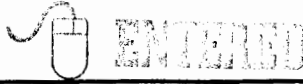


United States Government



Department of Energy

memorandum

Carlsbad Area Office
Carlsbad, New Mexico 88221

DATE:

JAN 05 2000

REPLY TO
ATTN OF: CAO:QA:SAV 99-1507 UFC 2300SUBJECT: CAO Audit Report A-00-02, Rocky Flats Environmental Technology Site (RFETS) TRU
Waste Characterization of Salt, Dry, Ash, and Wet Combustible Residue Repackaging
Activities

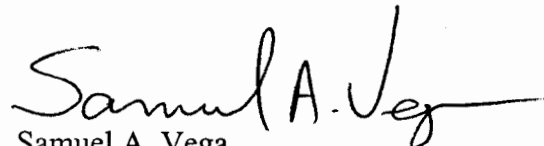
TO:

Joseph Legare, RFFO

The Carlsbad Area Office (CAO) conducted an audit of the RFETS Salt, Dry, Ash, and Wet Combustible Residue Repackaging activities on November 16-18, 1999. The audit team concluded that the RFETS technical and quality assurance programs for these activities were adequate in accordance with the CAO QAPD and QAPP. The audit team also concluded that the RFETS procedures were being satisfactorily implemented and the evaluated processes were effective.

Two observations and five recommendations were identified during the audit. Neither the observations nor the recommendations require a response.

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


Samuel A. Vega
Quality Assurance Manager

Attachment



printed on recycled paper



Joseph Legare

- 2 -

cc w/original attachment:
L. Chism, CAO

cc w/attachment:
B. Bennington, CAO
B. Stroud, CAO
S. Vega, CAO
D. Winters, DNFSB
B. Walker, EEG.
M. Eagle, EPA
S. Monroe, EPA
/ S. Zappe, NMED
M. Castagneri, RFETS
G. O'Leary, RFETS
T. Bowden, CTAC
C. Riggs, CTAC

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U.S. DEPARTMENT OF ENERGY
CARLSBAD AREA OFFICE

AUDIT REPORT

OF THE

ROCKY FLATS ENVIRONMENTAL TECHNOLOGY SITE

GOLDEN, COLORADO

AUDIT NUMBER A-00-02

November 16-18, 1999

TRU WASTE CHARACTERIZATION OF SALT, DRY, WET, AND ASH
RESIDUE REPACKAGING ACTIVITIES



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

Date: 1/3/00

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

Date: 1/3/00

1.0 EXECUTIVE SUMMARY

Carlsbad Area Office (CAO) Audit A-00-02 was conducted to evaluate the adequacy, implementation, and effectiveness of the Rocky Flats Environmental Technology Site (RFETS) Transuranic (TRU) waste characterization activities associated with Salt, Dry, Wet, and Ash Residue Repackaging. An evaluation of LECO equivalencies, LECO Magnesium Oxide (MgO) inserts, and the WIPP Waste Information System (WWIS) were added to the scope when it was determined that sufficient time and the proper mix of personnel were available.

The audit was conducted at the RFETS facility November 16-18, 1999. The audit team concluded that the adequacy of the RFETS technical programs, as applicable to these activities, was satisfactory in meeting CAO Quality Assurance Program Description (QAPD) and Quality Assurance Program Plan (QAPP) requirements. The audit team also concluded that the defined technical programs for these activities were being implemented in accordance with the RFETS Quality Assurance Project Plan (QAPjP) and RFETS implementing procedures and that the RFETS processes were effective.

The audit was performed in parallel with an inspection performed by personnel representing the United States Environmental Protection Agency (USEPA). The Environmental Evaluation Group (EEG) was present in an observer capacity.

The audit team did not identify any conditions adverse to quality resulting in the issuance of a Corrective Action Report (CAR). Three deficiencies, isolated in nature and requiring only remedial corrective actions, were Corrected During the Audit (CDA). Five Recommendations are being offered for management consideration and action. Two Observations were identified. The audit team noted an Exemplary Practice being performed by RFETS personnel. Observations, Recommendations, and Exemplary Practices are described in Section 6.0 of this report.

2.0 SCOPE

The audit team evaluated the adequacy, implementation, and effectiveness of technical processes related to the RFETS TRU Waste characterization activities associated with the Salt, Dry, Wet, and Ash Residue Repackaging processes.

