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

ENTERED

DEC 20 2012

Mr. John E. Kieling, Chief
Hazardous Waste Bureau
New Mexico Environment Department
2905 Rodeo Park Drive East, Building 1
Santa Fe, New Mexico 87505-6303

Subject: Review of Savannah River Site - Central Characterization Project Waste Stream Profile Form Number SR-SDD-HOM-B, Site Deactivation and Decommissioning Absorbed Inorganic Sludge

Dear Mr. Kieling:

The Department of Energy, Carlsbad Field Office has approved the Waste Stream Profile Form (WSPF) Number SR-SDD-HOM-B, *Site Deactivation and Decommissioning Absorbed Inorganic Sludge* for the Central Characterization Project at the Savannah River Site.

Enclosed is a copy of the WSPF as required by Section C-5a of the Waste Isolation Pilot Plant, Hazardous Waste Facility Permit, No. NM4890139088-TSDF.

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision according to 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 fine and imprisonment for knowing violations.

If you have questions, please contact Mr. J. R. Stroble, Director of the Office of the National TRU Program, at (575) 234-7313.

Sincerely,

J.R. Stroble for

Jose R. Franco, Manager
Carlsbad Field Office

Enclosure

cc: w/enclosure
S. Holmes, NMED *ED
T. Kliphuis, NMED ED
RCRA Chronology Record ED
WIPP Operating Record ED
CBFO M&RC
*ED denotes electronic distribution

121230

CBFO:NTP:JRS:PG:12-0707:UFC 5900.00

Attachment 2 – CCP Waste Stream Profile Form

(1) Waste Stream Profile Number: SR-SDD-HOM-B							
(2) Generator site name: Savannah River Site						(3) Generator site EPA ID: SC1890008989	
(4) Technical contact: Beverly Schrock						(5) Technical contact phone number: (575) 234-7444	
(6) Date of audit report approval by New Mexico Environment Department (NMED): May 23, 2012							
(7) Title, version number, and date of documents used for WIPP-WAP Certification: CCP-PO-001, CCP Transuranic Waste Characterization Quality Assurance Project Plan, Revision 20, June 16, 2011; CCP-PO-002, CCP Transuranic Waste Certification Plan, Revision 26, July 14, 2011; CCP-PO-004, CCP/SRS Interface Document, Revision 32, October 25, 2012							
(8) Did your facility generate this waste?	YES	X	NO				
(9) If no, provide the name and EPA ID of the original generator: NA							
Waste Stream Information							
(10) WIPP ID: SR-SDD-HOM-B						(11) Summary Category Group: S3000	
(12) Waste Matrix Code Group: Solidified Inorganics						(13) Waste Stream Name: Site Deactivation and Decommissioning Absorbed Inorganic Sludge	
(14) Description from the ATWIR: Absorbed sludge packaged in 55-gallon drums.							
(15) Defense TRU Waste:	YES	X	NO				
(16) Check One:	CH	X	RH				
(17) Number of SWBs: 6 (17a) Number of SLB2: NA			(18) Number of Drums: 64 55-gallon drums			(19) Number of Canisters NA	
(20) Batch Data Report numbers supporting this waste stream characterization: See Characterization Information Summary (CIS) Correlation of Container Identification Numbers to Batch Data Report Numbers							
(21) List applicable EPA Hazardous Waste Numbers:[1] D004, D005, D006, D007, D008, D009, D010, and D011							
(22) Applicable TRUCON Content Numbers: SR 127 / SR 227							
(23)**Acceptable Knowledge Information**							
(For the following, enter the supporting documentation used [i.e., references and dates])							
Required Program Information							
(23A) Map of site: CCP-AK-SRS-13, Revision 1, February 23, 2012, Figures 1, 2 and 8							
(23B) Facility mission description: CCP-AK-SRS-13, Revision 1, February 23, 2012, Section 4.2							
(23C) Description of operations that generate waste: CCP-AK-SRS-13, Revision 1, February 23, 2012, Sections 4.7							
(23D) Waste identification/categorization schemes: CCP-AK-SRS-13, Revision 1, February 23, 2012, Section 4.6.3							
(23E) Types and quantities of waste generated: CCP-AK-SRS-13, Revision 1, February 23, 2012, Section 4.6.1							
(23F) Correlation of waste streams generated from the same building and process, as applicable: CCP-AK-SRS-13, Revision 1, February 23, 2012, Section 4.6.2							
(24) Waste certification procedures: CCP-TP-030, Revision 31, November 19, 2012							
(25)Required Waste Stream Information							

(25A) Area(s) and building(s) from which the waste stream was generated: CCP-AK-SRS-13, Revision 1, February 23, 2012, Section 6.1			
(25B) Waste stream volume and time period of generation: CCP-AK-SRS-13, Revision 1, February 23, 2012, Section 6.2			
(25C) Waste generating process description for each building: CCP-AK-SRS-13, Revision 1, February 23, 2012, Section 6.3			
(25D) Waste Process flow diagrams: CCP-AK-SRS-13, Revision 1, February 23, 2012, Figure 3			
(25E) Material inputs or other information identifying chemical/radionuclide content and physical waste form: CCP-AK-SRS-13, Revision 1, February 23, 2012, Section 6.4			
(25F) Waste Material Parameter Weight Estimates per unit of waste: See table entitled "Waste Stream SR-SDD-HOM-B Waste Material Parameters" in Summation of Aspects of AK Summary Report: Waste Stream SR-SDD-HOM-B			
(26) Which Defense Activity generated the waste:			
	Weapons activities including defense inertial confinement fusion		Naval Reactors development
	Verification and control technology		Defense research and development
X	Defense nuclear waste and material by products management	X	Defense nuclear material production
	Defense nuclear waste and materials security and safeguards and security investigations		
(27)Supplemental Documentation:			
(27A) Process design documents: NA			
(27B) Standard operating procedures: See P012, P089, P140, P141, P146, P147, P148, P149, P150 and P188 in the Summation of Aspects of AK Summary Report: Waste Stream SR-SDD-HOM-B, Source Documents.			
(27C) Safety Analysis Reports: See D038, D039, D041, D074, D078 and D079 in the Summation of Aspects of AK Summary Report: Waste Stream SR-SDD-HOM-B, Source Documents			
(27D) Waste packaging logs: NA			
(27E) Test plans/research project reports: See P012 in the Summation of Aspects of AK Summary Report: Waste Stream SR-SDD-HOM-B, Source Documents			
(27F) Site databases: NA			
(27G) Information from site personnel: See C085, C086, C120, C155 and C157 in the Summation of Aspects of AK Summary Report: Waste Stream SR-SDD-HOM-B, Source Documents			
(27H) Standard industry documents: NA			
(27I) Previous analytical data: See C004, C040, C042, C073, C075, C077, D046, D069, M031, M034, M049, M062 and M064 in the Summation of Aspects of AK Summary Report: Waste Stream SR-SDD-HOM-B, Source Documents			
(27J) Material safety data sheets: See M029 in the Summation of Aspects of AK Summary Report: Waste Stream SR-SDD-HOM-B, Source Documents			
(27K) Sampling and analysis data from comparable/surrogate Waste: See C073 in the Summation of Aspects of AK Summary Report: Waste Stream SR-SDD-HOM-B, Source Documents			
(27L) Laboratory notebooks: NA			
Confirmation Information			
For the following, when applicable, enter procedure title(s), number(s) and date(s)			
(28)	Radiography: CCP-TP-053, Revision 12, August 22, 2012		
	Visual Examination: CCP-TP-113, Revision 16, April 25, 2011		

(29) Comments: For a list of the waste characterization procedures used and date of respective procedures see the list of procedures on the attached CIS.

Reviewed by AK Expert: **YES** [X] **Date:** 12/14/2012

Reviewed by STR (if necessary): **YES** [X] **N/A** [ ] **Date:** 12/17/2012

Waste Stream Profile Form Certification:

I hereby certify that I have reviewed the information in this Waste Stream Profile Form, and it is complete and accurate to the best of my knowledge. I understand that this information will be made available to regulatory agencies and that there are significant penalties for submitting false information, including the possibility of fines and imprisonment for knowing violations.

BSSchrock	Beverly Schrock	12/17/12
Signature of Site Project Manager	Printed Name	Date

NOTE: (1) If, radiography, visual examination were used to confirm EPA Hazardous Waste Numbers, attach signed Characterization Information Summary documenting this determination

CHARACTERIZATION INFORMATION SUMMARY

WSPF #: SR-SDD-HOM-B
Lot #: 1

TABLE OF CONTENTS

CCP Characterization Information Summary Cover Page

Waste Stream # SR-SDD-HOM-B Lot #: 1

AK Expert Review: N/A Date: N/A

SPM Review: Richard Kantrowitz Date: 12/17/2012

SPM signature certifies that through Acceptable Knowledge testing and/or analysis that the waste identified in this summary is not corrosive, ignitable, reactive, or incompatible with the TSDF.

A summary of the Acceptable Knowledge regarding this waste stream containing specific information about the corrosivity, reactivity, and ignitability of the waste stream is included as an attachment to the Waste Stream Profile Form. By reference, that information is included in this lot.

