SGS Can counter                         | Integrated segmented gamma scan and gamma isotopic measurement. | Genie PC Gamma Waste Assay System (Genie PC/GWAS), TRIFID |
| 5IQ1                               | IQ3              | Canberra mobile drum counter, bldg. 664 | High Sensitivity Gamma Waste Assay System                       | Gamma Waste Assay Systems (GWAS) Analysis Software        |
| 5PN1                               | PN               | Canberra mobile drum counter, bldg. 664 | Passive Neutron (PN) Coincidence Counter                        | Canberra Neutron Assay Software (NAS)                     |
| 5SD1                               | SGS              | Canberra mobile drum counter, bldg. 664 | Gamma-ray spectrometry portion of instrument utilized.          | Multi-Group Analysis (MGA)                                |
| <b>Non-destructive Examination</b> |                  |                                         |                                                                 |                                                           |
| 5RR1                               | 569 RTR          | Real-time radiography                   | Standard setup                                                  | NA                                                        |
| 5RR2                               | 664 RTR          | Real-time radiography                   | Standard setup                                                  | NA                                                        |

**RFETS CERTIFIED PROCEDURES**

| <b>PROCEDURE/DOCUMENT NUMBER</b> | <b>TITLE</b>                                                                                                     |
|----------------------------------|------------------------------------------------------------------------------------------------------------------|
| 00-NDA-NMC-100                   | Qualification Plan for the Neutron Multiplicity Counter (NMC) Instruments and TRIFID Gamma-Ray Isotopics Systems |
| 00-NDA-TGS-001                   | Qualification Plan for the Skid Mounted Tomographic Gamma Scanner (TGS)                                          |
| 00-NDA-TGS-002                   | Qualification Plan for the Tomographic Gamma Scanner (TGS)                                                       |
| 00-NDA-TGS-003                   | Qualification Plan for the 569TGS04 Tomographic Gamma Scanner (TGS) Building 569                                 |
| 00-NDA-TGS-004                   | Qualification Plan for the 371TGS04 Tomographic Gamma Scanner (TGS) Building 371                                 |
| 1-A65-ADM-15.01                  | Control of Nonconforming Items                                                                                   |
| 1-C80-WO-1102-W/RT               | Waste/Residue Traveler Instructions                                                                              |
| 1-E93-ADM-16.18                  | Data Analysis and Trending for Performance Improvement                                                           |
| 1-J55-ADM-08.10                  | Subcontractor Quality Evaluations                                                                                |
| 1-M12-WO-4034                    | Solid Radioactive Waste Packaging Requirements                                                                   |
| 1-MAN-004-CSMM                   | Computer Software Management Manual                                                                              |
| 1-MAN-008-WM-001                 | Transuranic (TRU) Waste Management Manual                                                                        |
| 1-MAN-017-LLGI-RM                | Site Lessons Learned/Generic Implications Requirements Manual                                                    |
| 1-MAN-039-WEM-WP-1200            | Waste and Environmental Management System (WEMS) Program Management Manual                                       |
| 1-N92-ADM-02.03                  | Training and Qualification of Assessment and Surveillance Personnel                                              |
| 1-PRO-072-001                    | Inspection and Acceptance Test Process                                                                           |
| 1-PRO-077-WIPP-005               | Management of Waste Information Prior to Transmittal to the Waste Records Center                                 |
| 1-PRO-079-WGI-001                | Waste Characterization, Generation and Packaging                                                                 |
| 1-PRO-110-WP-1212                | WIPP Waste Information System (WWIS) Data Entry                                                                  |
| 1-PRO-Q11-WO-1221                | Controls for Updating Waste Package Information in WEMS                                                          |
| 1-T13-Traffic-306                | Labeling and Marking TRUPACT Packages                                                                            |
| 1-V41-RM-001                     | Records Management Guidance for Records Sources                                                                  |
| 1-W37-IA-002                     | Integrated Planning and Scheduling of Independent Assessment Activities                                          |
| 3-B52-IA-003                     | Conduct of Independent Assessment Activities                                                                     |
| 3-MAN-006-NDA-1000               | NDA Calibration and Validation Program Manual                                                                    |
| 3-W24-MA-002                     | Kaiser-Hill Management Assessment Program                                                                        |
| 3-X31-CAP-001                    | Corrective Actions Process                                                                                       |
| 4-D15-BBPE-001                   | WSRIC Building Book Preparation and Editing                                                                      |