The following technical elements were evaluated in accordance with the CAO QAPP:

- Acceptable Knowledge (including LECO equivalencies and MgO LECO inserts)
- Segmented Gamma Scanner (SGS) Drum Counter
- SGS Can Counters
- Tomographic Gamma Scanner (TGS), Mobile
- WWIS

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

RFETS QAPjP for the Transuranic Waste Characterization Program, 95-QAPjP-0050

RFETS Transuranic Waste Management Manual, 3-MAN-008-WM-001

Related RFETS technical and quality assurance implementing procedures

3.0 AUDIT TEAM AND OBSERVERS

CAO AUDITORS/TECHNICAL SPECIALISTS

Samuel Vega	Quality Assurance Manager, CAO
Charlie Riggs	Audit Team Leader, CTAC
Steve Hans	Auditor, CTAC
Dee Scott	Auditor, CTAC
Wayne Ledford	Auditor, CTAC
Dick Blauvelt	Technical Specialist, CTAC
Ken Coop	Technical Specialist, CTAC
Jim Bresson	Technical Specialist, CTAC

EPA INSPECTORS

Scott Monroe	Lead Inspector, EPA
Connie Walker	Inspector, EPA Support Contractor
Patrick Kelley	Inspector, EPA Support Contractor
Robert Thielke	Inspector, EPA Support Contractor

OBSERVERS

Ben Walker	EEG
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4.0 AUDIT PARTICIPANTS

RFETS individuals contacted during the audit process are identified in Attachment 1. A preaudit meeting was held at RFETS Building 460 on November 16, 1999. A daily meeting was held with RFETS management and staff to discuss issues and potential deficiencies. The audit was concluded with a postaudit meeting held at RFETS Building 111 on November 18, 1999.

5.0 SUMMARY OF AUDIT RESULTS

5.1 Program Adequacy, Implementation, and Effectiveness

The audit team concluded that the adequacy of the RFETS QA Program, as described in the RFETS implementing procedures for these activities, satisfactorily meets the requirements of the CAO QAPD, Revision 2 and the QAPP, Revision 0 and Interim Changes 2/96 and 11/96. The audit team concluded that the QA program was being

satisfactorily implemented. For the technical processes evaluated, the RFETS program was determined to be effective.

A summary table of audit results is provided as Attachment 2. Details of audit activities, including specific objective evidence reviewed, are contained within the audit checklists. Checklists are retained as CAO quality records. Attachment 3 identifies the RFETS implementing procedures that were included in the audit.

5.2 Technical Activities

5.2.1 SGS Drum Counter

The audit team examined the procedures and processes associated with the SGS drum counter, with an emphasis on those that were not satisfactory during CAO Audit A-99-17, performed in September 1999, or procedures that had been changed since the previous audit.

The team examined the Total Measurement Uncertainty (TMU) documentation for the SGS drum counter and determined that it was satisfactory.

Two Observations were made by the audit team: RFETS has not yet participated in a Performance Demonstration Program (PDP) cycle, but is scheduled to complete the measurements by early December 1999, and RFETS should provide WIPP with greater assurance about the validity of their expert review of their resolution/decision on acceptance of assay results. (see Observations No. 1 and 2)

There is no easily accessible record of drums where assays were rejected due to control check measurement failures or assays out-of-range (see Recommendation No. 3).

Overall, the SGS Drum Counter was found to be adequate, satisfactorily implemented, and effective.

5.2.2 SGS Can Counters

The audit team examined the procedures and processes for six SGS can counter instruments: 371SGSCS01, 371SGSCS02, 707SGSCS02, 707SGSCS03, 707SGSCS04, and 707SGSCS05. Specifically, the team concentrated on items that were not satisfactory during CAO Audit A-99-17 or procedures that had been changed since the previous audit.

Additionally, documents associated with instruments not included in the previous audit were examined. The team also examined the TMU document for these instruments and concluded that it was satisfactory (see Recommendations Nos. 1 and 2).

Overall, the SGS Can Counter Systems were found to be adequate, satisfactorily implemented, and effective.

5.2.3 TGS Mobile Unit

The audit team evaluated the TGS system (Mobile TGS Unit from Los Alamos National Laboratory). The evaluation included an assessment of the adequacy and implementation of the LANL procedures applicable to this system including the Interface Document (TWCP-TWID-RFETS-001, Revision 1) with RFETS. Calibration data, quality assurance objective (QAO) verification data, and assay data packages were reviewed.