List of procedures used:

Radiography (RTR/NDE):

CCP-TP-053	Rev. 10	03/04/11	CCP Standard Real-Time Radiography (RTR) Inspection Procedure
CCP-TP-053	Rev. 11	07/20/11	CCP Standard Real-Time Radiography (RTR) Inspection Procedure
CCP-TP-053	Rev. 12	08/22/12	CCP Standard Real-Time Radiography (RTR) Inspection Procedure

Visual Examination (VE):

CCP-TP-113	Rev. 16	04/25/11	CCP Standard Contact-Handled Waste Visual Examination

Non Destructive Assay (NDA):

CCP-TP-193	Rev. 2	01/31/11	CCP Data Reviewing, Validating, and Reporting Procedure for the Nondestructive Assay Box Counters
CCP-TP-193	Rev. 3	08/08/11	CCP Data Reviewing, Validating, and Reporting Procedure for the Nondestructive Assay Box Counters

Solids Sampling:

INST-OI-73	Rev. 4	04/07/09	Manual Drum Coring Operations
INST-OI-16	Rev. 30	04/07/09	Drum Coring Operations

Solids Analysis:

CCP-TP-180	Rev. 2	12/29/10	CCP Analytical Sample Management
CCP-TP-181	Rev. 0	05/02/07	CCP Determination of Mercury by CVAA for TRU Waste Characterization
CCP-TP-182	Rev. 1	01/26/09	CCP Determination of Metals by ICP-AES for TRU Waste Characterization
CCP-TP-183	Rev. 0	05/02/07	CCP Microwave Assisted Digestion of Homogeneous Solids and Soil/Gravel
CCP-TP-184	Rev. 0	05/02/07	CCP Volatile Organic Compounds by Gas Chromatography/Mass Spectrometry
CCP-TP-185	Rev. 1	11/18/08	CCP Semivolatile Organic Compounds by Gas Chromatography/Mass Spectrometry
CCP-TP-186	Rev. 1	08/22/07	CCP Determination of Nonhalogenated Volatile Organic Compounds by Gas Chromatography
CCP-TP-187	Rev. 1	11/18/08	CCP Sample Preparation for Semivolatile Organic Compounds
CCP-TP-188	Rev. 2	12/29/10	CCP Analytical Data Recording, Review, and Reporting

Project Level Data Validation / DQO Reconciliation:

CCP-TP-001	Rev. 19	12/29/10	CCP Project Level Data Validation and Verification
CCP-TP-001	Rev. 20	09/27/12	CCP Project Level Data Validation and Verification
CCP-TP-002	Rev. 23	12/29/10	CCP Reconciliation of DQOs and Reporting Characterization Data
CCP-TP-002	Rev. 24	12/28/11	CCP Reconciliation of DQOs and Reporting Characterization Data
CCP-TP-003	Rev. 18	12/29/10	CCP Data Analysis for S3000, S4000, and S5000 Characterization
CCP-TP-003	Rev. 19	11/02/12	CCP Data Analysis for S3000, S4000, and S5000 Characterization
CCP-TP-005	Rev. 22	04/21/11	CCP Acceptable Knowledge Documentation
CCP-TP-005	Rev. 23	08/30/11	CCP Acceptable Knowledge Documentation
CCP-TP-005	Rev. 24	11/28/11	CCP Acceptable Knowledge Documentation
CCP-TP-030	Rev. 29	04/28/11	CCP CH TRU Waste Certification and WWIS/WDS Data Entry
CCP-TP-030	Rev. 30	05/21/12	CCP CH TRU Waste Certification and WWIS/WDS Data Entry
CCP-TP-030	Rev. 31	11/19/12	CCP CH TRU Waste Certification and WWIS/WDS Data Entry

WAP Certification:

CCP-PO-001	Rev. 20	05/16/11	CCP Transuranic Waste Characterization Quality Assurance Project Plan
CCP-PO-002	Rev. 26	07/14/11	CCP Transuranic Waste Certification Plan
CCP-PO-004	Rev. 29	07/05/11	CCP/SRS Interface Document
CCP-PO-004	Rev. 30	10/17/11	CCP/SRS Interface Document
CCP-PO-004	Rev. 31	10/01/12	CCP/SRS Interface Document
CCP-PO-004	Rev. 32	10/25/12	CCP/SRS Interface Document

CIS002

CCP Correlation of Container Identification Numbers to Batch Data Report Numbers

Waste Stream: # SR-SDD-HOM-B

Lot # 1

Container ID Number	NDA BDR	RTR BDR	VE BDR	Solids Sampling BDR	Solids Analytical BDR	Load Management/ Overpack Yes	Headspace Gas BDR		
							Sample	Analysis	
FCA080002	SRLBC0544	SR4RTR0215	N/A	SSC12-00003	ALD12017F, ALD12017H, ALD12017M, ALD12017N, ALD12017S, ALD12017V		N/A	N/A	N/A
FCA080004	SRLBC0575	N/A	SRVEFW0354	SSC12-00003	ALD12017F, ALD12017H, ALD12017M, ALD12017N, ALD12017S, ALD12017V		N/A	N/A	N/A
FCA080010	SRLBC0536	SRSRTR0524	N/A	SSC12-00003	ALD12017F, ALD12017H, ALD12017M, ALD12017N, ALD12017S, ALD12017V		N/A	N/A	N/A
FCAN06025	SRLBC0546	SRSRTR0530	N/A	SSG12-00003	ALD12017F, ALD12017H, ALD12017M, ALD12017N, ALD12017S, ALD12017V		N/A	N/A	N/A
SD00005610	SRLBC0449	SRSRTR0478	N/A	SSG12-00003	ALD12017F, ALD12017H, ALD12017M, ALD12017N, ALD12017S, ALD12017V		N/A	N/A	N/A

Signature of Site Project Manager

Richard Kantrowitz
Printed Name

12/17/2012
Date

CTS003

CCP Solids Analysis VOC UCL_{90} Evaluation Form

WSPF #: SR-SDD-HOM-B **Solids Summary Waste Stream Lot Number** 1 through 1

ANALYTE	Transform Data Used (No, Data-Log, SQRT, other)	# Samples above MDL (1)	# Samples	Maximum (mg/kg)	Mean (mg/kg)	SD (mg/kg)	UCL_{90} (mg/kg)	PRQL (mg/kg)	Transformed PRQL (N/A or Value)	UCL_{90} > PRQL Yes	EPA HWN
Benzene	Log	0	5	-1.6607	-1.7267	0.0420	-1.6979	10	2.30		
Bromoform	Log	0	5	-1.6607	-1.7267	0.0420	-1.6979	10	2.30		
Carbon Disulfide	Log	0	5	-1.6607	-1.7267	0.0420	-1.6979	10	2.30		
Carbon Tetrachloride	Log	0	5	-1.6607	-1.7267	0.0420	-1.6979	10	2.30		
Chlorobenzene	Log	0	5	-2.3539	-2.4200	0.0467	-2.3880	10	2.30		
Chloroform	Log	0	5	-1.6607	-1.7267	0.0420	-1.6979	10	2.30		
1,1-Dichloroethylene	Log	0	5	-1.6607	-1.7267	0.0420	-1.6979	10	2.30		
1,2-Dichloroethane	Log	0	5	-1.6607	-1.7267	0.0420	-1.6979	10	2.30		
Ethylbenzene	Log	0	5	-1.6607	-1.7267	0.0420	-1.6979	10	2.30		
Methylene Chloride	Log	0	5	-1.2553	-1.3176	0.0446	-1.2870	10	2.30		
m,p-Xylene[a]	Log	0	5	-1.6607	-1.7267	0.0420	-1.6979	10	2.30		
o-Xylene	Log	0	5	-2.3539	-2.4200	0.0467	-2.3880	10	2.30		
1,1,2,2-Tetrachloroethane	Log	0	5	-1.6607	-1.7267	0.0420	-1.6979	10	2.30		
Tetrachloroethylene	Log	0	5	-2.3539	-2.4200	0.0467	-2.3880	10	2.30		
Toluene	SQRT	4	5	2.4495	1.3665	0.8005	1.9154	10	3.16		
Trans-1,2-Dichloroethylene	Log	0	5	-1.6607	-1.7267	0.0420	-1.6979	10	2.30		
1,1,1-Trichloroethane	Log	0	5	-1.6607	-1.7267	0.0420	-1.6979	10	2.30		
Trichloroethylene	Log	0	5	-1.6607	-1.7267	0.0420	-1.6979	10	2.30		
1,1,2-Trichloro-1,2,2-trifluoroethane	Log	0	5	-1.6607	-1.7267	0.0420	-1.6979	10	2.30		
1,1,2-Trichloroethane	Log	0	5	-1.6607	-1.7267	0.0420	-1.6979	10	2.30		
Trichlorofluoromethane	Log	0	5	-1.2553	-1.3214	0.0465	-1.2895	10	2.30		
Vinyl Chloride	Log	0	5	-1.6607	-1.7267	0.0420	-1.6979	4	1.39		
Acetone	Log	0	5[(2)]	1.5041	0.9712	0.4228	1.3174	100	4.61		
Butanol	Log	0	5[(2)]	1.5041	0.9712	0.4228	1.3174	100	4.61		
Methanol	Log	0	5[(2)]	1.5041	0.9712	0.4228	1.3174	100	4.61		
Methyl ethyl ketone	Log	0	5[(2)]	1.5041	0.9712	0.4228	1.3174	100	4.61		
Ethyl ether	Log	0	5[(2)]	2.1972	1.6647	0.4304	2.0172	100	4.61		
Isobutanol	Log	0	5[(2)]	1.5041	0.9712	0.4228	1.3174	100	4.61		

CT5004

CCP Solids Analysis VOC UCL_{90} Evaluation Form

WSPF #: SR-SDD-HOM-B **Solids Summary Waste Stream Lot Number** 1 through 1

ANALYTE	Transform Data Used (No, Data-Log, SQRT, other)	# Samples above MDL (1)	# Samples	Maximum (mg/kg)	Mean (mg/kg)	SD (mg/kg)	UCL_{90} (mg/kg)	PRQL (mg/kg)	Transformed PRQL (N/A or Value)	UCL_{90} > PRQL Yes	EPA HWN
Pyridine	Log	0	5[(2)]	1.5041	0.9712	0.4228	1.3174	100	4.61		
Formaldehyde	No	0	5	1.0500	1.0000	0.0354	1.0242	100	N/A		
Hydrazine	Log	0	5	1.4110	0.9600	0.4009	1.2349	100	4.61		

[a] These xylene isomers cannot be resolved by the analytical methods employed in the program. m-Xylene and p-Xylene will be reported as "Total m-p-Xylene."