| 4-D99-WO-1100                    | Solid Radioactive Waste Packaging                                                                                |
| 4-F72-WEM-WP-1205                | WEMS Software QA Compliance                                                                                      |
| 4-G83-WEM-WP-1209                | WEMS Waste Package Verification and Certification                                                                |
| 4-H19-WSRIC-001                  | WSRIC Characterization and Reverification                                                                        |
| 4-H80-776-ASRF-007               | Visual Examination for Confirmation of RTR                                                                       |
| 4-I19-NDT-00569                  | Real-Time Radiography Testing of Transuranic and Low-Level Waste in Building 569                                 |
| 4-K47-WEM-WP-1210                | WEMS Offsite Shipping Module                                                                                     |
| 4-M63-WI-4013                    | Final and Loading Inspections for Packages                                                                       |
| 4-T04-TRAFFIC-204                | Waste Shipment Certification Form, RF-46416                                                                      |
| 4-T20-Traffic-505                | Certifying Authorized Payloads for TRUPACT-II                                                                    |
| 4-T43-TRAFFIC-528                | TRUPACT-II Operations Flow                                                                                       |
| 4-W30-NDT-00664                  | Real-Time Radiography Testing of Transuranic and Low-Level Waste in Bldg 664                                     |

| PROCEDURE/DOCUMENT NUMBER          | TITLE                                                                                                                                                                   |
|------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 4-W84-RS-0114                      | Salt Residue Stabilization, Bldg 707                                                                                                                                    |
| 5-NDT-TC-1A                        | Training, Qualification and Certification of Nondestructive Testing Personnel                                                                                           |
| 95-QAPjP-0050                      | Rocky Flats Environmental Technology Site TRU Waste Characterization Program Quality Assurance Project Plan (QAPjP)                                                     |
| 95-WP/SAP-001                      | Transuranic (TRU/TRM) Waste Sampling Plan                                                                                                                               |
| 99-NDA-SGS-100                     | Qualification Plan for the Canberra Segmented Gamma Scan (SGS) Can Counter Instruments                                                                                  |
| 371-STGS-01 (IDC 411R)             | Building 371 Skid TGS Can Counter (ID 371-STGS-01) Calibration and Qualification Report                                                                                 |
| ASD-003                            | Identification System for Reports and Samples                                                                                                                           |
| BII-5103-MTN-09                    | RFETS 569 IPAN Drum System, Module Test Note, version 2.67, December 28, 2000                                                                                           |
| BII-5103-SBS-01                    | RFETS 569 IPAN Drum System, Software Verification and Validation Description for RFETS 569 PADC                                                                         |
| BII-5103-SCN-09                    | RFETS 569 IPAN Drum System, Software Change Note, version 2.67, December 28, 2000                                                                                       |
| BII-5103-SDD-001                   | RFETS 569 IPAN Drum System, Software Build Specification                                                                                                                |
| BII-5103-SOMP-001                  | RFETS 569 IPAN Drum System, System Operation and Maintenance Procedures for the RFETS 569 IPADC System                                                                  |
| BII-5103-SQAD-001                  | RFETS 569 IPAN Drum System, Software Quality Assurance Description                                                                                                      |
| BII-5103-SRN-004                   | RFETS 569 IPAN Drum System, Software Release Note                                                                                                                       |
| BII-5103-SVVD-001                  | RFETS 569 IPAN Drum System, Software Verification and Validation Description for RFETS 569 PADC                                                                         |
| BII-5111-FFTP-001                  | RFETS-Gamma Spectroscopy Measurement System for the SuperHENC, Factory Functionality Test Plan                                                                          |
| BII-5111-OPM-001                   | Operating Procedure Manual                                                                                                                                              |
| DCI SOP NO. MLA 008                | Metrology Control of Measuring and Test Equipment                                                                                                                       |
| INS-246                            | TWCD QAPD Procedures Matrix                                                                                                                                             |