The TGS operations and records were reviewed and evaluated and determined to comply with applicable LANL and RFETS procedures. Assay data package records are prepared on forms that accurately reflect requirements in the operating and calibration procedures. The data are assembled on a batch basis and traceable to individual waste containers.

The audit team determined that the method of documenting the technical supervisor's evaluation of coagulated masses of material known as "lumps" indicated by TGS assay should be clarified to state that the evaluation will be documented in the operating log (see Recommendation No. 5).

Overall, the TGS Mobile Unit was found to be adequate, satisfactorily implemented, and effective.

5.2.4 Acceptable Knowledge

Acceptable knowledge (AK) for the four subject processes (salt residue repack, ash residue repack, dry residue repack, and wet residue repack), was reviewed and found to be satisfactory. Several site specific procedures, including six repackaging procedures were examined during the audit to verify that the required waste stream/waste process information as specified in the QAPP was captured in implementing procedures. The required AK information was observed in the review of these documents.

The audit team also looked at related areas including training, internal audits, document control, Nonconformance Reports (NCRs), prohibited items, AK discrepancies and limitations and accuracy reporting. A concern was raised regarding incomplete documentation of an internal audit conducted in July of this year in preparation for a CAO audit. A second concern identified a lack of documented training in the NCR process for an AK evaluator. These concerns were corrected during the audit by amending the assessment to include the list of documents reviewed during the assessment and providing the necessary training to the AK evaluator. The audit team also reviewed the status of Observations and Recommendations from the CAO audit A-

99-17. Finally, the audit team traced salt residue repack container no. D94945 through the entire AK process and found all records to be complete.

Equivalency requests and supporting documentation for the LECO crucibles and the Mg Oxide LECO Crucible Inserts were reviewed. The CAO team, based upon the review of the supporting documents, supplemental documents reviewed during the audit and questions raised and addressed, has no concerns regarding the Mg Oxide LECO Crucible Insert assay method.

Overall, AK was found to be adequate, satisfactorily implemented, and effective.

5.2.5 WIPP WASTE INFORMATION SYSTEM (WWIS)

The audit team discussed the operation of the WWIS with the system analysts and observed several operations using a test module. The transfer of actual data to WIPP was observed for one container. The WWIS pulls many items from the Waste and Environmental Management System (WEMS) database to compile a WWIS file. To avoid the possibility of omitting required data, the automatic function should be used whenever possible (see Recommendation No. 4). The WEMS has a built-in "edit function" that shows who made changes and when the changes were made (see Exemplary Practice).

Overall, WWIS was found to be adequate, satisfactorily implemented, and effective.

6.0 CORRECTIVE ACTIONS, OBSERVATIONS, and RECOMMENDATIONS

6.1 Corrective Action Reports

6.1.1 CARs Previously Issued (CAO Audit A-99-17)

6.1.1.2 CAO CAR 99-112

Nonconformance Report (NCR) #SSOC-99-0163 had been prepared and properly dispositioned.

The Total SVOCs data package for 9/99 Method Performance Samples, SVOA-PD-00002 was complete and the precision and accuracy were within the required tolerance.

It is recommended that this CAR be closed.

6.1.2.2 CAO CAR 99-113

Remedial Actions

Reviewed Total Measurement Uncertainty for the Building 371 Segmented Gamma

Scanner, ICN 371SGSDC01, had been modified.

Administrative Procedure 3-Q22-NDA-3000, Section 11.3, Batch Report, had been modified to include the requirement for control charts.

Administrative Procedure 3-Q22-NDA-3000, had not been modified, as committed to in the CAR response. The upper ranges of 197 grams for WG Pu, 1.0 grams for Am, and 197 grams for U had been added to the procedure, but the lower ranges of 0.029, 0.0019, and 0.029 grams, respectively, had not been added.

Investigative Actions

Previously validated radioassay batch data packages from the Building 371 SGS drum counter, numbers 371-SGS-DP-0001, 0002, and 0003, had been revised.

Actions to Preclude Recurrence

The Lessons Learned memorandum issued to address the CAR was acceptable.

This CAR will not be closed until procedure 3-Q22-NDA-3000 is revised to include the lower qualified activity ranges of the SGS Drum Counter.