Comments:

(1) For analytes where there were no samples measured above the MDL value, 1/2 of the MDL value was used. (Per section C4 of the WAP, 1/2 of the MDL value is used in calculating the mean concentration.)

(2) As a result of dilution requirements for 1 of the 5 samples, Acetone, Butanol, Methanol, Methyl ethyl ketone, Ethyl ether, Isobutanol and Pyridine were reported as non-detected with an MDL value in excess of the PRQL. In accordance with the Waste Analysis Plan, Section C4-3e such observations with elevated MDL values due to dilution were not used in calculating the mean concentration. Consequently, the subject analytes were statistically evaluated with 4, rather than 5, usable observations.

Signature of Site Project Manager

Richard Kantrowitz
Printed Name

12/17/2012
Date

CTS005

CCP Solids Analysis SVOC UCL_{90} Evaluation Form

WSPF #: SR-SDD-HOM-B **Solids Summary Waste Stream Lot Number** 1 through 1

ANALYTE	Transform Data Used (No, Data-Log, SQRT, other)	# Samples above MDL (1)	# Samples	Maximum (mg/kg)	Mean (mg/kg)	SD (mg/kg)	UCL90 (mg/kg)	PRQL (mg/kg)	Transformed PRQL	UCL_{90} > PRQL Yes	EPA HWN
1,2-Dichlorobenzene	No	0	5(3)	0.2000	0.2000	0.0000	0.2000	40	N/A		
1,4-Dichlorobenzene	No	0	5(3)	0.2000	0.2000	0.0000	0.2000	40	N/A		
2,4-Dinitrophenol	No	0	5(2)	20.0000	14.7750	9.7947	22.7956	40	N/A		
2,4-Dinitrotoluene	No	0	5(3)	0.1000	0.1000	0.0000	0.1000	2.6	N/A		
Hexachlorobenzene	No	0	5(3)	0.1000	0.1000	0.0000	0.1000	2.6	N/A		
Hexachloroethane	No	0	5(3)	0.2000	0.2000	0.0000	0.2000	40	N/A		
2-Methylphenol (cresol)	No	0	5(2)	20.0000	14.7750	9.7947	22.7956	40	N/A		
3&4-Methylphenol (cresol)	No	0	5(2)	20.0000	14.7750	9.7947	22.7956	40	N/A		
Nitrobenzene	No	0	5(3)	0.2000	0.2000	0.0000	0.2000	40	N/A		
Pentachlorophenol	No	0	5(2)	20.0000	14.7750	9.7947	22.7956	40	N/A		

Comments:

(1) For analytes where there were no samples measured above the MDL value, 1/2 of the MDL value was used. (Per C4 of the WAP, 1/2 of the MDL value is used in calculating the mean concentration.)

(2) As a result of dilution requirements, 1 sample for 2,4-Dinitrophenol, 2-Methylphenol, 3&4-Methylphenol, and Pentachlorophenol were reported as non-detected with an MDL value in excess of the PRQL. In accordance with the Waste Analysis Plan, Section C4-3e such observations with elevated MDL values due to dilution were not used in calculating the mean concentration. Consequently, the subject analytes were statistically evaluated with 4, rather than 5, usable observations

(3) As a result of dilution requirements, 4 of 5 samples for 1,2-Dichlorobenzene, 1,4-Dichlorobenzene, 2,4-Dinitrotoluene, Hexachlorobenzene, Hexachloroethane, and Nitrobenzene were reported as non-detected with an MDL value in excess of the PRQL. In accordance with the Waste Analysis Plan, Section C4-3e such observations with elevated MDL values due to dilution were not used in calculating the mean concentration. Consequently, the subject analytes were statistically evaluated with 1, rather than 5, usable observations

Signature of Site Project Manager

Richard Kantrowitz
Printed Name

12/17/2012
Date

CCP Solids Analysis Metals UCL_{90} Evaluation Form

WSPF #: SR-SDD-HOM-B **Solids Summary Waste Stream Lot Number** 1 through 1

ANALYTE	Transform Data Used (No, Data-Log, SQRT, other)	# Samples above MDL (1)	# Samples	Maximum (mg/kg)	Mean (mg/kg)	SD (mg/kg)	UCL90 (mg/kg)	PRQL (mg/kg)	Transformed PRQL	UCL_{90} > PRQL Yes	EPA HWN
Antimony	SQRT	2	5	2.65	1.19	0.99	1.87	100	10.00		
Arsenic	SQRT	1	5	1.18	0.83	0.23	0.99	100	10.00		
Barium	Log	5	5	3.78	2.96	0.49	3.30	2000	7.60		
Beryllium	No	3	5	0.58	0.29	0.22	0.43	100	n/a		
Cadmium	No	5	5	1.10	0.69	0.39	0.96	20	n/a		
Chromium	SQRT	5	5	84.85	47.12	27.22	65.78	100	10.00	Yes	D007
Lead	Log	5	5	3.47	2.50	0.86	3.09	100	4.61		
Mercury	SQRT	5	5	22.80	15.20	5.70	19.11	4	2.00	Yes	D009
Nickel	SQRT	5	5	62.45	34.39	20.11	48.18	100	10.00	Yes	(2)
Selenium	Log	1	5	1.31	-0.29	0.90	0.32	20	3.00		
Silver	SQRT	5	5	7.55	4.59	2.64	6.40	100	10.00		
Thallium	No	0	5	0.60	0.36	0.13	0.45	100	n/a		
Vanadium	No	5	5	33.00	23.00	8.28	28.67	100	n/a		
Zinc	Log	5	5	5.44	4.69	0.58	5.09	100	4.61	Yes	(2)

Comments:

(1) For analytes where there were no samples measured above the MDL value, 1/2 of the MDL value was used. (Per section C4 of the WAP, 1/2 of the MDL value is used in calculating the mean concentration.)

(2) Nickel and Zinc are not characteristic under 40 CFR 261.24.

Signature of Site Project Manager

Richard Kantrowitz
Printed Name

12/17/2012
Date

CTSOP Page 10 of 33

CCP Solid VOCs Summary Data

Waste Stream Number: SR-SDD-HOM-B

Solids Summary Waste Stream Lot Number: 1 through 1

Tentatively Identified Compound	Maximum Observed Estimated Concentrations (ppmv)	# Samples Containing TIC	% Detected
None	N/A	N/A	N/A

Data Supports EPA Hazardous Waste Numbers Assigned by AK? Yes ☑ No ☐

If no, describe the basis for assigning the EPA Hazardous Waste Codes:

SPM Signature _____ Date 12/17/2012

CIS008

CCP Solid SVOCs Summary Data

Waste Stream Number: SR-SDD-HOM-B

Solids Summary Waste Stream Lot Number: 1 through 1

Tentatively Identified Compound	Maximum Observed Estimated Concentrations (ppmv)	# Samples Containing TIC	% Detected
Phenol	4.40	1	20.00%
bis(2-Ethyl-hexyl) phthalate	110.00	1	20.00%

Note: N/A

Data Supports EPA Hazardous Waste Numbers Assigned by AK? Yes ☑ No ☐

If no, describe the basis for assigning the EPA Hazardous Waste Codes:

SPM Signature [signature] Date 12/17/2012

CIS009

CCP RTR/VE Summary of Prohibited Items and AK Confirmation

Waste Stream Number: SR-SDD-HOM-B Lot #: 1

Container Number	RTR Prohibited Items [a,b]	Visual Examination Prohibited Items [a,b]
See correlation of container ID numbers for list of remaining drum numbers in this Lot.	None of the containers in this lot had prohibited items identified during RTR.	None of the containers in this Lot had prohibited items identified during Visual Examination technique.

a. See Batch Data Reports
b. If AK has assigned U134 to this waste stream, then any liquids in these containers are prohibited items (not acceptable by the TSDF).

Justification for the selection of RTR and/or VE: RTR was selected as the characterization method because waste was previously packaged and RTR meets all the Data Quality Objectives for NDE for the waste. VE was selected as the characterization method for one drum because the drum contained a large amount of liquids and VE was performed during the liquid remediation.

Site Project Manager Signature	Richard Kantrowitz	12/17/2012
	Printed Name	Date

CTS010

CCP Reconciliation with Data Quality Objectives

WSPF# SR-SDD-HOM-B Lot # 1

Sampling Completeness

RTR/VE

Number of Valid Samples: 5 Number of Total Samples Analyzed: 5
Percent Complete: 100 (QAO is 100%)

NDA

Number of Valid Samples: 5 Number of Total Samples Analyzed: 5
Percent Complete: 100 (QAO is 100%)

HSG

Number of Valid Samples: NA Number of Total Samples Collected: NA
Percent Complete: NA (QAO is ≥90%)
Number of Valid Samples: NA Number of Total Samples Analyzed: NA
Percent Complete: NA (QAO is ≥90%)

Total VOC

Number of Valid Samples: 5 Number of Total Samples Collected: 5
Percent Complete: 100 (QAO is ≥90%)
Number of Valid Samples: 5 Number of Total Samples Analyzed: 5
Percent Complete: 100 (QAO is ≥90%)

Total SVOC

Number of Valid Samples: 5 Number of Total Samples Collected: 5
Percent Complete: 100 (QAO is ≥90%)
Number of Valid Samples: 5 Number of Total Samples Analyzed: 5
Percent Complete: 100 (QAO is ≥90%)

Total Metals

Number of Valid Samples: 5 Number of Total Samples Collected: 5
Percent Complete: 100 (QAO is ≥90%)
Number of Valid Samples: 5 Number of Total Samples Analyzed: 5
Percent Complete: 100 (QAO is ≥90%)

