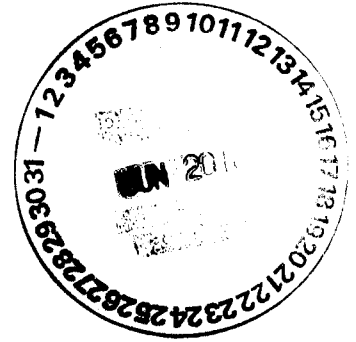




Department of Energy
 Carlsbad Field Office
 P. O. Box 3090
 Carlsbad, New Mexico 88221
 JUN - 7 2010



Mr. James Bearzi, Chief
 Hazardous Waste Bureau
 New Mexico Environment Department
 2905 Rodeo Park Drive East, Building 1
 Santa Fe, NM 87505-6303

Subject: Review of CCP-SRS Waste Stream Profile Form Number SR-MD-HOM-A,
 Absorbed Aqueous Liquids

Dear Mr. Bearzi:

The Department of Energy Carlsbad Field Office has approved the CCP-SRS Waste Stream Profile Form Number SR-MD-HOM-A, Absorbed Aqueous Liquids, at the Savannah River Site. Enclosed is a copy of the form as required by Section B-5a of the WIPP Hazardous Waste Facility Permit No. NM4890139088-TSDF.

If you have questions on this matter, please contact me at (575) 234-7300.

Sincerely,

David C. Moody
 Manager

Enclosure

cc: w/enclosure
 S. Zappe, NMED *ED

cc: w/o enclosure
 J. Kieling, NMED ED
 G. Basabilvazo, CBFO ED
 N. Castaneda, CBFO ED
 C. Fesmire, CBFO ED
 C. Gadbury, CBFO ED
 S. McCauslin, CBFO ED
 G. Sena, CBFO ED
 J. R. Stroble, CBFO ED
 K. Watson, CBFO ED
 W. Ledford, CTAC ED
 P. Gilbert, LANL ED
 G. Lyshik, LANL ED
 C. Walker, TechLaw ED
 CBFO, M&RC

*ED denotes electronic distribution



CCP-TP-002, Revision 21
CCP Reconciliation of DQOs and
Reporting Characterization Data

Effective Date: 8/04/2009

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(1) Waste Stream Profile Number: SR-MD-HOM-A	
(2) Generator site name: Savannah River Site	(4) Technical contact: Craig Simmons
(3) Generator site EPA ID: SC 1890008989	(6) Technical contact phone number: 575-234-7216
(5) Date of audit report approval by New Mexico Environment Department (NMED): March 16, 2010	
(7) Title, version number, and date of documents used for WAP Certification: CCP-PO-001, CCP Transuranic Waste Characterization Quality Assurance Project Plan, Revision 17, June 23, 2009 CCP-PO-002, CCP Transuranic Waste Certification Plan, Revision 23, April 7, 2010 CCP-PO-004, CCP/SRS Interface Document, Revision 27, May 22, 2009	
(8) Did your facility generate this waste? YES <input type="checkbox"/> NO <input checked="" type="checkbox"/> X <input type="checkbox"/>	
(9) If no, provide the name and EPA ID of the original generator: Mound Site OH6890008984	
Waste Stream Information¹	
(10) WIPP ID: SR-W027-999-MD-HOM-A	(11) Summary Category Group: S3000
(12) Waste Matrix Code Group: Solidified Inorganics	(13) Waste Stream Name: Absorbed Aqueous Liquids
(14) Description from the TWBIR: Aqueous liquids absorbed in polyethylene bottles	
(15) Defense TRU Waste: YES <input type="checkbox"/> X <input checked="" type="checkbox"/> NO <input type="checkbox"/>	
(16) Check One: CH <input checked="" type="checkbox"/> X <input type="checkbox"/> RH <input type="checkbox"/>	
(17) Number of SWBs N/A	(18) Number of Drums 11
(19) Number of Canisters N/A	
(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: ² D006, D007, D008, D009, and F002	
(22) Applicable TRUCON Content Numbers: SQ 111 / SQ 211	
(23) Acceptable Knowledge Information¹	
<i>(For the following, enter the supporting documentation used [i.e., references and dates])</i>	
Required Program Information	
(23A) Map of site: CCP-AK-SRS-8, Rev. 5, October 14, 2009, Figures 1, 2, 3, 4, & 5	
(23B) Facility mission description: CCP-AK-SRS-8, Rev. 5, October 14, 2009, Section 4.2	
(23C) Description of operations that generate waste: CCP-AK-SRS-8, Rev. 5, October 14, 2009, Sections 4.3 and 7.3	
(23D) Waste identification/categorization schemes: CCP-AK-SRS-8, Rev. 5, October 14, 2009, Section 4.5	
(23E) Types and quantities of waste generated: CCP-AK-SRS-8, Rev. 5, October 14, 2009, Sections 4.4.1 and 7.2	
(23F) Correlation of waste streams generated from the same building and process, as applicable: CCP-AK-SRS-8, Rev. 5, October 14, 2009, Section 4.4.2	
(24) Waste certification procedures: CCP-TP-030, CCP CH TRU Waste Certification and WWIS/WDS Data Entry, Rev. 27, December 14, 2009	
(25) Required Waste Stream Information	
(25A) Area(s) and building(s) from which the waste stream was generated: CCP-AK-SRS-8, Rev. 5, October 14, 2009, Section 7.1	
(25B) Waste stream volume and time period of generation: CCP-AK-SRS-8, Rev. 5, October 14, 2009, Section 7.2	