| KH-NDA2001-SHENC-001-QUAL-569TGS04 | Calibration and Qualification Report for the Determination of Plutonium-239 in Combustible Waste Packaged in 55-Gallon Drums using the ANTECH TGS Drum Counter 569TGS04 |
| L-1000                             | Requirements for Radiological Laboratories L-Procedures                                                                                                                 |
| L-1006                             | Maintenance Records for Analytical Instrumentation                                                                                                                      |
| L-2421                             | Precision Gas Mass Spectrometry Operations and Analysis (VG-30-38)                                                                                                      |
| L-4006                             | Chain-of-Custody and Sample Administration for Headspace Sample Canisters                                                                                               |
| L-4026                             | Records Handling, Storage, and Retrieval for the WIPP Project File                                                                                                      |
| L-4028                             | Sample Administration for Radiological Laboratory                                                                                                                       |
| L-4031                             | Software Quality Assurance                                                                                                                                              |
| L-4035                             | Data Review and Validation for Total Metals for WIPP-TRU Waste Characterization Program (TWCP) Data Generation Level                                                    |
| L-4038                             | WIPP Data Review and Validation for Volatile Organic Compounds                                                                                                          |
| L-4039                             | WIPP Data Review and Validation for Semi-Volatile Organic Compounds (in Solid Samples)                                                                                  |
| L-4108                             | Toxicity Characteristic Leaching Procedure (TCLP) for Metals in Waste                                                                                                   |
| L-4111                             | GC/MS Determination of Volatile Organics for Waste Characterization                                                                                                     |
| L-4138                             | Summa Passivated Stainless Steel Canister Cleaning and                                                                                                                  |



| PROCEDURE/DOCUMENT NUMBER | TITLE                                                                                                                                          |
|---------------------------|------------------------------------------------------------------------------------------------------------------------------------------------|
|                           | Certification                                                                                                                                  |
| L-4146                    | Headspace Gas Sampling of Waste Containers                                                                                                     |
| L-4148                    | Preparation of Samples and Calibration Standards for Determination of Gases in Sample Canisters                                                |
| L-4150                    | Total Metals Acid Digestion Procedure of Solid, Liquid, and TCLP Extract Samples                                                               |
| L-4151                    | Waste Analysis by Atomic Absorption Spectroscopy                                                                                               |
| L-4152                    | Mercury Analysis in Waste ( Cold-Vapor Technique)                                                                                              |
| L-4153                    | Trace Metals by ICP Spectrometry (Solids, Liquids, and TCLP Extracts)                                                                          |
| L-4165                    | GC/MS Determination of Volatile Organic Compounds (Solids, Liquids, and TCLP Extracts)                                                         |
| L-4214                    | Extraction of Total SVOCS for GC/MS Analysis for WIPP                                                                                          |
| L-4215                    | GC/MS Determination of Total SVOCS for WIPP                                                                                                    |
| L-4217                    | Metals Analysis Data Compilation and Reporting                                                                                                 |
| L-5016                    | Data Review and Validation of Inorganic Gas Analysis for WIPP-TRU Waste Characterization Program (TWCP) - Data Generation Level                |
| L-5017                    | HVOC Data Review and Validation (Data Generation Level)                                                                                        |
| LATA-MGSSID-001           | LATA Program Interface Document for the Mobile Gas Generation Sampling System for use at the Rocky Flats Environmental Technology Site (RFETS) |
| LA-UR-00-2955             | Determination of the Total Measurement Uncertainty for the RFETS Skid Mounted TGS and Can TGS                                                  |