CIS011

CCP Reconciliation with Data Quality Objectives

WSPF# SR-SDD-HOM-B Lot # 1

	Y/N/NA	Reconciliation Parameter
1	Y	Waste Matrix Code.
2	Y	Waste Material Parameter Weights.
3	Y	The waste matrix code identified is consistent with the type of sampling and analysis used to characterize the waste.
4	Y	The TRU activity reported in the BDRs for each container demonstrates with a 95% probability that the container of waste contains TRU radioactive waste.
5	N	AK Sufficiency. Is there an approved AK sufficiency Determination for this waste stream?
6	NA	Mean concentrations, UCL_{90} values for the mean concentration, standard deviations, and the number of samples collected for each VOC in the HSG of each container were calculated and compared with the program required quantitation limits, as reported in CCP-TP-003 Attachment 3, and additional U.S. Environmental Protection Agency (EPA) Hazardous Waste Numbers were assigned as required. Samples were randomly collected (when appropriate).
7a	Y	Mean concentrations, UCL_{90} values for the mean concentration, standard deviations, and the number of samples collected for solids VOCs were calculated and compared with the program required quantitation limits and regulatory thresholds, as reported in the Characterization Information Summary, CCP-TP-003 Attachment 4, and additional EPA HWNs were assigned as required. Samples were randomly collected.
7b	Y	Mean concentrations, (UCL_{90}) values for the mean concentration, standard deviations, and the number of samples collected for solids SVOCs were calculated and compared with the program required quantitation limits and regulatory thresholds, as reported in the Characterization Information Summary, CCP-TP-003 Attachment 5, and additional EPA HWNs were assigned as required. Samples were randomly collected.
7c	Y	Mean concentrations, (UCL_{90}) values for the mean concentration, standard deviations, and the number of samples collected for total metals were calculated and compared with the program required quantitation limits and regulatory thresholds, as reported in the Characterization Information Summary, CCP-TP-003 Attachment 6, and additional EPA HWNs were assigned as required. Samples were randomly collected.

CIS012

CCP Reconciliation with Data Quality Objectives

WSPF# SR-SDD-HOM-B Lot # 1

8	Y	The data demonstrates whether the waste stream exhibits a toxicity characteristic under Title 40 Code of Federal Regulations (CFR), Part 261, Identification and Listing of Hazardous Waste, Subpart C, Characteristics of Hazardous Waste.
9	N	Does the waste stream contain listed waste found in 20.4.1.200 NMAC incorporating 40 CFR Part 261, Subpart D, Lists of Hazardous Wastes.
10	Y	Waste stream can be classified as hazardous or nonhazardous at the 90-percent confidence level.
11	NA	Appropriate packaging configuration and Drum Age Criteria (DAC) is applied and documented in the headspace gas sampling documentation, and the drum age met prior to sampling.
12	Y	TICs were appropriately identified and reported in accordance with the requirements of Section C3-1 of the QAPjP.
13	NA	The PRQLs for headspace gas VOCs were met for all analyses as evidenced by the analytical batch data reports.
14		The overall completeness, comparability, and representativeness QAOs were met for each of the analytical and testing procedures as specified in the WAP Sections C3-2 through C3-9 prior to submittal of a waste stream profile form for a waste steam or waste stream lot.

	Completeness	Comparability	Representativeness
Radiography	Y	Y	Y
VE	Y	Y	Y
Headspace Gas Analysis	NA	NA	NA
Solids Sampling	Y	Y	Y
Solids VOCs	Y	Y	Y
Solids SVOCs	Y	Y	Y
Solids Metals	Y	Y	Y

Comments:

None

Signature of Site Project Manager

Richard Kantrowitz
Printed Name

12/17/2012
Date

CTS013

Summation of Aspects of AK Summary Report: Waste Stream SR-SDD-HOM-B

Overview

Waste stream SR-SDD-HOM-B consists of contact handled (CH) transuranic (TRU) mixed homogeneous solid waste generated and managed by the Savannah River Site (SRS). This waste stream is comprised primarily of absorbed inorganic homogeneous sludge removed during cleanout of Tank 804, the Recycle Sump, and Tanker 3034 in the Building 211-F manufacturing process/product system also referred to as the Building 211-F tank system. The mission of F-Canyon and its supporting facilities (i.e., the Building 211-F tank system) was in direct support of the SRS core mission of producing nuclear materials for national defense and peacetime applications. Tank 804 received material from Tanks C and D in Building 772-F, also known as the F/H Area Laboratory. Building 772-F provides analytical support primarily for 200-F and 200-H separations processes. The Recycle Sump received material from various sources, including the Tank 502, Tank 503, Tank 511, Acid Recovery Unit (ARU) (and its operating tanks), General Purpose (GP) Evaporator Feed Tanks, GP Evaporators, and GP Storage Tanks in Building 211-F. Tanker 3034 received material from the Recycle Sump.

Building 211-F provides general support including defense nuclear materials production and nuclear waste and materials by-products management (i.e., recovery and treatment of radioactive liquid) for the F-Area operations, principally the F-Canyon. Therefore, this waste stream is defense related waste.

This summation of the Acceptable Knowledge (AK) Summary Report includes information to support Waste Stream Profile Form (WSPF) number SR-SDD-HOM-B for inorganic sludge waste generated at SRS. The primary source of information for this Summation is CCP-AK-SRS-13, *Central Characterization Project Acceptable Knowledge Summary Report For Savannah River Site, Site Deactivation and Decommissioning Waste, Waste Streams: SR-SDD-HOM-A, SR-SDD-HOM-B, SR-SDD-HET-A,* Revision 1, February 23, 2012.

Waste Stream Identification Summary

Wastes Stream Name:	Site Deactivation and Decommissioning Absorbed Inorganic Sludge
Waste Stream Number:	SR-SDD-HOM-B
Dates of Waste Generation:	June-July 2006 and May 2008
Waste Stream Volume – Current:	64 55-gallon drums and 6 standard waste boxes (SWBs)
Waste Stream Volume – Projected:	None expected
Summary Category Group:	S3000
Waste Matrix Code Group:	Solidified Inorganics
Waste Matrix Code:	S3120, Inorganic Sludges
TRUPACT-II Content Codes:	SR 127/SR 227

Annual Transuranic Waste Inventory
Report Identification Number: SR-SDD-HOM-B

Waste Stream Description and Physical Form

Waste stream SR-SDD-HOM-B is comprised primarily of inorganic sludge, absorbed liquids, and absorbent. In addition to sludge and liquid absorbed with kitty litter (clay), SP-400 (metal alkyl aryl sulfonate, oxygenated hydrocarbon, petroleum distillate), Celite (diatomaceous earth), and Portland cement (tricalcium silicate, dicalcium silicate, tricalcium aluminate, tetracalcium aluminoferrite, calcium sulfate dehydrate); mopheads, grey pads, brown dividers, metal screens, and metal scoops will be present. Plastic bags, plastic liners, tape, metal collections containers, drums, lids, and rings will be present as internal packaging.

The waste stream meets the definition of waste materials that have common physical form, that contain similar hazardous constituents, and that are generated from a single process or activity. This waste stream was generated from the removal of tank sludge from Tank 804 in the 800-series underground tank facility, the Recycle Sump, and Tanker 3034 during site deactivation and decommissioning.

Point of Generation

Location

Waste stream SR-SDD-HOM-B was generated at SRS in Aiken, South Carolina. The waste is currently stored at the SRS E-Area TRU waste storage pads.

Area and/or Buildings of Generation

Waste stream SR-SDD-HOM-B was generated in Tank 804, the Recycle Sump, and Tanker 3034 in Building 211-F located at F-Area.

Generating Processes

Description of Waste Generation Processes

Building 211-F provides general support, principally to the processing of irradiated fuels and targets in the F-Canyon. The term "outside facilities" is used to describe a wide variety of processes, utilities, and services that are ancillary to the primary F-Area operations. The below sections describe the contributing operations (i.e., upstream facilities), the Building 211-F complex/tank system, and the tank sludge removal/solidification process conducted during the period of TRU waste generation (References D012, D039, D041).

Based on the material flow in Building 211-F and the F-Canyon there was frequent commingling of liquid throughout the Building 211-F tank system. The liquid flow provided a route for liquid from Tank 804, which was sent to the F-Canyon for evaporation in the laboratory evaporator, to be routed through GP Tanks 802 and 812 on its way from the F-Canyon to the GP Evaporators. In addition, the liquid from Tank 804, as well as any other liquid processed through Tanks 501, 802, and 812, could have been routed to the Recycle Sump and Tanker 3034 since the Recycle Sump was fed by the GP Evaporator, GP Evaporator Feed Tanks, the GP Storage Tanks, the Acid Recovery Unit and its associated tanks, and the Water Handling Facility, which included Tank 501. Tanker 3034 received material from the Recycle Sump. Any liquid in the Recycle

Sump would have been discharged back to the GP Storage Tanks to be fed to the GP Evaporator (References D012, D039, D041, D072).

Building 211-F Facilities

The Building 211-F includes material (e.g., radioactive water) handling facilities. Water handling facilities receive and store water from steam condensates (i.e., overheads), acid recovery reboilers, general purpose evaporator heaters, and collection tanks from the cold feed preparation area and deionized water from the power house for use as process water. The facilities are used to prepare acidified water for the F-Canyon and to retain contaminated water in hold tanks pending analysis and disposal or re-evaporation if necessary. Two skimmer tanks separate solvent/organics and discharge the skimmed solvent to a hold tank. Skimmers receive feed from various locations including the F-Canyon evaporators and outside facilities (References D012, D039, D041).

Skimmer Tank 501 processes material that is expected to exceed limits set for discharge to seepage basins. Feed for this skimmer tank is normally received from either the F-Canyon rerun evaporator overheads or the collection tank in the old cold feed preparation area. The aqueous phase flows by gravity to Tank 503, while skimmed solvent flows to Hold Tank 511. The aqueous phase is analyzed for radioactivity. If the radioactivity is above the limits for the seepage basins, it is sent to the GP evaporator for further processing (References D012, D039, D041).