**CCP-TP-002, Revision 21
CCP Reconciliation of DQOs and
Reporting Characterization Data**

Effective Date: 8/04/2009

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(25C)	Waste generating process description for each building: CCP-AK-SRS-8, Rev. 5, October 14, 2009, Section 4.4.2		
(25D)	Waste Process flow diagrams: CCP-AK-SRS-8, Rev. 5, October 14, 2009, Section 7.3		
(25E)	Material inputs or other information identifying chemical/radionuclide content and physical waste form: CCP-AK-SRS-8, Rev. 5, October 14, 2009, Section 7.4		
(25F)	Waste Material Parameter Weight Estimates per unit of waste See Table 2 of the Summation of Aspects of AK Summary Report: SR-MD-HOM-A		
(26)	Which Defense Activity generated the waste: (check one)		
	<input type="checkbox"/> Weapons activities including defense inertial confinement fusion		Naval Reactors development
	<input type="checkbox"/> Verification and control technology	<input checked="" type="checkbox"/>	Defense research and development
	<input type="checkbox"/> Defense nuclear waste and material by products management		Defense nuclear material production
	<input type="checkbox"/> Defense nuclear waste and materials security and safeguards and security investigations		
(27)	Supplemental Documentation		
(27A)	Process design documents: N/A		
(27B)	Standard operating procedures: See S2 AK#s on Attachment 1 to Summation of Aspects of AK Summary Report		
(27C)	Safety Analysis Reports: See S3 AK#s on Attachment 1 to Summation of Aspects of AK Summary Report		
(27D)	Waste packaging logs: See S4 AK#s on Attachment 1 to Summation of Aspects of AK Summary Report		
(28E)	Test plans/research project reports: See S5 AK#s on Attachment 1 to Summation of Aspects of AK Summary Report		
(27F)	Site databases: See S6 AK#s on Attachment 1 to Summation of Aspects of AK Summary Report		
(27G)	Information from site personnel: See S7 AK#s on Attachment 1 to Summation of Aspects of AK Summary Report		
(27H)	Standard industry documents: See S8 AK#s on Attachment 1 to Summation of Aspects of AK Summary Report		
(27I)	Previous analytical data: See S9 AK#s on Attachment 1 to Summation of Aspects of AK Summary Report		
(27J)	Material safety data sheets: See S10 AK#s on Attachment 1 to Summation of Aspects of AK Summary Report		
(27K)	Sampling and analysis data from comparable/surrogate Waste: See S12 AK#s on Attachment 1 to Summation of Aspects of AK Summary Report		
(27L)	Laboratory notebooks: N/A		
Confirmation Information²			
<i>For the following, when applicable, enter procedure title(s), number(s) and date(s)</i>			
(28)	Radiography: : CCP-TP-053, Revision 6, March 4, 2008		
(29)	Visual Examination: N/A		
(30)	Comments: For a list of the waste characterization procedures used and date of the respective procedures see the list of procedures on the attached CIS.		

Reviewed by AK Expert:	YES <input checked="" type="checkbox"/>	Date: <u>04/05/2010</u>
Reviewed by STR (if necessary):	YES <input checked="" type="checkbox"/> N/A <input type="checkbox"/>	Date: <u>04/08/2010</u>
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.		
(31) 	(32) Craig Simmons	(33) 04/08/2010
Signature of Site Project Manager	Printed Name	Date
NOTE: (1) Use back of sheet or continuation sheets, if required. (2) 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-MD-HOM-A

Lot 1

TABLE OF CONTENTS

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Correlation of Container Identification Numbers to Batch Data Report Numbers.....	003
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CCP Characterization Information Summary Cover Page

Waste Stream # SR-MD-HOM-A Lot #: 1
 AK Expert Review: N/A Date: N/A
 SPM Review: Craig Simmons Date: 4/5/2010

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. 6 03/04/08 CCP Standard Real-Time Radiography (RTR) Inspection Procedure

Solids Sampling:

INST-OI-73 Rev. 4 04/07/09 Manual Drum Coring Operations
 INST-OI-73 Rev. 3 07/24/08 Manual Drum Coring Operations
 INST-OI-16 Rev. 30 04/07/09 Drum Coring Operations
 INST-OI-16 Rev. 29 07/03/08 Drum Coring Operations

Solids Analysis:

CCP-TP-180 Rev. 0 05/02/07 CCP Analytical Sample Management
 CCP-TP-180 Rev. 1 08/24/09 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. 1 06/19/09 CCP Analytical Data Recording, Review, and Reporting

Project Level Data Validation / DQO Reconciliation:

CCP-TP-001 Rev. 17 09/24/07 CCP Project Level Data Validation and Verification
 CCP-TP-002 Rev. 21 08/04/09 CCP Reconciliation of DQOs and Reporting Characterization Data
 CCP-TP-003 Rev. 16 10/02/07 CCP Data Analysis for S3000, S4000, and S5000 Characterization
 CCP-TP-003 Rev. 17 11/09/09 CCP Data Analysis for S3000, S4000, and S5000 Characterization
 CCP-TP-005 Rev. 18 11/16/06 CCP Acceptable Knowledge Documentation
 CCP-TP-030 Rev. 26 05/27/09 CCP CH TRU Waste Certification and WWIS Data Entry
 CCP-TP-030 Rev. 27 12/14/09 CCP CH TRU Waste Certification and WWIS/WDS Data Entry