6.1.2.3 CAO CAR 99-114

Procedure PRO-604-RC-001 had been revised to specifically identify those QAOs and their acceptance criteria that are being verified by the QA Officer.

It is recommended that this CAR be closed.

6.1.2.4 CAO CAR 99-115

Remedial Actions

Revision (DCF-CHG-3) to 99-NQA-SGS-100, Rev. 0, *Qualification Plan for the Canberra Segmented Gamma Scan (SGS) Can Counter Instruments (Buildings 371, 707, 776)* had been revised.

Work Instruction NDA-17, Rev. 0, *Investigation of CBCP Comparative Bias Anomalies*, dated 9/30/99 satisfactorily addressed the remedial action.

Work Instruction NDA-16, Rev. 0, *Completing the Baseline Bias Correction Spreadsheet Used for SGS, NMC, and TGS*, dated 9/30/99 satisfactorily addressed the remedial action.

Actions to Preclude Recurrence

Lessons Learned memorandum, J. A. Geis to Distribution, dated 10/22/99 satisfactorily addressed the action to preclude recurrence.

It is recommended that this CAR be closed.

6.2 Deficiencies Corrected During the Audit (CDA)

Three deficiencies requiring remedial action only were identified during the audit. All three were corrected before the completion of the audit. These are identified in the completed audit checklists, which are kept as QA Records.

6.3 Observations

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

1. As originally noted during CAO Audit A-99-17, the SGS drum counter, with a new detector and calibration, has not participated in the NDA PDP. RFETS is participating in PDP Cycle 6B and the cycle is scheduled for completion in early December. RFETS does not plan to ship waste measured on this counter to WIPP until successful participation in the PDP program.
2. Procedure 3-Q22-NDA-3000 should reference the expert review procedure and additional details regarding review criteria should be added to the procedure. Canberra routinely uses a spreadsheet to examine assay parameters associated with their "expert review" of assay results. But, they should make this expert review process more meaningful by providing additional information, in written instructions/procedures, about the criteria they are applying and, thus, provide WIPP with greater assurance about the validity of their decision on acceptance of assay results.

6.4 Recommendations

Recommendations are presented for RFETS management consideration:

1. RFETS should continue to examine and refine their Total Measurement Uncertainty (TMU) document as additional data becomes available from the SGS and calorimetry comparisons. The RFETS practice is to continue to compare SGS assay results with calorimetry results for a fraction of drums assayed with the SGS. Comparison of the results can provide valuable information about the actual size of the TMU, and could lead to refinement of the TMU values reported.
2. RFETS should consider decreasing the measurement errors for PU-240 and Pu-238 isotopics that trigger the use of default isotopics. Specifically, RFETS should

address whether default isotopics should be used when errors associated with them are smaller than the measured isotopic errors. Currently, RFETS practice is to measure the relative isotopic abundance of Pu-238 and Pu-240. If the measurement errors are less than 200% and 70%, respectively, measured values are used. However, AK values may be more accurate. Thus, the recommendation is to use the values with the smallest errors, to decrease TMU.

3. RFETS should consider maintaining an easily accessible record of drums with assays rejected due to control check measurement failures or assays out-of-range. Not doing so makes it difficult to obtain information/statistics on failed assays, the reason for failures, etc. The site does maintain the raw data, and can, thus, reconstruct the failed assay information if they have the drum identification.
4. Procedure 1-PRO-110-WP-1212, *WIPP Waste Information System (WWIS) Data Entry* should specify that the manual input of data to WWIS only be performed when the automatic function is not available.
5. The method of documenting the technical supervisor's evaluation of coagulated masses of material known as "lumps" indicated by TGS assay should be clarified to state that the evaluation will be documented in the operating log. This should be done in TWCP-DTP-1.2-011 and in the document "*Applicability of the Tomographic Gamma Scanner to Different Waste Types*".

6.4 Exemplary Practice

The WEMS has a built-in "edit function" that shows who made changes and when the changes were made. This feature provides an outstanding audit trail.