ARU

The ARU is used to concentrate nitric acid overheads for reuse. The dilute acid results from acidic evaporation of various process solutions in the F-canyon. If the gamma activity of the high-activity overheads exceeds processing specification, the condensate is returned from the transfer tank to the F-Canyon for reprocessing. If the condensate is acceptable, the dilute acid is transferred to the Preheater, reduced–pressure fractionating column, and cooler to recovered acid tanks. Overheads are condensed and are passed through an overhead cooler to overhead hold tanks. Condenser and other cooling water are provided by the recirculating cooling water system. Part of the overhead condensate is returned to the column as reflux. Concentration of the recovered acid is adjusted to 50 percent by adding concentrated acid or water as required. The adjusted acid is pumped to the Acid Storage Tank for transfer to the F-Canyon as required. Recovered acid that does not meet process specifications may be reprocessed. Overhead dilute acid condensate and steam jet condensate collected in hold tanks are normally used as dilution and stripping water for high-activity material, low-activity material, and the acid stripping evaporators. A large fraction of the overheads is used as dilute acid or dilution water in the makeup of acid solutions and recycled to the process. Excess overheads are transferred to the seepage basins (References D039, D041).

GP Evaporators

GP evaporators concentrate aqueous material with activity in excess of disposal limits yet low enough to be evaporated in unshielded equipment. Two evaporators are provided to accommodate the volume of material in F-Area. The GP evaporators are operated as flash evaporators with forced bottoms circulation. Evaporator bottoms are concentrated and retained for analysis before discharge to the tank farm (References D039, D041).

Feed is received and neutralized in Tanks 701-1F and -2F. Both GP evaporators can be fed from either tank, one of which is filled while the other provides feed. These tanks are filled from GP Storage Tanks 802, 803, 812, and 813. Adjusted feed at pH > 8 is continuously pumped through Preheater 802 into Evaporator 703, where it flashes into vapor and bottoms. Bottoms are continuously circulated by the same pump through the superheater and back into the evaporator until the desired specific gravity is reached (References D039, D041).

Overhead condensates are received from Condensers 704 through Reflux Weirs 705. The condensates flow by gravity to Condensate Hold Tanks 706 and 707. The hold tanks are filled in succession and analyzed when full. Normally, the activity content is low enough to permit discharge to the seepage basins. If it is above permissible discharge limits, it is returned to the GP evaporator feed tank (References D039, D041).

GP Storage and Chemical Makeup Tanks

The tanks in this facility are used to collect GP evaporator feed, for preparing and dispensing dilute concentrations of nitric acid, and to receive and dispense evaporator overheads for further processing. The tanks receive a variety of low-activity aqueous materials from the F-Canyon, FA-line, and Building 211-F complex that do not exceed the specifications for feed to the GP evaporators (References D039, D041).

Truck Shed

The Truck Shed's primary use has been the receipt and unloading of both high-activity and low-activity radiological/chemical laboratory returns from the Savannah River National Laboratory (SRNL), which are sent to the 800-series underground tank facility. Located at the north end of the Building 211-F outside facilities, it houses two tank trailer stalls (one each for high-activity and low-activity laboratory returns); two sumps (one per trailer bay); a steel access platform between the two bays; electrical systems/components; instrumentation; gang valves; and piping to perform unloading, loading, and transfer operations. Beneath the building slab, there are two concrete pipe chases (Reference D039, D041, D042, D072).

800-Series Underground Tank Facility

The 800-series underground tank facility is a vault that consists of five below ground tanks (Tanks 800, 801, 804, 808, and 809) located in an underground concrete secondary containment cell at Building 211-F. There are two sumps, the Unloading Bay Sump and the Cell Sump, associated with the 800-series underground tank facility. The vault and its sumps are considered chemically and radiologically contaminated due to the type of material that was processed through them. The 800-series underground tank facility includes five tanks and their primary functions are described below (References D039, D041, D042, D046, D072, M030):

- Tank 800 received low-activity laboratory returns from the SRNL, via tanker truck.
- Tank 801 received low-activity laboratory returns from Building 772-F (Tanks A and B) via underground transfer line. Additionally, Tank 801 received drainage from the 211-3F Truck Shed sumps.
- Tank 804 received high-activity laboratory returns from Building 772-F (Tanks C and D) via underground transfer line.

- Tank 808 received high-activity laboratory returns from the SRNL via tanker truck and acid washes from Tank 905 located in Building 221-F.

- Tank 809 received batch transfer of aqueous material from the other 800-series underground tanks. Material was transferred from Tank 809 to Tank 17.2 located in Building 221-F.

Cold or very low-activity materials are transferred to the seepage basins by way of the 800-series tanks. Low-activity materials are sent to the GP evaporators for concentration. High-activity materials are pumped to the laboratory evaporator feed tank in the F-Canyon (References D039, D041, D042, D046, D072, M030).

Segregated Solvent Facilities

Segregated solvent facilities provide purification and storage of solvent before it is returned to the F-Canyon for reuse or sent to the burial ground for disposal. There are two plutonium-uranium extraction solvent feed streams associated with the segregated solvent facilities. One stream is purified entirely in the Building 211-F complex. The other stream is initially purified within the F-Canyon before final purification in the segregated solvent facilities. In the segregated solvent facilities, streams are purified by washing in solutions of sodium carbonate and nitric acid. Degraded solvent is transferred to the rerun station in the F-Canyon for decontamination, load out, and transfer to the underground storage tanks at the burial ground. Washer tanks are supplied with cooling water for temperature control. Solvent overflow lines are connected between the wash and hold tanks. Segregated solvent facilities also include floor drains, floor sumps, a decanter, and decant sumps (References D039, D041).

Acid washes are removed from Tanks by decanting the aqueous phase from the bottom of the tank to the decant sump. Decant sump material is transferred to the GP evaporator feed tanks. Carbonate wash solutions are removed by pumping the aqueous phase from the bottom of the tank through a decanter. Entrained solvent is separated from the aqueous phase and drained from the decanter back to a tank. The carbonate solution is pumped either to the laboratory evaporator feed tank in the F-Canyon or a GP evaporator feed tank (References D039, D041).

Recycle Sump

The recycle sump is a shielded, stainless steel lined, underground concrete sump. The sump, received the chemical, solvent, and radioactive drains and overflows from various sources. The sources included the Discard Water Tank 503, Aluminum Nitrate Tank 502, Skimmed Solvent Hold Tank 511, ARU (and its associated operating tanks, GP Evaporator Feed Tanks, GP Evaporators, and GP Storage Tanks in Building 211-F. A submerged sump pump discharged the recycle sump's drains through a filter back to the GP Storage Tanks. This material was then fed to the GP Evaporator for concentration (References D039, D041, and D072).

Tanker 3034

Tanker 3034 received aqueous material (approximately 3,500 gallons) from Building 211-F recycle sump (References C074, D070).

Tank Sludge Removal

The activity that generated this waste was the removal of tank sludge from Tank 804 in the 800-series underground tank facility, the Recycle Sump, and Tanker 3034. The 800-series underground tank facility is used for storage and transfer of high- and low-activity materials. Tank 804 received high-activity liquid from Tanks C and D in Building 772-F. Building 772-F provides analytical support primarily for 200-F and 200-H separations processes. The Recycle Sump received the chemical, solvent, and radioactive drains and overflows from various sources, including the Discard Water Tank 503, Aluminum Nitrate Tank 502, Skimmed Solvent Hold Tank 511, ARU and its operating tanks, GP Evaporator Feed Tanks, GP Evaporators, and GP Storage Tanks in Building 211-F. Tanker 3034 received aqueous material from the Recycle Sump.

After the removal of liquid, Tank 804 was systematically flushed during deactivation activities and received at least one full volume flush with four Molar nitric acid, followed by several water flushes. During sludge removal, sludge from Tank 804 was placed in collection containers (a galvanized pail) that contained a Celite-Portland mixture, bagged out with additional absorbent added, and then placed in a radiological bag that was closed with tape. Following assay, the waste packages were then placed into 55-gallon drums (References C110, D001, D068, M030, M038, M040, P140).

Sludge removal was performed in the Tank 804 cell within a containment hut. Sludge removal occurred through an access port at the top of the tank with a 46-inch port installed at the top to allow for the wrapping of buckets as they were removed. No flammable liquids or gasses were allowed in the Tank 804 cell during sludge removal. Scrubs in-a-Bucket, ABC Asbestos Biding Compound, and Krylon Living Color Latex Enamel, were among the items used during sludge removal and the subsequent cleaning of Tank 804 and the tools used to remove the sludge. Although not expected, this could contaminate the debris that is present in this waste (References D001, D068, M030, M038, M040, P140).

After liquid contained in the Recycle Sump was removed, removal of the sludge was done in two stages. The first stage involved adding a clay absorbent, commonly known as kitty litter, to the sludge in the sump. Approximately 2,000 pounds of kitty litter was added to the material in the sump. The sludge and absorbent were mixed with a rake. Sludge was then shoveled into plastic bags and triple bagged before being placed into drums. The second stage of the removal involved adding a different absorbent, SP-400, to the sludge. These drums were subsequently placed into SWBs because the drums initially used were not appropriate for TRU waste (Reference M033, M034).

After liquid was removed from Tanker 3034, Tanker 3034 was enclosed in a containment hut, and the front of Tanker 3034 was removed. Personnel entered the tanker and shoveled the sludge into a funnel that transferred the sludge from the tanker into 90-mil plastic liners inside 55-gallon drums. Absorbent (from 3 to 12 pounds per drum) was then added to the drums. The drums were filled to approximately 60 percent of capacity. Job control waste was not packaged with the sludge removed from Tanker 3034 (References C075, M031, M032, M038, M047, M048).

Waste Stream Material and Chemical Inputs

The following table identifies the Resource Conservation and Recovery Act (RCRA) toxicity characteristic constituents identified in this waste stream.