WAP Certification:

CCP-PO-001 Rev. 18 10/31/07 CCP Transuranic Waste Characterization Quality Assurance Project Plan
 CCP-PO-001 Rev. 17 06/23/09 CCP Transuranic Waste Characterization Quality Assurance Project Plan
 CCP-PO-002 Rev. 21 01/26/09 CCP Transuranic Waste Certification Plan
 CCP-PO-002 Rev. 22 01/12/10 CCP Transuranic Waste Certification Plan
 CCP-PO-004 Rev. 26 08/26/08 CCP/SRS Interface Document
 CCP-PO-004 Rev. 27 05/22/09 CCP/SRS Interface Document

CCP Correlation of Container Identification Numbers to Batch Data Report Numbers

Waste Stream: # SR-MD-HOM-A

Lot # 1

Container ID Number	NDA BDR	RTR BDR	VE BDR	Solids Sampling BDR	Solids Analytical BDR	Load Management/ Overpack Yes
MDL011336	SRSGS178	SRSRTR0310	N/A	N/A	N/A	
MDL016237	SRNDA1630	SRSRTR0310	N/A	N/A	N/A	
MDL016280	SRNDA1633	SRSRTR0310	N/A	N/A	N/A	
MDL016440	SRNDA1660	SRSRTR0310	N/A	N/A	N/A	
MDL0202746	SRNDA1632	SRSRTR0310	N/A	SSG09-00007	ALD09013V ALD09013S ALD09013N ALD09013M	
MDL022749	SRNDA1630	SRSRTR0310	N/A	SSC09-00007	ALD09013V ALD09013S ALD09013N ALD09013M	
MDL026261	SRNDA1630	SRSRTR0310	N/A	N/A	N/A	
MDL026262	SRNDA1632	SRSRTR0310	N/A	N/A	N/A	
MDL026265	SRNDA1630	SRSRTR0310	N/A	SSG09-00007	ALD09013V ALD09013S ALD09013N ALD09013M	
MDL026278	SRNDA1630	SRSRTR0310	N/A	SSC09-00007	ALD09013V ALD09013S ALD09013N ALD09013M	
MDL026279	SRNDA1630	SRSRTR0310	N/A	SSG09-00007	ALD09013V ALD09013S ALD09013N ALD09013M	


Signature of Site Project Manager

Craig Simmons
Printed Name

4/5/2010
Date

CS
03

CCP Solids Analysis VOC UCL₉₀ Evaluation Form

WSPF #: SR-MD-HOM-A

Waste Stream Lot Number

1 through 1

ANALYTE	Transform Data Used (No, Data-Log, SQRT, other)	# Samples above MDL (1)	# Samples (2)	Maximum (mg/kg)	Mean (mg/kg)	SD (ppmv)	UCL ₉₀ (mg/kg)	PRQL (mg/kg)	Transformed PRQL (N/A or Value)	UCL ₉₀ > PRQL Yes	EPA Code
Benzene	Log	0	5	-1.2208	-2.1711	0.5327	-1.8059	10	2.30		
Bromoform	Log	0	5	-1.2208	-2.1711	0.5327	-1.8059	10	2.30		
Carbon Disulfide	Log	0	5	-0.5108	-1.4691	0.5373	-1.1007	10	2.30		
Carbon Tetrachloride	Log	0	5	-1.2208	-2.1711	0.5327	-1.8059	10	2.30		
Chlorobenzene	Log	0	5	-1.2208	-2.1711	0.5327	-1.8059	10	2.30		
Chloroform	Log	0	5	-1.2208	-2.1711	0.5327	-1.8059	10	2.30		
1,2-Dichloroethane	Log	0	5	-1.2208	-2.1711	0.5327	-1.8059	10	2.30		
1,1-Dichloroethylene	Log	0	5	-1.2208	-2.1711	0.5327	-1.8059	10	2.30		
trans-1,2-Dichloroethylene	Log	0	5	-1.2208	-2.1711	0.5327	-1.8059	10	2.30		
Ethyl benzene	Log	0	5	-1.2208	-2.1711	0.5327	-1.8059	10	2.30		
Methylene chloride	Log	0	5	-1.2208	-2.1711	0.5327	-1.8059	10	2.30		
1,1,2,2-Tetrachloroethane	Log	0	5	-1.2208	-2.1711	0.5327	-1.8059	10	2.30		
Tetrachloroethylene	Log	0	5	-1.2208	-2.1711	0.5327	-1.8059	10	2.30		
Toluene	Log	0	5	-1.2208	-2.1711	0.5327	-1.8059	10	2.30		
1,1,1-Trichloroethane	Log	0	5	-1.2208	-2.1711	0.5327	-1.8059	10	2.30		
1,1,2-Trichloroethane	Log	0	5	-1.2208	-2.1711	0.5327	-1.8059	10	2.30		
Trichloroethylene	Log	0	5	-1.2208	-2.1711	0.5327	-1.8059	10	2.30		
Trichlorofluoromethane	Log	0	5	-1.2208	-2.1711	0.5327	-1.8059	10	2.30		
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	Log	0	5	-1.2208	-2.1711	0.5327	-1.8059	10	2.30		
Vinyl chloride	Log	0	5	-0.5108	-1.4691	0.5373	-1.1007	4	1.39		
m,p-Xylene ^a	Log	0	5	-1.2208	-2.1711	0.5327	-1.8059	10	2.30		
o-Xylene	Log	0	5	-1.2208	-2.1711	0.5327	-1.8059	10	2.30		
Acetone	No	0	2	0.9500	0.7500	0.2828	1.3655	100	N/A		
Butanol	No	1	2	11.0000	5.7750	7.3893	21.8559	100	N/A		
Ethyl ether	No	0	2	1.9500	1.5000	0.6364	2.8850	100	N/A		
Isobutanol	No	0	2	0.9500	0.7500	0.2828	1.3655	100	N/A		