7.0 LIST OF ATTACHMENTS

- Attachment 1: Personnel Contacted During the Audit
- Attachment 2: Summary Table of Audit Results
- Attachment 3: Table of RFETS Implementing Procedures Audited

PERSONNEL CONTACTED DURING THE AUDIT

RFETS PERSONNEL CONTACTED DURING AUDIT A-00-02				
NAME	ORG/TITLE	PREAUDIT MEETING	CONTACTED DURING AUDIT	POST-AUDIT MEETING
Anderson, Scott	KH/Waste Ops; Program Manager	X		
Baldwin, Chuck	RMRS/NDA; Sr. Eng	X	X	
Ballenger, R. J.	SSOC/WIPP; Residue Compliance Manager	X	X	X
Betts, Stephen	LANL; LANL NDA (TGS)	X	X	
Brown, Denny	Consultant	X		
Carson, Pete	RMRS/LATA/TRU Waste; Scientist/Engineer	X	X	X
Castagneri, Mark	RMRS/QA; TWCP QAO	X	X	X
Clapham, Martin	RMRS/NDA; Physicist		X	
Corlett, Charles D.	SSOC/IFORM; TGS Lead	X	X	X
Coulter, W. L.	KH; NDA Programs	X		
D'Amico, Eric	RMRS/Waste Projects; Environmental Scientist		X	X
Dahl, Dave	SSOC NDA; QE	X	X	X
Davidson, Dorothy R.	Canberra/NDA; VP NDA Services	X		X
Davis, Robert E.	KH CP E&I/Special Projects	X		
Dreher, David	SSOC/NDA; Manager	X	X	X
Eberlein Susan	SSOC/Product Quality; Department Manager	X		X
Eschenbaum, R. A.	SSOC/LATA/WIPP/Residue Compliance; Senior Eng	X		X
Ferrera, Ken	KH/707 Project Dir			X
Fisher, A. J.	SSOC; QA Manager			X
Fleissner, John G.	Canberra; Sen. Scientist	X	X	
Fox, J.	RMRS; Sr Compliance Specialist	X		

RFETS PERSONNEL CONTACTED DURING AUDIT A-00-02				
NAME	ORG/TITLE	PREAUDIT MEETING	CONTACTED DURING AUDIT	POST-AUDIT MEETING
Fox, Janet	SSOC/Ash Program		X	
Franco, Johnna	RMRS/NDA	X	X	
Freiberg, Ken	Consultant	X		
Freiboth, Cameron J.	The IT Group/RFETS Residue 3; Engineer		X	
French, David M.	Residues QA/QC; Consultant	X	X	X
Fulks, L. K.	KH	X		X
Gavett, Marji	LANL/E-ET; LANL Site Project QA Officer		X	
Geis, J. A. 'Art'	SSOC/Product Quality; Mgr	X		X
Gibbs, Frank E.	IT Corporation; Engineer/Scientist		X	
Gillespie, Bruce	Canberra; Sr. Scientist	X	X	
Gilllespie, Doyle	KH QP; Principal Quality Engineer	X	X	X
Grady, Frank	RMRS/TRU Waste Projects; TRU Project Engineer	X	X	X
Greene, Jerry	SSOC/NDA		X	
Harrison, Jeff	Wastren/RMRS; Engineer		X	
Hernandez, Jaun	RMRS/QA; QA Manager	X		X
Jeffries, James	RFFO/DOE; Director Quality Program Division	X		
Joan, Morse	Waste Systems; Systems Analyst		X	
Kangas, Mark	SSOC/WIPP Residue Compliance	X		X
Karas, Ted M.	LATA/SSOC/Dry Repack Project Support			X
Kercher, Ann	RMRS/TRU Waste Project; Engineer	X	X	X

RFETS PERSONNEL CONTACTED DURING AUDIT A-00-02				
NAME	ORG/TITLE	PREAUDIT MEETING	CONTACTED DURING AUDIT	POST-AUDIT MEETING
Kirschenmann, Harley	RMRS/TWCP; Engineer	X		X
Krupp, Gene	LATA/WIPP Residue Compliance; Sr. Chemical Engineer	X		X
Lehew, John	KH/Nuc Ops; Nuc Ops P. M.	X		X
Malloy, Randy	LATA/Dry Repack Project; Lead	X	X	X
McGavin, Andrew	Source One; Manager	X		
McKinney, Ruth	Source One; Executive Vice President/Acting Program Manager			X
Miller, George	KH IO&QA; Director			X
Miller, John C.	KH CPO&I; Program Lead	X		
Morales, Bart	SSOC; NDA Tech Engineering Lead		X	
Morgan, G. P.	DOE/CTG			X
Muscatello, Tony	LANL/KH; Mobile TGS LNAL Interface	X		
Nishimoto, Gregg	DOE/RFFO; RFFO Residue Mgr.		X	X
O'Leary, Jerry	RMRS/TRU Waste Project Manager	X		X
Pigeon, Paul	RMRS/Training Programs; TWCP Training Officer			
Raaz, R. D.	SSOC; Vice President			X
Reed, Charles	SSOC/Ash Program		X	X
Rivera, Mike	LATA/SSOC/WIPP Residue Compliance; Engineer	X	X	X
Robbins, Elver	DOE/RFFO/QPD	X		
Schafer, Steve	Wastren/RMRS/Waste Systems; Env Scientist		X	