Toxicity Characteristic Constituents in Waste Stream SR-SDD-HOM-B

Chemical	EPA HWNs	Use/Source	References
Arsenic	D004	Contaminant detected in sludge samples	C008, C073, C075, C077, C097, D046, DR001, M011, M038, M040
Barium	D005	Contaminant detected in sludge samples	C008, C073, C075, C077, C097, D046, DR001, M011, M038, M040
Cadmium	D006	Contaminant detected in sludge samples	C008, C073, C075, C077, C097, D046, DR001, M011, M038, M040
Chromium	D007	Contaminant detected in sludge samples	C008, C073, C075, C077, C097, D046, DR001, M011, M038, M040
Lead	D008	Contaminant detected in sludge samples	C008, C073, C075, C077, C097, D046, DR001, M011, M038, M040
Mercury	D009	Contaminant detected in sludge samples	C008, C073, C075, C077, C097, D046, DR001, M011, M038, M040
Selenium	D010	Contaminant detected in sludge samples	C008, C073, C075, C077, C097, D046, DR001, M011, M038, M040
Silver	D011	Contaminant detected in sludge samples	C008, C073, C075, C077, C097, D046, DR001, M011, M038, M040

RCRA Determinations

Historical Waste Management

The subject waste has historically been managed in accordance with the generator site requirements and in compliance with the requirements of the South Carolina Department of Health and Environmental Control (SCDHEC). Based on historical waste management practices, the SRS managed this waste as hazardous and assigned Environmental Protection Agency (EPA) hazardous waste numbers (HWNs) D005, D006, D007, D008, D009, D010, and D011. A review of available AK has determined the waste is hazardous; however, HWN D004 was also assigned for the presence of arsenic detected in sludge samples (References C008, C073, C075, C077, C097, D046, DR001, M011, M038, M040).

Hazardous Waste Determinations

Ignitability, Corrosivity, Reactivity

Ignitability

Waste stream SR-SDD-HOM-B does not meet the definition of ignitability as defined in 40 Code of Federal Regulations (CFR) 261.21. The material is not a liquid, an ignitable compressed gas, or an oxidizer, and is not capable of causing fire through friction, absorption of moisture, or spontaneous chemical change.

Based on analysis, the sludge from Tank 804 is predominantly inorganic but does contain almost 10 percent organics, primarily tributylphosphate and normal paraffinic hydrocarbons (tridecane, tetradecane, pentadecane, and hexadecane). These compounds are not ignitable. In addition, the liquid in Tank 804 is not ignitable based on flash point analysis. Based on analysis of Tanker 3034 sludge, the sludge removed from the Recycle Sump and Tanker 3034

contains less than 5 percent organics, primarily tributylphosphate and Bis (2-ethylhexyl) phthalate. Although ignitable volatile organic compounds were detected in sludge samples (e.g., benzene, methyl ethyl ketone), they were detected in trace amounts (References M011, M038).

The materials are not a compressed gas, nor does the waste contain compressed gases. The SRS Waste Acceptance Criteria (WAC) and procedures prohibited the inclusion of compressed gases in TRU waste to be shipped to E-Area TRU Pads. Container paperwork did not identify compressed gases in any container in waste stream SR-SDD-HOM-B (References D063, D064, M038, P136).

Oxidizers, if present, would not be present in their pure form and would only be present as trace contaminants. Ignitable liquids were used in the facilities that discharged material to Tank 804, the Recycle Sump, and Tanker 3034, and some examples include acetone, methyl alcohol, toluene, and xylene. According to procedure, absorbent was added to internal packaging and drums during sludge removal. The SRS WAC required TRU-contaminated liquid waste be absorbed and solidified prior to transfer to E Area TRU Pads. Real-time radiography (RTR) and/or visual examination (VE) will be performed to ensure that the waste contains no ignitable waste by documenting the absence of liquids in excess of Treatment Storage and Disposal Facility (TSDF)-WAC limits. The materials in this waste stream are, therefore, not ignitable D001 wastes (References C005, C022, D063, D064, D067, D068, D070, M033, M034, M038, M040, P136, P140).

Corrosivity

Waste stream SR-SDD-HOM-B is a not liquid and does not contain unreacted corrosive chemicals; therefore, it does not meet the definition of corrosivity as defined in 40 CFR 261.22.

Based on analysis, the sludge from Tank 804 is predominantly inorganic but does contain almost 10 percent organics, primarily tributylphosphate and normal paraffinic hydrocarbons (tridecane, tetradecane, pentadecane, and hexadecane). Based on analysis of Tanker 3034 sludge, the sludge removed from the Recycle Sump and Tanker 3034 contains less than 5 percent organics, primarily tributylphosphate and Bis (2-ethylhexyl) phthalate. These compounds are not corrosive. The pH of the liquid in Tank 804 was measured at two which is corrosive. However, the sludge does not meet the definition of corrosivity because the addition of Celite and Portland cement neutralizes and absorbs any liquid present (Reference C110, M011, M038).

Corrosive liquids were used in the facilities that discharged material to Tank 804 and some examples include nitric acid and hydrofluoric acid, however, liquids are not present in the waste. According to procedure absorbent was added to internal packaging and drums. The SRS WAC required TRU-contaminated liquid waste be absorbed and solidified prior to transfer to E-Area TRU Pads. RTR and/or VE are performed to ensure that the waste contains no corrosive waste by documenting the absence of liquids in excess of TSDF-WAC limits. The materials in this waste stream are, therefore, not corrosive D002 wastes (References C005, C022, D063, D064, D067, D068, M038, M040, P136, P140).

Reactivity

Waste stream SR-SDD-HOM-B does not meet the definition of reactivity as defined in 40 CFR 261.23. The materials are stable and will not undergo violent chemical change without

detonating. The materials will not react violently with water, form potentially explosive mixtures with water, or generate toxic gases, vapors, or fumes when mixed with water. The materials do not contain reactive cyanides or sulfides and are not capable of detonation or explosive reaction.

Based on analysis, the sludge from Tank 804 is predominantly inorganic but does contain almost 10 percent organics, primarily tributylphosphate and normal paraffinic hydrocarbons (tridecane, tetradecane, pentadecane, and hexadecane). Based on analysis of Tanker 3034 sludge, the sludge removed from the Recycle Sump and Tanker 3034 contains less than 5 percent organics, primarily tributylphosphate and Bis (2-ethylhexyl) phthalate. These compounds are not reactive (References M011, M038). In addition, SRS procedures prohibit the packaging of reactive materials in TRU waste (References D063, M040, P136). The materials in this waste stream are, therefore, not reactive D003 wastes (Reference DR001).

The containers in the waste stream will be evaluated in accordance with the WIPP-WAP using RTR and/or VE prior to shipment to ensure the waste is not ignitable, corrosive, or reactive.

Toxicity Characteristic

Based on review of AK relative to materials used during site deactivation and decommissioning and present in sludge samples from Tank 804 and Tanker 3034, waste stream SR-SDD-HOM-B is contaminated with toxicity characteristic metal compounds as defined in 40 CFR 261.24.

The 29-90s (container paperwork) for waste stream SR-SDD-HOM-B Tank 804-related containers list barium, cadmium, chromium, lead, mercury, selenium, and silver as being present in the waste. This is supported by analytical data from sampling of Tank 804 sludge that identified barium, cadmium, chromium, lead, mercury, selenium, and silver above the RCRA regulatory levels. The analytical data also identified the presence of arsenic below the RCRA regulatory level (References M011, M038, M040).

The 29-90s for Recycle Sump-related containers list barium, cadmium, chromium, lead, mercury, and silver as being present in the waste. The 29-90s for Tanker 3034-related containers list chromium and mercury as being present in the waste. SRS used the results from sampling and analysis conducted on Tanker 3034 sludge to assign HWNs to both Tanker 3034 sludge containers and the Recycle Sump sludge containers. The analytical results identified barium, cadmium, chromium, lead, mercury, and silver as present, but only chromium and mercury were above RCRA regulatory limits (References C075, C077, M038, M040).

SRS inconsistently assigned HWNs for toxicity characteristic metals identified as present but below the RCRA regulatory limit. For example, the analytical data for the Tanker 3034 sludge was used to assign chromium and mercury HWNs to the associated waste but the same data was used to assign barium, cadmium, chromium, lead, mercury, and silver HWNs to the Recycle Sump waste. Consequently, the HWNs for all toxicity characteristic metals identified in the sludge analytical results will be assigned to the waste stream. Therefore, D004 (arsenic), D005 (barium), D006 (cadmium), D007 (chromium), D008 (lead), D009 (mercury), D010 (selenium), and D011 (silver) are assigned to waste stream SR-SDD-HOM-B (References C008, C073, C075, C077, C097, D046, DR001, M011, M038, M040).

Based on a review of AK to materials present in sludge samples from Tank 804 and Tanker 3034, waste stream SR-SDD-HOM-B is not contaminated with toxicity characteristic organic

compounds as defined in 40 CFR 261.24. Toxicity characteristic organic compounds were not detected above regulatory levels (References DR001, M011, M038, M040).

Listed Waste

F-Listed Waste

Based on review of AK relative to materials used during site deactivation and decommissioning, waste stream SR-SDD-HOM-B does not contain or is not mixed with F-listed hazardous wastes from non-specific sources listed in 40 CFR 261.31.