CCP Solids Analysis VOC UCL₉₀ Evaluation Form

WSPF #:

SR-MD-HOM-A

Waste Stream Lot Number

1 through 1

ANALYTE	Transform Data Used (No, Data-Log, SQRT, other)	# Samples above MDL (1)	# Samples (2)	Maximum (mg/kg)	Mean (mg/kg)	SD (ppmv)	UCL ₉₀ (mg/kg)	PRQL (mg/kg)	Transformed PRQL (N/A or Value)	UCL ₉₀ > PRQL Yes	EPA Code
Methanol	No	0	2	0.9500	0.7500	0.2828	1.3655	100	N/A		
Methyl ethyl ketone	No	0	2	0.9500	0.7500	0.2828	1.3655	100	N/A		
Pyradine	No	0	2	0.9500	0.7500	0.2828	1.3655	100	N/A		
1,4-Dichlorobenzene ^b	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A		
Ortho-Dichlorobenzene ^b	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A		
Formaldehyde ^c	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A		
Hydrazine ^d	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A		

^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."

^b Can also be analyzed as an SVOC. If analyzed as an SVOC, the QAO's of CCP-TP-001, Table B3-6 apply.

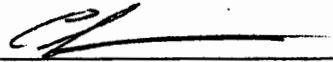
^c Required only for homogenous solids and soil/gravel waste from the Savannah River Site.

^d Required only for homogenous solids and soil/gravel waste from Oak Ridge National Laboratory and Savannah River Site.

Comments:

(1) For analytes where there were no samples measured above the MDL value, 1/2 of the MDL value was used. (Per section B4 of the WAP, 1/2 of the MDL value is used in calculating the mean concentration.)

(2) As a result of dilution requirements, several analytes were reported as non-detected with MDL values in excess of the PRQL. In accordance with Section B4-3d of the WIPP-WAP, such "U" flagged observations with elevated MDL values due to dilution were not used in calculating mean concentration. Consequently, the subject analytes were statistically evaluated using only the useable observations.



 Signature of Site Project Manager

Craig Simmons

 Printed Name

4/5/2010

 Date

CCP Solids Analysis SVOC UCL₉₀ Evaluation Form

WSPF #:

SR-MD-HOM-A

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 (N/A or Value)	UCL ₉₀ > PRQL Yes	EPA Code
2-Methylphenol (cresols)	No	0	5	0.10	0.10	0.00	0.10	40	N/A		
3&4 -Methylphenol (cresols)	No	0	5	0.10	0.10	0.00	0.10	40	N/A		
1,4-Dichlorobenzene ^a	No	0	5	0.10	0.10	0.00	0.10	40	N/A		
Ortho-Dichlorobenzene ^a	No	0	5	0.10	0.10	0.00	0.10	40	N/A		
2,4-Dinitrophenol	Log	1	5	-0.53	-1.96	0.80	-1.41	40	3.69		
2,4-Dinitrotoluene	No	0	5	0.10	0.10	0.00	0.10	2.6	N/A		
Hexachlorobenzene	No	0	5	0.15	0.15	0.00	0.15	2.6	N/A		
Hexachloroethane	No	0	5	0.10	0.10	0.00	0.10	40	N/A		
Nitrobenzene	No	0	5	0.10	0.10	0.00	0.10	40	N/A		
Pentachlorophenol	No	0	5	0.10	0.10	0.00	0.10	40	N/A		

^a Can also be analyzed as a VOC. If analyzed as a VOC, the QAO's of CCP-TP-001, Table B3-4 apply.

Comments:

(1) For analytes where there were no samples measured above the MDL value, 1/2 of the MDL value was used. (Per B4 of the WAP, 1/2 of the MDL value is used in calculating the mean concentration.)



 Signature of Site Project Manager

Craig Simmons

 Printed Name

4/5/2010

 Date

CCP Solids Analysis Metals UCL₉₀ Evaluation Form

WSPF #:

SR-MD-HOM-A

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 (N/A or Value)	UCL ₉₀ > PRQL Yes	EPA Code
Antimony	No	1	5	3.70	1.10	1.45	2.10	100	N/A		
Arsenic	Log	3	5	0.92	-0.77	1.03	-0.06	100	4.61		
Barium	Log	5	5	7.74	4.81	1.64	5.94	2000	7.60		
Beryllium	No	5	5	6.40	3.60	2.24	5.14	100	N/A		
Cadmium	Log	5	5	0.41	-0.06	0.37	0.19	20	3.00		
Chromium	Log	5	5	6.87	4.73	1.20	5.55	100	4.61	Yes	D007
Lead	No	4	5	8.90	6.79	3.62	9.27	100	N/A		
Mercury	Log	3	5	-1.56	-3.75	1.67	-2.60	4	1.39		
Nickel	Log	5	5	5.30	3.76	0.88	4.36	100	4.61		
Selenium	No	1	5	1.40	0.56	0.47	0.88	20	N/A		
Silver	No	1	5	1.30	0.58	0.40	0.86	100	N/A		
Thallium	Log	4	5	1.72	0.79	0.69	1.26	100	4.61		
Vanadium	Log	5	5	4.50	4.26	0.20	4.40	100	4.61		
Zinc	Log	5	5	4.48	4.18	0.17	4.30	100	4.61		