| MAN-001-SDRM              | Site Document Requirements Manual                                                                                                              |
| MAN-012-SCARM             | Site Corrective Action Requirements                                                                                                            |
| MAN-062-CAUSEANALYSIS     | Cause Analysis Requirements Manual                                                                                                             |
| MAN-092-M&TEM             | Measuring and Test Equipment Management Manual                                                                                                 |
| MAN-094-TPM               | Training Program Manual                                                                                                                        |
| MAN-134-PPM               | Procurement Program Manual                                                                                                                     |
| MGSSQP-LATA-001           | Mobile Gas Generation Testing Sampling System Qualification Plan                                                                               |
| MGSSTP-LATA-001           | Mobile Gas Generation Testing Sampling System (MGSS) Test Plan                                                                                 |
| PLN-97-007                | TRU Waste Characterization Program Training Implementation Plan                                                                                |
| PRO-108-PREP-01           | Preparation of Nondestructive Assay Performance Demonstration Program Samples                                                                  |
| PRO-110-WP-1212           | WIPP Waste Information System (WWIS) Data Entry                                                                                                |
| PRO-156-RS-0137           | Data Review and Validation of Salt Residue Stabilization Sampling Batch Report                                                                 |
| PRO-174-WO-5227           | Operating Building 371 SGS Drum Counter                                                                                                        |
| PRO-232-DRR-776           | Dry Residue Repackaging                                                                                                                        |
| PRO-264-RS-0141           | Data Review and Verification of Residues Repack Batch Reports                                                                                  |
| PRO-284-POC-001           | Pipe Overpack Container Initial Assembly Process                                                                                               |
| PRO-291-TPO/WO/5035       | TRUPACT-II Verification Leak Test, Building 664                                                                                                |
| PRO-404-RS-0145           | Data Review and Verification, Ash Residue Repack Batch Reports                                                                                 |
| PRO-428-RS-0146           | Data Review and Validation of Ash Residue Repack Sample Batch Reports                                                                          |
| PRO-440-RS-0149           | GGTP Drum Selection and Batching                                                                                                               |
| PRO-484-WIPP-003          | Collection, Review, and Confirmation of Acceptable Knowledge Documentation                                                                     |
| PRO-486-WIPP-006          | TRU Waste Characterization Project QA Grading                                                                                                  |

| PROCEDURE/DOCUMENT NUMBER | TITLE                                                                                           |
|---------------------------|-------------------------------------------------------------------------------------------------|
| PRO-489-TRU-664           | TRUPACT-II Operating Instructions for Building 664                                              |
| PRO-543-ASD-002           | Initiation, Preparation, and Implementation of Chain-of-Custody Forms                           |
| PRO-544-SALT-REPACK-371   | Residue Repack, Building 371                                                                    |
| PRO-548-SSOC-SQA          | Software Management for Nondestructive Assay Systems                                            |
| PRO-603-RS-0152           | Data Review and Verification of Repack Sampling Batch Reports                                   |
| PRO-604-RC-001            | Field Sample QC Data Calculations, Review, and Validation Batch Reports                         |
| PRO-666-PADC569           | Operating Building 569 Passive/Active Drum Counter                                              |
| PRO-687-TGS-371           | Operating the Tomographic Gamma Scanner (TGS)                                                   |
| PRO-692-MGSS-030-002      | Non-Heated Gas Test Canister Operations                                                         |
| PRO-697-MLC-00013         | Preparation and Certification of NDA Standards and Sources                                      |
| PRO-701-TGS-371           | Setup and Calibration for the Skid Mounted Tomographic Gamma Scanner (TGS)                      |
| PRO-728-NDA-001           | Operating the Neutron Multiplicity Counters and Trifid Gamma-Ray Isotopics Systems              |
| PRO-731-MC-002            | NDA Measurement Control Program                                                                 |
| PRO-767-WIPP-001          | Waste Records Center Processing                                                                 |
| PRO-815-DM-01             | Developing and Maintaining Documents                                                            |