Trace quantities (low parts per million [ppm] levels) of F001 (methylene chloride, tetrachloroethylene, trichloroethylene), F002 (methylene chloride, tetrachloroethylene, trichloroethylene, trichlorofluoromethane), F003 (xylene, ethyl benzene) and F005 (benzene, methyl ethyl ketone, toluene) listed constituents were identified in Tanker 3034 sludge samples (References C075, M038). However, SRS has provided clarification that the Building 211-F tank system is not a waste system. SRS has determined, with acceptance from the EPA and SCDHEC, that the Building 211-F tank system is a manufacturing process/product system. According to SRS, the waste generator, any materials including chemicals discharged to the drain and subsequently sent to the Building 211-F tank system would not be considered "discarded." In addition, F-listed solvents were not used or disposed of during the removal of tank sludge from Tank 804, the Recycle Sump, and Tanker 3034. The chemicals/materials used during site deactivation and decommissioning (e.g., Celite, Portland cement, ABC Asbestos Biding Compound) did not contain F-listed solvents. Finally, an evaluation performed by SRS determined that F-listed solvents are stored in approved hazardous waste storage facilities and are not sent to the Building 211-F tank system. Therefore, F-listed HWNs are not assigned to waste steam SR-SDD-HOM-B (References C155, C156, C157, D069, D073, DR001, M011, M038, M040, M046).

K-Listed Waste

Based on review of AK relative to materials used during site deactivation and decommissioning, waste stream SR-SDD-HOM-B does not contain hazardous waste from the specific sources in 40 CFR 261.32 and therefore is not a K-listed waste (Reference DR001).

P- and U-Listed Waste

Based on review of AK relative to materials used during site deactivation and decommissioning, waste stream SR-SDD-HOM-B does not contain or is not mixed with a discarded commercial chemical product, an off-specification commercial chemical product, or a container residue or spill residue thereof as defined in 40 CFR 261.33.

Liquids from various facilities feed into the Building 211-F tank system including Building 772-F, also referred to as the F/H Laboratory or the Central Laboratory Facility. Information exists that unused commercial chemical products from Building 772-F were discharged down the drain system that may have fed into Tank 804, which is part of the Building 211-F tank system (References C085, C086, D073). However, material is discharged down the drain system because it is assumed to contain special nuclear material. SRS has provided clarification that the Building 211-F tank system is not a waste system. SRS has determined, with acceptance from the EPA and SCDHEC, that the Building 211-F tank system is a manufacturing process/product system. According to SRS, the waste generator, any materials including

chemicals discharged to the drain and subsequently sent to the Building 211-F tank system would not be considered "discarded." Materials sent to Building 211-F tank system contain special nuclear material in concentrations that require removal and recovery. In the unlikely event that an unused chemical did not contain special nuclear material, SRS maintains that once it crosses into the Building 211-F tank system boundary (i.e., the manufacturing process/product system boundary) it becomes part of the raw materials used for processing; hence, it has been used and would not carry a listed P- or U-listed HWN (References C087, C155, C156, C157, DR001, M038, M040, M046).

Commercial chemical products (e.g., hydrofluoric acid, U134-waste) were not used or disposed of during the removal of tank sludge from Tank 804, the Recycle Sump, and Tanker 3034. The chemicals/materials used during site deactivation and decommissioning (e.g., Celite, Portland cement, ABC Asbestos Biding Compound) were used for their intended purpose. Beryllium was used in facilities that sent material to the Building 211-F tank system and trace quantities (ppm levels) were identified in the analytical data. However, unused beryllium powder (P015-waste) was not identified as being used during site deactivation and decommissioning. Therefore, P- and U-listed HWNs are not assigned to waste stream SR-SDD-HOM-B (References C155, C156, C157, DR001, M011, M038, M040, M046).

Polychlorinated Biphenyls (PCBs)

Waste stream SR-SDD-HOM-B consists predominately of sludge waste. No PCB containing equipment was packaged with the sludge or present during the packaging of the waste. Based on analysis conducted on organic solvents removed from the Recycle Sump that showed PCBs above the regulatory limit of 50 ppm, and a lack of analysis on the Recycle Sump sludge, SRS has managed waste containers generated in the Recycle Sump as PCB waste. Therefore, containers from the Recycle Sump in this waste stream are regulated as a Toxic Substances Control Act waste under 40 CFR 761 (References C075, C077, C120, C124, D068, M031, M038, M040, M049).

Prohibited Items

Prohibited items are not expected to be present in this waste stream. Procedures did not allow containers greater than 4 liters (sealed with tape) to be used for waste packaging. Procedures also did not allow liquids in excess of TSDF-WAC limits. All liquids present in the waste would have been absorbed. Procedures did not allow unpunctured aerosol cans, compressed gas cylinders, or explosives to be packaged in the waste. Container-specific data states that the waste consists of sludge, absorbed liquids, absorbent, plastic bags, drum liners, tape, drums, lids, drum rings, buffer pads, metal containers, metal scoops, metal screens, scrub pads, mopheads, metal screens, grey pads, and brown dividers. However, this waste stream includes sludge and solidified liquid waste and the presence of liquids due to dewatering is possible (References C007, D063, D064, D068, M031, M033, M034, M038, M040, M047, M048, M055, P136).

Certified RTR and/or VE are performed by CCP to ensure liquids do not exceed TSDF-WAC limits and to ensure the absence of ignitable compressed gases and explosives. Any container identified with liquids in excess of TSDF-WAC limits or having unpunctured aerosol cans, compressed gas cylinders, or explosives will be segregated from the waste stream and will not be eligible for disposal at WIPP until the prohibited materials are removed and/or remediated (References P146, P147, P148, P149).

Method for Determining Waste Material Parameter Weights per Unit of Waste

The waste material parameter weight estimates for waste stream SR-SDD-HOM-B were derived primarily from information provided by SRS personnel. Included in the container-specific data provided by SRS were weight percentages for waste material categories, including waste components (References M038, M040).

Container data provided by SRS indicated that the containers in waste stream SR-SDD-HOM-B included iron-based metals/alloys, cellulosics, plastics, plastic packaging, inorganic matrix, organic matrix, absorbed liquids, and steel packaging. To estimate the weight percent of the inorganic matrix waste material category, the weight percent provided on container paperwork for absorbed liquids and inorganic matrix were combined. Average, minimum, and maximum waste material parameter weight percentages were calculated and the results of this analysis are presented in the Waste Stream SR-SDD-HOM-B Waste Material Parameters table (References M038, M040).

Waste Stream SR-SDD-HOM-B Waste Material Parameters

Waste Material Parameter	Weight Percent	Weight Percent Range
Iron-Based Metals/Alloys	11.8%	0.0 – 29.8%
Aluminum-based Metals/Alloys	0.0%	0 – 0%
Other Metals	0.0%	0 – 0%
Other Inorganic Materials	0.0%	0 – 0%
Cellulosics	1.4%	0.0 – 8.3%
Plastics (waste materials)	2.7%	0.0 – 13.4%
Rubber	0.0%	0.0 – 0.0%
Organic Matrix	0.4%	0.0 – 3.5%
Inorganic Matrix	83.7%	54.8 –99.2%
Soils/Gravel	0.0%	0 – 0%

List of Any AK Sufficiency Determinations Requested for the Waste Stream

There are no AK sufficiency determination requests for this waste stream.

Transportation

This waste stream and its chemical constituents have been reviewed for consistency with listed TRUCON codes and they are consistent. Organic compounds categorized as Waste Type IV are less than five weight percent, and therefore, this waste stream does not require gas generation testing (Reference M011).

Beryllium

Beryllium will not be present in amounts greater than 1% by weight of the waste in each payload container.

Radionuclide Information

The radiological content of waste stream SR-SDD-HOM-B is based primarily on SRS sampling/analysis and radioassay in combination with scaling methods (Reference M011, M031, M034, M038, M040, P141).

To determine isotopic ratios for waste stream SR-SDD-HOM-B as a whole, the total gram value for each individual radionuclide reported on the 29-90 forms was divided by the total mass of all radioactive constituents in the waste stream and converted to a percentage. This result is listed as "Total Radionuclide Wt%." Weight percents for each container from Tank 804 were scaled using Np-237 or Pu-238. The individual radionuclide gram values were converted to activity, and the same process was applied to determine "Total Radionuclide Ci%" and "Total Radionuclide Ci% Range." To determine the "Total Radionuclide Wt% Range" for individual containers, the radiological mass in each container in the waste stream was summed. The mass of each individual radionuclide in a container was divided by the total radiological mass for that container and converted to a percentage. A similar method was used to determine the "Total Radionuclide Ci% Range." The two most prevalent radionuclides by mass in this waste stream are U-238 and Pu-239. The most predominant radionuclides by activity are Pu-238 and Pu-241. (References C001, M011, M031, M034, M038, M040).

Waste Stream SR-SDD-HOM-B Radiological Characterization

Isotope	Total Radionuclide Wt%[1,3]	Total Radionuclide Wt% Range	Total Radionuclide Ci%[2,3]	Total Radionuclide Ci% Range	Suspected Present (Yes/No)
WIPP-Required Radionuclides					
Am-241	0.01%	0.00% to 0.04%	0.18%	0.17% to 2.94%	Yes
Pu-238	0.83%	0.00% to 3.17%	82.68%	5.16% to 82.79%	Yes
Pu-239	**12.49%**	0.05% to 47.62%	4.54%	4.52% to 19.85%	Yes
Pu-240	0.48%	0.01% to 4.05%	0.64%	0.61% to 19.87%	Yes
Pu-242	0.12%	0.06% to 17.52%	Trace	0.0% to 1.48%	Yes
U-233	Not Reported	Not Reported	Not Reported	Not Reported	Yes
U-234	0.01%	0.00% to 0.05%	Trace	0.00% to 0.04%	Yes
U-238	**85.35%**	0.00% to 99.67%	Trace	0.00% to 0.22%	Yes
Cs-137	Trace	0.00% to 0.00%	Trace	0.00% to 0.73%	Yes
Sr-90	Not Reported	Not Reported	Not Reported	Not Reported	Yes
Additional Radionuclides					
Am-242m	Trace	0.00% to 0.00%	Trace	0.00% to 0.00%	Yes
Am-243	Trace	0.00% to 0.01%	Trace	0.00% to 0.04%	Yes
Cf-249	Trace	0.00% to 0.00%	Trace	0.00% to 0.01%	Yes
Cf-251	Trace	0.00% to 0.00%	Trace	0.00% to 0.00%	Yes
Cm-242	Trace	0.00% to 0.00%	Trace	0.00% to 0.00%	Yes
Cm-243	Trace	0.00% to 0.00%	Trace	0.00% to 0.01%	Yes
Cm-244	Trace	0.00% to 0.00%	0.01%	0.00% to 0.01%	Yes
Cm-245	Trace	0.00% to 0.00%	Trace	0.00% to 0.01%	Yes
Cm-247	0.01	0.00% to 2.67%	Trace	0.00% to 0.01%	Yes
H-3	Trace	0.00% to 0.00%	Trace	0.00% to 0.00%	Yes
Np-237	0.24%	0.00% to 0.93%	Trace	0.00% to 0.00%	Yes
Pu-241	0.02%	0.00% to 0.08%	11.96%	11.90% to 49.98%	Yes
U-235	0.42%	0.20% to 61.49%	Trace	0.00% to 0.00%	Yes
U-236	0.02%	0.00% to 0.08%	Trace	0.00% to 0.00%	Yes
Radionuclides Not Quantified but Potentially Present					
C-14	Co-60	Eu-154	Eu-155	I-129	Ni-59
Ni-63	Np-239	Pa-233	Pa-243m	Sb-125	Sb-126
Tc-99	Th-232	Th-234			