Comments:

(1) For analytes where there were no samples measured above the MDL value, 1/2 of the MDL value was used. (Per section B4 of the WAP, 1/2 of the MDL value is used in calculating the mean concentration.)



Signature of Site Project Manager

Craig Simmons

Printed Name

4/5/2010

Date

CCP Solid VOCs Summary Data

Waste Stream Number

SR-MD-HOM-A

Waste Stream Lot Number

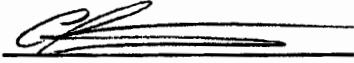
1

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

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 4/5/2010

CCP Solid SVOCs Summary Data

Waste Stream Number

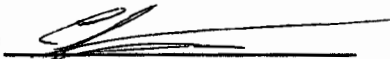
SR-MD-HOM-A

Waste Stream Lot Number

1

Tentatively Identified Compound	Maximum Observed Estimated Concentrations (ppmv)	# Samples Containing TIC	% Detected
1,2-Benzenedicarboxylic acid, bis(2-methylpropyl) ester	1.10	1	20.00%
Phenol	0.21	1	20.00%
Acetophenone	0.63	1	20.00%
Data Supports EPA Hazardous Waste Numbers Assigned by AK? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>			
If no, describe the basis for assigning the EPA Hazardous Waste Codes:			

SPM Signature



Date 4/5/2010

CCP RTR/VE Summary of Prohibited Items and AK Confirmation

Waste Stream Number: SR-MD-HOM-A

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 were characterized using Visual Examination.
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).		



Site Project Manager Signature

Craig Simmons
Printed Name

4/5/2010
Date

CCP Reconciliation with Data Quality Objectives

WSF# SR-MD-HOM-A

Lot # 1

Sampling Completeness

RTR:

Number of Valid Samples: 11 Number of Total Samples Analyzed: 11
Percent Complete: 100 (QAO is 100%)

NDA

Number of Valid Samples: 11 Number of Total Samples Analyzed: 11
Percent Complete: 100 (QAO is 100%)

HSG

Number of Valid Samples: NA Number of Total Samples collected: NA
Percent Complete: NA (QAO is $\geq 90\%$)
Number of Valid Samples: NA Number of Total Samples analyzed: NA
Percent Complete: NA (QAO is $\geq 90\%$)

Total VOC

Number of Valid Samples: 5 Number of Total Samples collected: 5
Percent Complete: 100 (QAO is $\geq 90\%$)
Number of Valid Samples: 5 Number of Total Samples analyzed: 5
Percent Complete: 100 (QAO is $\geq 90\%$)

Total SVOC (1)

Number of Valid Samples: 5 Number of Total Samples collected: 5
Percent Complete: 100 (QAO is $\geq 90\%$)
Number of Valid Samples: 5 Number of Total Samples analyzed: 5
Percent Complete: 100 (QAO is $\geq 90\%$)

Total Metals

Number of Valid Samples: 5 Number of Total Samples collected: 5
Percent Complete: 100 (QAO is $\geq 90\%$)
Number of Valid Samples: 5 Number of Total Samples analyzed: 5
Percent Complete: 100 (QAO is $\geq 90\%$)

CCP Reconciliation with Data Quality Objectives

WSF# SR-MD-HOM-A

Lot # 1

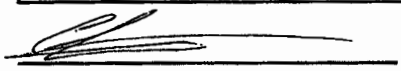
	Y/N/NA	Reconciliation Parameter
1	Y	Waste Matrix Code.
2	Y	Waste Material Parameter Weights.
3	Y	The waste matrix code identified is consistent with the type of sampling and analysis used to characterize the waste.
4	Y	The TRU activity reported in the BDRs for each container demonstrates with a 95% probability 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, UCL90 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 Environmental Protection Agency (EPA) Hazardous Waste Numbers were assigned as required. Samples were randomly collected (when appropriate).
7a	Y	Mean concentrations, UCL90 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 Hazardous Waste Numbers were assigned as required. Samples were randomly collected.
7b	Y	Mean concentrations, UCL90 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 Hazardous Waste Numbers were assigned as required. Samples were randomly collected.
7c	Y	Mean concentrations, (UCL90) 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 Hazardous Waste Numbers were assigned as required. Samples were randomly collected.

CCP Reconciliation with Data Quality Objectives

WSF# SR-MD-HOM-A

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	Y	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 B3-1 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 B3-2 through B3-9 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	NA	NA	NA
	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:				
(1) Three SVOC analytes (bis(2-Ethylexy)phthalate, Fluoranthene, and Phenol) were added as target analytes by the lab and have been included in the statistical calculations for completeness. The subject analytes were added after the first analysis BDR had been completed and therefore are included for only those drums from subsequent BDRs.				