| PRO-823-REPACK-371        | Combustible Residue Repackaging                                                                 |
| PRO-830-DRUM-371          | Drum Loading into Standard Waste Boxes                                                          |
| PRO-845-NDA-008           | Data Review, Verification and Validation for Nondestructive Assay (NDA) Measurements Systems    |
| PRO-856-RS-0153           | Gas Generation Testing Data Reduction and Reporting [heated operations]                         |
| PRO-860-RS-0156           | Repack Sampling – Building 371                                                                  |
| PRO-864-TGS-371           | Setup and Calibration for the Can Counter Tomographic Gamma Scanner (TGS)                       |
| PRO-908-ASD-004           | On-Site Transfer and off-Site Shipment of Samples                                               |
| PRO-933-NMC-002           | Neutron Multiplicity Counter and TRIFID Systems Setup and Calibration                           |
| PRO-940-WIPP-010          | WIPP TRU Waste Characterization Project Level Data Review and Reporting                         |
| PRO-943-WIPP-007          | TRU Waste Characterization Program Conditions Adverse to Quality Trending and Analysis          |
| PRO-944-WIPP-008          | Completion of Waste Stream Profile Form for Waste to be Disposed of at WIPP                     |
| PRO-945-WIPP-009          | RCRA Characterization of TRU Waste to be Disposed of at WIPP                                    |
| PRO-957-SuperHENC         | Operating the Super High Efficiency Neutron Coincidence (SuperHENC) Counter Mobile Assay System |
| PRO-962-MGSS-001          | Mobile Gas Generation Testing Sampling System (MGSS) Sampling Operations                        |
| PRO-963-MGSS-002          | Mobile Gas Generation Testing Sampling System Data Calculation                                  |
| PRO-984-440-HSGS          | Waste Management Operations Building 440 C-Cell                                                 |
| PRO-1006-TGS-569-01       | Setup and Calibration of Building 569 Drum Tomographic Gamma Scanner (TGS)                      |
| PRO-1007-TGS-569-02       | Operating Building 569 Drum Tomographic Gamma Scanner (TGS)                                     |
| PRO-1018-SWB-371          | Standard Waste Box Drum Selection and Grouping                                                  |
| PRO-1037-WEMS-97-107      | Waste and Environmental Management System (WEMS) System Administration Guidance                 |
| PRO-1038-WEMS-97-108      | WEMS and WSRIC Software Validation Specifications (SVS) Development                             |

| PROCEDURE/DOCUMENT NUMBER                       | TITLE                                                                                                  |
|-------------------------------------------------|--------------------------------------------------------------------------------------------------------|
| PRO-1072-NDA-MSQ                                | Matrix Specific Qualification for NDA Can Counters                                                     |
| PRO-1092-FRAM-569                               | Operating Building 569 FRAM Gamma Spectroscopy System                                                  |
| PRO-1141-WP-4701                                | Waste Characterization Gas Sampling                                                                    |
| PRO-1297-CLC&RPT-371<br>(Formerly L-3007)       | Calorimetry/Gamma Ray Assay Calculation and Reporting of Results                                       |
| PRO-1298-ISOANAL-371<br>(Formerly L-4193)       | Gamma-Ray Isotopic Analysis of Plutonium-bearing Solids in the Building 371Cal/Gamma Laboratory        |
| PRO-1299-AIRBATCH-371<br>(Formerly L-4209)      | Calorimeter Procedure using the ANTECH Airbath System in the Building 371Cal/Gamma Laboratory          |
| PRO-1302-WIPPDATA-371<br>(Formerly L-4034)      | Data review and Validation for Calorimetric Assay for WIPP TRU Waste Characterization Program          |
| PRO-1418-WO-TRUOP                               | TRUPACT-II Operations                                                                                  |
| PRO-1419-WO-LKTST                               | TRUPACT-II Shipping Leak Test                                                                          |
| PRO-J23-FO-0133                                 | Drum and Box Repack                                                                                    |
| PRO-J44-RC&I-6600<br>(Formerly 4-J44-RC&I-6600) | Procured Items Inspection & Certification                                                              |
| PRO-N01-RES-030-001                             | Gas Test Canister Operations                                                                           |
| PRO-Q22-NDA-3000                                | Review of Non-TWCP Nondestructive Assay Sheets                                                         |
| PRO-U76-WC-4030                                 | Control of Waste Nonconformances                                                                       |
| PRO-W90-FO-0103                                 | Balances                                                                                               |
| PRO-X05-WC-4018                                 | Transuranic Waste Certification                                                                        |
| PRO-X32-RS-0128                                 | Dry Residue Repackaging, Building 707                                                                  |
| PRO-X56-RS-0123                                 | Ash Residue Repack, Building 707                                                                       |
| RF/RMRS-97-018                                  | RFETS TRU Waste Acceptable Knowledge Supplemental Information                                          |
| RMRS-WIPP-98-100                                | Acceptable Knowledge TRU/TRM Waste Stream Summaries                                                    |