1. This listing indicates the total weight percent of each radionuclide over the entire waste stream.
2. This listing indicates the total activity (curie) percent of each radionuclide over the entire waste stream.
3. "Trace" indicates <0.01 weight percent for that radionuclide.

Payload management will not be utilized for this waste stream.

Source Documents

Tracking Number	Document Title
C001	Email to Jeff Lunsford re: 800 Underground Tanks
C003	Email to Anotnio Nasol re: SVOCs
C004	Email to Gilmore Lunsford re: OSR 29-90s for TRU Waste (Tank 501, 812) SDD
C005	Email to Antonio Nasol re: Use of Cellulose-Bearing Materials in the 804 Cleaning Process
C007	Email to Michele Bullington re: RTR of 800-Underground Tank Mock-up Drum
C008	Email to Joseph D'Amelio re: 800 UG Deactivation Justification (U)
C022	Memo to Project Files re: Tank 804 Deactivation Project Absorbent Specifications and Utilization Rates
C040	Email to Distribution re: GC/MS Analytical Results - SVOA - WSM (SDD) 06333
C042	Email to Distribution re: GC/MS Analytical Results - SVOA - WSM (SDD) 06289
C054	Memo to A. K. Ferrari re: 211-F Outside Facilities General Purpose Waste Tank 802 Material Packaging Corrosion Evaluation
C073	Letter from L.M. Chandler to G. J. Zachman and R.A. Eubanks re: Tanks 804, 808, and 809 Radiochemistry and Organic Data Compilation and Independent Technical Review
C074	Letter from D. R. Ludwick to T. L. Williams re: Special Discard Request for Disposal of Trailer 3034 Recycle Sump Solution MBA FCA
C075	Letter from M. B. Hughes to R.W. Wingard re: Savannah River Site (SRS) Resource Conservation and Recovery Act (RCRA) F-Area Canyon Sump Water Trailer Temporary Authorization (TA) Final Report
C077	Memorandum from Clyde D. Smith to Pam Allen re: Canyon Waste Streams FC06RSM RCRA - Hazardous Characterization
C085	Interview with CLAB Chemistry Technicians Betty Baxley, Marcia Wicker, Mark Randall, Caeser Finch, and Jim Marsh
C086	Record of Communication for Interview with Harold Hodgens
C087	E-mail from William Maloney to Gilmore Lunsford re: Listed
C097	E-mail from Marie Frazer to Jason Montoya re: RCRA Code Assignments for SR-SDD-HOM-C
C110	E-mail to Jeff Lunsford from Antonio Nasol re: CCP-AK-SRS-13 SR-SDD-HOM-B
C111	Memo to Gary Chandler from Aparajita S. Morrison re: ISOCS Measurement of F Area 800 underground Tank/Cell Miscellaneous Tools and Object
C112	E-mail from Wally Walliser to Jeff Lunsford re: FDD 10058
C114	Memo from Clyde Smith to Pam Allen re: 804 Tank Cell JCW RCRA Evaluation
C116	E-mail from Nancy Lowry to Gilmore Lunsford re: SRS-13 PCBs
C117	E-mail from Nancy Lowry to Jeff Lunsford re: Agitator and Piping from 804 Cell
C120	Memo from N.J. Lowry to F.L. Fox and G.F. Lunsford re: Review of Waste Characterization re: CCP-AK-SRS-13 PCB Assignment
C124	E-mail from Gilmore Lunsford to Jason P. Montoya re: Review of Characterization for 211-F Waste Handling Facility TRU Wastes
C155	Interview with Ross Fanning re: The Building 211-F Tank System
C156	F Canyon Permit Boundaries and the Use of Listed Waste Codes
C157	Evaluation of Building 211-F Tank System and the Assignment of Listed Hazardous Waste Codes
D001	Categorization of Solids in the 800 Underground Tanks

Tracking Number	Document Title
D012	Safety Analysis Report, Savannah River Site, F-Canyon, FA-Line and Outside Facilities
D018	211-F General TRU Waste Streams
D037	Supplemental Alternatives for Long-Term Management of Defense Transuranic Waste at the Savannah River Plant, Aiken, South Carolina (and Supplemental Alternatives)
D038	F-Canyon Complex Facilities; Technical Safety Requirements Savannah River Site
D039	Safety Analysis - 200 Area Savannah River Plant F-Area Outside Facility Operations Supplement 10
D041	Systems Analysis - 200 Area Savannah River Plant -F-Area Outside Facility Operations
D042	Characterization Plan for Building 211-3F Waste Unloading Truck Shed
D046	800 Underground Tanks
D062	Absorbent Needed for the 211-F Tanks Sludge
D063	SRS Waste Acceptance Criteria Manual
D064	F-Area Closure Low Level, TRU, and Mixed Radioactive Waste Certification Plan
D065	Request for Deviation to SRS Waste Acceptance Criteria Manual
D067	Request for Deviation to SRS Waste Acceptance Criteria Manual for 804 Underground Tank
D068	Site D&D Work Package for 804 Cell: Remove Sludge from 804 Tank
D069	Mobilization, Poisoning, and Filtration of F-Canyon Tank 804 Sludge
D070	Nuclear Criticality Safety Assessment: Handling and Storage of TRU Waste Tanker 3034
D072	Characterization Plan for Building 211-F Outside Facilities
D073	Letter from S.R. Wright, Acting Director of DOE-SROO Environmental Division, to Mr. B.W. Truesdale, Director of South Carolina Department of Health and Environmental Control Division of Facility Engineering, and supporting documentation
D074	Safety Analysis - 200 Area, Savannah River Plant, New Production Control Facilities, Building 772-1F
D076	Central Laboratory Facility - Buildings 772-F, 772-1F, and 772-4F, Safety Analysis Report
D078	Auditable Safety Analysis for the Effluent Treatment Facility (U)
D079	SRTC Technical Area Safety Analysis Report
D080	Citation Determination and Evaluation of Waste Incidental to Reprocessing
D085	Site D&D Work Package: Remove Agitator from 804 Underground Cell
D086	Project 804 Cell Entry and Exit
D093	Waste Incidental to Reprocessing Citation Determination
DR001	Discrepancy Resolution: Assignment of Hazardous Waste Numbers for Waste Streams SR-SDD-HOM-A, SR-SDD-HOM-B, SR-SDD-HET-A
M011	Emails and Calculations: 804 Underground Tank Cleanup; Disposal of filters used to Clean up 804 Underground Tank Located in F-Area
M029	Request for Deviation to SRS Waste Acceptance Criteria Manual
M030	804 Tank Sludge Removal Project: Sludge Removal And Waste Handling
M031	Calculation Cover Sheet: Tanker 3034 Sludge TRU Waste Characterization Calculation
M032	VSDS Standard Map RSLS

Tracking Number	Document Title
M033	Request for Deviation to SRS Waste Acceptance Criteria Manual for Recycle Sump Sludge Waste
M034	Calculation Cover Sheet and Supporting Documentation for Recycle Sump Sludge Waste Loaded into Standard Waste Boxes
M037	Container Paperwork for waste stream SR-SDD-HOM-A
M038	Container Paperwork for waste stream SR-SDD-HOM-B
M039	Go West Query for Waste Stream SR-SDD-HOM-A
M040	Go West Query for Waste Stream SR-SDD-HOM-B
M046	Waste Water Process Diagram Canyon Evaporators to ETP Outfall
M047	Tanker Task 3: Remove front section of Trailer 3034 to assist in waste removal
M048	Tanker Task 4: Subcontractors to remove mixed hazardous waste from Tanker 3034
M049	Results of PCB Analysis on Tanker 3034 Sludge
M055	Pictures of Tank 804 Waste Package
M057	Container Paperwork for SR-SDD-HET-A
M058	Go West Query for Waste Stream SR-SDD-HET-A
M059	Interference Removal Chart
M062	Radiological Distribution for 804 Underground Tank and Cell Waste Stream
M064	804 Tank Cell JCW Waste Characterization
P012	211-F: Remove Sludge from Tank 501, 802, 812, & 813
P089	Work Instructions: 211-3F Removal of TRU Waste Line and Interferences; TRU Line Removal in 211-3F Truck Bay Sump
P136	Transuranic Waste Handling
P140	804 Tank TRU Waste Handling
P141	Portable Gamma Detector Assaying with Turntable
P146	Absorbing Containerized Liquids
P147	TRU Drum Repackaging
P148	Absorbing Containerized Liquids
P149	Transuranic (TRU) Waste Repackaging in H-Canyon
P150	F Canyon Container Transfer (U)
P188	Packaging Sealed Containers With Liquid Waste (U)