 Signature of Site Project Manager

Craig Simmons

 Printed Name

4/5/2010

 Date

SUMMATION OF ASPECTS OF AK SUMMARY REPORT: WASTE STREAM SR-MD-HOM-A**Overview**

Waste stream SR-MD-HOM-A is contact-handled (CH) transuranic (TRU) homogeneous solids waste generated at the Mound Site in Miamisburg, Ohio. The waste was transferred to the Savannah River Site (SRS) in Aiken, South Carolina for storage between 2001 and 2005.

The primary mission as it relates to the generation of TRU waste was the processing of heat-source plutonium (Pu-238) for the fabrication of radioisotopic heat sources and Radioisotopic Thermoelectric Generators (RTG) for space and military applications, including the U.S. Navy and U.S. Air Force. The atomic energy defense activities that apply to TRU wastes generated by Mound operations are defense nuclear materials production and defense research and development.

This Summation of Aspects includes information to support Waste Stream Profile Form (WSPF) number SR-MD-HOM-A. The primary source of information for this summation is CCP-AK-SRS-8, *Central Characterization Project Acceptable Knowledge Summary Report For Mound Site Transuranic Waste Stored at Savannah River Site, Waste Streams SR-MD-HET, SR-MD-SOIL, SR-MD-HOM-A, SR-MD-HOM-B, SR-MD-HOM-C*, Revision 5, October 14, 2009.

Waste Stream Identification Summary

Waste Stream Name:	Absorbed Aqueous Liquids
Waste Stream Number:	SR-MD-HOM-A
Site Where TRU Waste Was Generated:	Mound Site
Site Where TRU Waste Is Currently Stored:	Savannah River Site
Facility Where TRU Waste Was Generated:	PP Building and R Building at Mound
Waste Stream Volume – Current:	8 55-gallon drums and 3 85-gallon overpacks
Waste Stream Volume – Projected:	None
Dates of Waste Generation:	April 1979 – June 1992
TRUPACT-II Content code (TRUCON):	SQ 111 / SQ 211
Summary Category Group:	S3000
Waste Matrix Code:	S3113, Inorganic Particulate Absorbents
Waste Matrix Code Group:	Solidified Inorganics
Waste Stream TWBIR Identification:	SR-W027-999-MD-HOM-A
RCRA Hazardous Waste Numbers:	D006, D007, D008, D009, F002

Waste Stream Description and Physical Form

Waste stream SR-MD-HOM-A is comprised primarily of a sludge-like material consisting of aqueous liquids absorbed in Florco (aluminum-magnesium-iron silicate clay material), but includes minor amounts of debris waste including pipe, metal cans, and plastic.

This waste stream is comprised of more than 50 percent, by volume absorbed aqueous liquids with the balance of the matrix being debris. Therefore, Waste Matrix Code Group Solidified Inorganics and Waste Matrix Code S3113, Inorganic Particulate Absorbents, are applied to this waste stream.

Waste stream SR-MD-HOM-A was generated from a single process or from an activity that is similar in material, physical form, and hazardous constituents and is therefore a single waste stream.

Point of Generation

Location

This waste stream was generated at the Mound Site located in Miamisburg, Ohio about ten miles southwest of Dayton and 31 miles north-northeast of Cincinnati. The waste was shipped to SRS for storage. SRS is located approximately 25 miles southeast of Augusta, Georgia on the western border of South Carolina.

Area and/or Buildings of Generation

This waste stream was generated at the Mound Site in Room 52 of PP Building and Rooms 140 and 149 of R Building. The primary mission of PP Building was Pu-238 heat source production and recovery operations. R Building was a research facility that conducted Pu-238 heat source research. Room 140 was an analytical lab in R Building that supported various activities in R Building including Pu-238 heat source research. Room 149 also conducted activities in support of the Pu-238 heat source mission by separating U-234 from aged Pu-238.

Generating Processes

Description of Waste Generating Processes

These production, recovery, research, and analytical support activities as well as the cleanup and decontamination of these areas at the end of their missions generated various aqueous liquids that were absorbed in Florco.

Acidic and caustic liquid wastes from PP Building were collected in separate tanks in Room 14 and then transferred to Room 52. An estimated 95 percent of the acid waste was nitric acid with trace amounts of hydrofluoric, hydrochloric, sulfuric, and oxalic acids. Caustic waste was primarily sodium hydroxide and limited amounts of ammonium hydroxide. Thirty-eight (38) liters of the acid or caustic (un-neutralized) were transferred into a drum lined with a rigid liner and a polyethylene drum bag. Florco absorbent (150 pounds) was added to the drum bag before introducing the liquid. The drums were allowed to outgas for a minimum of 16 hours and then sealed by twisting and taping the bag. This operation was discontinued in November 1982. When recovery operations ended in PP Building, the amount of acidic liquid waste greatly decreased. Since that time, acidic wastes were combined with caustic wastes for processing.

Limited amounts of acidic and caustic liquids, such as plutonium-contaminated cleaning solutions and plutonium standards, were also generated in R Building, Room 140 and absorbed with Florco in small bottles (e.g., 2 liters). Prior to 1982, acid and caustic wastes were absorbed separately. From 1982 until this operation ceased in 1992, acid wastes were made basic and combined with caustic wastes before processing.