| RS-012-004                                      | Grid Method – Repack Solid Sampling & Analysis Plan                                                    |
| RS-012-005                                      | Cone & Quartering Method – Repack Solid Sampling and Analysis Plan                                     |
| RS-020-001                                      | Gas Generation Testing QAPjP                                                                           |
| RS-020-006                                      | Salt Residue Stabilization, Building 707 Process Control/Qualification                                 |
| RS-020-012                                      | Ash Residue Repack Project, Process Control Plan                                                       |
| RS-020-013                                      | Dry Residue Repackaging Process Control Plan                                                           |
| RS-020-017                                      | Salt Residue Stabilization, Building 707 Qualification Report                                          |
| RS-020-018                                      | Combustible Residue Repackaging Process Control Plan                                                   |
| RS-020-021                                      | Salt Residue Repack, Building 371 and Building 707 Process Control Plan                                |
| SQM-007                                         | IQ3 Waste Assay Trailer Operating Procedure - Operating and Calibrating the Canberra IQ3 Gamma Scanner |
| SQM-008                                         | Operating & Calibrating the Canberra Passive Neutron Counter                                           |
| SQM-009                                         | Operating & Calibrating the Canberra Segmented Gamma Scanner                                           |
| SQM-010                                         | Review, Validation, & Reporting Nondestructive Assay (NDA) Data & Results                              |
| SQM-011                                         | Canberra Nuclear NDA Implementation Plan for RFETS Transuranic Waste Characterization Program          |
| SQM-016                                         | Overview of Canberra Mobile NDA Services RFETS Project                                                 |
| SQM-120                                         | Mobile Software Configuration Management                                                               |
| SQM-121                                         | Mobile Software Configuration Verification                                                             |
| SQM-130                                         | RFETS Transuranic Waste Expert Review                                                                  |

| PROCEDURE/DOCUMENT<br>NUMBER                             | TITLE                                                                                                                                                           |
|----------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Qualification and Calibration Reports for A-01-12</b> |                                                                                                                                                                 |
| PLAN-MSQ.CMSQ-001                                        | Matrix-Specific Qualification Program Plan                                                                                                                      |
| Unnumbered                                               | 569 TGS Compact Disc, includes ARC TGS V1.1 LACP 00285, Master Analysis Software Quality Assurance (SQA), PC FRAM Documentation, TGS Fit And TGS Mat.           |
| Unnumbered                                               | ANTECH MasterScan Project Log, ANTECH Quality Control Document for TGS Software                                                                                 |
| Unnumbered                                               | Building 569 Passive/Active Drum Counter Calibration and Validation Plan, Instrument Control Number 569PADC001, Rev 1., August 26, 1999                         |
| Unnumbered                                               | Calibration and Qualification Report Package for Building 569 Passive/Active Drum Counter Instrument Identification Number: 569PADC01, prepared January 4, 2001 |
| Unnumbered                                               | Calibration and Qualification Report Package for the SuperHENC Mobile Assay Trailer Instrument Identification Number: 440SHENC01, prepared January 22, 2001     |
| Unnumbered                                               | Calibration and Qualification Report Package for the SuperHENC Mobile Assay Trailer, approval date: January 23, 2001.                                           |
| Unnumbered                                               | Kaiser Hill NDA System Software Change Request for SuperHENC (Software change), SCR No. 01-013 HENC, version 1.03, February 20, 2001                            |
| Unnumbered                                               | Kaiser Hill NDA System Software Change request for SuperHENC SGEAS (System Set-up), SCR No. 01-010 HENC, version 2.66, January 23, 2001                         |
| Unnumbered                                               | Kaiser Hill NDA System Software Change request for SuperHENC SGEAS (System Set-up), SCR No. 01-025 HENC, version 2.67, February 20, 2001                        |
| Unnumbered                                               | RFETS-Gamma Spectroscopy Measurement System for the Mobile Standard Waste Box Counter-Super-HENC, Software Lifecycle Documentation, dated January 19, 2001      |
| Unnumbered                                               | Super High Efficiency Neutron Counter Calibration and Validation Plan, Instrument Control Number 984SHENC01, October 16, 1999                                   |