RFETS PERSONNEL CONTACTED DURING AUDIT A-00-02				
NAME	ORG/TITLE	PREAUDIT MEETING	CONTACTED DURING AUDIT	POST-AUDIT MEETING
Sendelweck, Vivian	SSOC; Environmental Engineer	X	X	X
Smart, Kim	KH/IRM; Manager	X		X
Smith, L. C.	KH/Quality Program Mgr			X
Stewart, Judith	SAIC/SSOC NDA; QA/QC Engineer	X	X	X
Tomlinson, Phillip F.	Informatics/SSOC/Lead Data V&V Lead	X	X	
Wolfe, Mike	SOM; Waste Records Center Manager	X	X	X
Xuan, Lam	DOE/RFFO/EC/General Engineer/WIPP Interface	X		X

AUDIT SUMMARY TABLE A-00-02

Documents	Concern Classification				QA Evaluation		Technical
	CARs	CDAs	Obs	Rec	Adequacy	Implementation	Effectiveness
Activity							
WWIS				4	A	S	E
ACCEPTABLE KNOWLEDGE		2,3			A	S	E
TGS				5	A	S	E
SGS DRUM			1,2	3	A	S	E
SGS CAN		1		1,2	A	S	E
TOTALS	0	3	2	5	A	S	E

Definitions

E = Effective
S = Satisfactory
I = Indeterminate

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-00-02

No.	Procedure Number	Title
1	TWCP-TWID-RFETS-001, Rev 1	Interface Document
2	TWCP-DTP-1.2-011 Rev 1	Waste Assay Using the TGS
3	TWCP-DTP-1.2.016 Rev 1	Calibrating the TGS
4	TWCP-DTP-1.2-029 Rev 4	Detailed Technical Instructions for Determining the Isotopic Ratios in Waste Containers Using the RANT PC FRAM Assay System
5	PRO-236-SGS-001 Rev 3	Operating the Canberra Segmented Gamma Scan Can Counter
6	PRO-548-SSOC-SQA Rev 1	Software Management for SSOC Nondestructive Assay Systems
7	PRO-420-SGS-008 Rev 3	Data Validation and Verification for NDA Measurements
8	PRO-415-SGS-003 Rev 0	Segmented Gamma Scan (SGS) System Calibration
9	PRO-695-NDA-CBCP Rev 0	Continuous Bias Correction Program
10	707SGSCS03/IDC301u	SGS Qualification Report
11	707SGSCS02/IDC301U	SGS Qualification Report
12	Addendum 1 707SGSCS02/IDC310	SGS Qualification Report
13	Addendum 1 707SGSCS03/IDC310	SGS Qualification Report
14	99-NDA-SGS-100 Rev 0	Qualification Plan for the Canberra Segmented Gamma Scan (SGS) Can Counter Instruments
15	PRO-697-MLC-00013 Rev 0	Preparation and Certification of NDA Standards and Sources
16	4-PRO-174-5227 Rev 0	Operating Building 371 SGS Drum Counter
17	3-Q22-NDA-3000 Rev 2	Review of Nondestructive Assay Sheets
18	3-MAN-006-NDA-1000 Rev 0	NDA Calibration and Validation Program Manual
19	4-PRO-173-NDA-1020 Rev 0	Calibration of Gamma Assay Systems
20	PRO-484-WIPP-003 Rev 0	Collection, Review, and Confirmation of Acceptable Knowledge Documentation
21	RMRS-WIPP-98-100 Rev 5	Acceptable Knowledge TRU/TRM Waste Stream Summaries
22	1-PRO-11-WP-1212 Rev 0	WIPP Waste Information System (WWIS) Data Entry
23	1-MAN-039-WEM-WP-1200 Rev 0	Waste and Environmental Management System (WEMS) Program Management Manual