In R Building, Room 149, U-234 was separated from aged Pu-238 (Pu-238 decays by alpha emission to U-234). A batch of solid Pu-238 material was processed by dissolution (nitric acid), precipitation (oxalic acid), solvent extraction (tri-octyl phosphine oxide in kerosene or di-sec-butylphenyl-phosphonate in 1,1,2-trichloroethane), nitrate anion exchange, chloride ion exchange, and calcination to produce a high-purity (99 percent) U-234 oxide. The acidic liquid containing the Pu-238 that has been separated from the solvent extract was neutralized and absorbed with Florco in small bottles

Table 1 identifies toxicity characteristic and F-listed constituents in waste stream SR-MD-HOM-A.

Table 1 – Toxicity Characteristic and F-Listed Constituents in Waste Stream SR-MD-HOM-A

Constituent	CAS #	EPA Hazardous Waste Number
Cadmium	7440-43-9	D006
Chromium	7440-47-3	D007
Lead	7439-92-1	D008
Mercury	7439-97-6	D009
1,1,1-Trichloroethane	71-55-6	F002
Trichloroethylene	79-01-6	F002

RCRA Determinations

Hazardous Waste Determinations

Waste generated in this waste stream does not qualify for any of the exclusions outlined in 40 CFR 260 or 261. Real Time Radiography (RTR) or visual examination is used to verify that the waste stream is not a liquid waste and does not contain explosives, non-radioactive pyrophoric materials, compressed gases or reactive waste. Therefore, this waste stream does not exhibit the characteristic for ignitability (D001), corrosivity (D002), or reactivity (D003).

Ignitability

Waste stream SR-MD-HOM-A does not meet the definition of ignitability as defined in 40 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. In addition, incompatible materials that may cause the generation of heat, fire, or flammable gas are placed in separate payload containers and are not included in this waste stream (Reference P079).

According to procedure and in compliance with waste acceptance criteria, containers are drained before disposal and packaged with absorbent material (References P041, P065, P078, and P105). Previous radiography did not identify observable liquids in this waste (Reference I005). Radiography and/or visual examination are performed by CCP to ensure liquids do not exceed the amount allowed by the WIPP-WAP. Any container identified with liquids in excess of the amount allowed by the WIPP-WAP will be segregated from the waste stream during characterization and will not be eligible for disposal at WIPP until further characterization and/or processing is conducted.

According to procedure and in compliance with waste acceptance criteria, containers are vented prior to disposal in TRU waste (References I010, P041, P065, P078, and P105). Previous radiography did not identify un-vented containers (e.g., aerosol cans) in this waste stream (Reference I005). Radiography and/or visual examination are performed by CCP to ensure the absence of ignitable compressed gases. Any container identified with unpunctured aerosol cans or compressed gas cylinders will be segregated from the waste stream during characterization and will not be eligible for disposal at WIPP until the cans are either punctured or removed from the waste stream.

Pyrophorics have not been identified in this waste stream, and procedures and waste acceptance criteria prohibit the disposal of pyrophorics in TRU waste (References C003, I010, P041, P065, P078, and P105). Pyrophoric materials were not typically handled in areas where TRU waste was generated (Reference P065).

To ensure the waste does not exhibit the characteristic of ignitability, liquid in excess of TSDF-WAC limits will be removed or immobilized, and compressed gases (e.g., aerosol cans) will be removed or vented prior to WIPP disposal. Therefore, this waste does not meet the characteristic of ignitability (D001).

Corrosivity

Waste stream SR-MD-HOM-A does not meet the definition of corrosivity as defined in 40 CFR 261.22. Previous RTR did not identify observable liquids in the containers in this waste stream (Reference I005). To ensure the waste does not exhibit the characteristic of corrosivity, liquid in excess of TSDF-WAC limits will be removed or immobilized prior to WIPP disposal. Therefore, this waste does not meet the characteristic of corrosivity (D002).

Reactivity

Waste stream SR-MD-HOM-A 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. 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 waste does not contain cyanides or sulfides, and is not capable of detonation or explosive reaction. In addition, incompatible materials that may generate toxic gases or cause an explosion or violent reaction are placed in separate payload containers and are not included in this waste stream (Reference P079).

Explosives have not been identified in this waste stream, and procedures and waste acceptance criteria prohibit the disposal of explosives in TRU waste (References I010, P041, P065, P078, and P105). Explosives were segregated and are not part of this waste stream (References C019, I090, P020, P058, P065). To ensure the waste does not exhibit the characteristic of

reactivity, liquid in excess of TSDf-WAC limits will be removed or immobilized, and compressed gases (e.g., aerosol cans) will be removed or vented prior to WIPP disposal. Therefore, this waste does not meet the characteristic of reactivity (D003).

Toxicity Characteristic

This waste stream exhibits the characteristic of toxicity per 40 CFR 261.24. The toxicity characteristic contaminants fall into two categories; metals and organics. Where a constituent has been identified and there is no quantitative data available to demonstrate that the concentration is below a regulatory threshold, the applicable EPA hazardous waste number is conservatively applied to the waste stream.

The toxicity characteristic metals cadmium, chromium, lead, and mercury are present in this waste stream. Cadmium, chromium, lead were used in analytical activities in R Building, and chromium, lead, and mercury were identified as contaminants in acidic and caustic liquids (References P061, P122). Since data are not available that demonstrate the concentration of these constituents is less than the toxicity characteristic regulatory level, EPA hazardous waste numbers D006, D007, D008, and D009 are conservatively applied to waste stream SR-MD-HOM-A (Reference DR003).

Since the more specific F-Listed hazardous waste number has been applied for trichloroethylene, assignment of the corresponding toxicity characteristic hazardous waste number D040 is not applied.

F-Listed Waste

Waste stream SR-MD-HOM-A was not derived from the treatment of any of the hazardous wastes from non-specific sources listed in 40 CFR 261.31. Based on the AK documentation reviewed, the process that generated this waste stream used 1,1,2-trichloroethane as a solvent for liquid-liquid extraction. The absorbed aqueous liquid resulting from this process contains small amounts of this solvent; however, EPA has clarified that the aqueous phase from organic liquid-liquid extraction does not meet the definition of an F-listed waste. Therefore, F002 is not assigned to this waste stream for 1,1,2-trichloroethane (Reference 12).

Headspace gas analysis was previously conducted on three of the containers in waste stream SR-MD-HOM-A. Samples were analyzed for hydrogen, methane, and total VOCs, but not individual VOCs. VOCs were not detected in this waste (Reference P098). In the same Mound waste that was sent to Idaho for storage (Advanced Mixed Waste Treatment Project [AMWTP] waste stream BN835), headspace gas analysis detected 1,1,1-trichloroethane and trichloroethylene above the PRQL (Reference P122). As a conservative measure, EPA hazardous waste number F002 is assigned to waste stream SR-MD-HOM-A (Reference DR003).

The explanation of differences in characterization between AMWTP waste stream BN835 and waste stream SR-MD-HOM-A is included in the "Other Waste Streams Generated From the Same Buildings and Processes" section.

The following F-Listed constituents contaminate the waste and are applied:

(F002)
1,1,1-trichloroethane, trichloroethylene

U, K, and P-Listed Waste

Waste stream SR-MD-HOM-A was not mixed with a discarded commercial chemical product, an off-specification commercial chemical product, or a container residue or spill residue thereof (40 CFR 261.33).

Beryllium powder was not identified in this waste stream, and therefore, EPA hazardous waste number P015 is not applied to this waste stream. Hydrofluoric acid was used in the processes that generated this waste stream. However, the review of the AK source documentation did not identify the disposal of unused hydrofluoric acid (U134) or disposal of materials contaminated with spills of this acid; therefore the EPA hazardous waste number U134 is not assigned to waste stream SR-MD-HOM-A. Therefore, waste stream SR-MD-HOM-A is not a U- or P-listed waste.

Waste stream SR-MD-HOM-A does not include any of the manufacturing process wastes from the specific industries or sources listed in 40 CFR 261.32.

Waste stream SR-MD-HOM-A is not assigned and U-, K-, or P-Listed EPA hazardous waste numbers.

Solids Sampling/Analysis Information

Solid sampling and analysis was completed on five randomly selected drums. No new hazardous waste numbers were assigned as a consequence of sampling and analysis, although the PRQL was exceeded for chromium. No TIC was found in greater than 25% of the containers in this lot. No VOCs or SVOCs were detected in greater than 25% of the samples. The specifics of this information are included in the attached Characterization Information Summary Report

Other Waste Streams Generated From the Same Buildings and Processes

Savannah River Site waste stream SR-MD-HOM-A and AMWTP waste stream BN835 both were generated at the Mound Site by solidifying acidic and caustic liquid wastes. Waste stream SR-MD-HOM-A consists of 11 drums generated between 1979 and 1992, primarily from Rooms 140 and 149 in R Building. AMWTP waste stream BN835 consists of over 2,500 drums generated between 1974 and 1985, primarily in PP Building. The EPA hazardous waste numbers assigned to the two waste streams are the same with the following exceptions. EPA hazardous waste number D006 (cadmium) was assigned to waste stream SR-MD-HOM-A due to processes that were conducted in the analytical laboratory in Room 140 of R Building. EPA hazardous waste number F001 for carbon tetrachloride, 1,1,1-trichloroethane, and trichloroethylene was assigned to AMWTP waste stream BN835 due to historical application of F001 by the Mound Site. However, the EPA has clarified that F001 is only applicable for large-scale degreasing operations. Large-scale degreasing operations were not conducted at the Mound Site. Therefore, F001 is not assigned to waste stream SR-MD-HOM-A.

Conclusion

The EPA hazardous waste numbers that apply to the waste stream are D006, D007, D008, D009, and F002.

Polychlorinated Biphenyls

No sources of PCBs have been identified in this waste stream. PCB waste not authorized under an EPA PCB waste disposal authorization is not in this waste stream.

Prohibited Items

The absence of prohibited items is determined and documented through AK and characterization activities. Radiography or visual examination is performed on each container in this waste stream as a verification activity. The following items have been determined as not present in the waste:

- Liquids
- Non-radioactive pyrophoric materials
- Hazardous wastes not occurring as co-contaminants with TRU mixed wastes (non-mixed hazardous waste)
- Waste incompatible with backfill, seal and panel closure materials, container and packaging materials, or other wastes
- Explosives or compressed gases
- Waste with PCBs not authorized under an EPA PCB waste disposal authorization
- Waste exhibiting the characteristics of ignitability, corrosivity, or reactivity
- Waste that has ever been managed as high-level waste and waste from tanks specified in Table B-8 of the WIPP HWFP, unless specifically approved through a Class 3 permit modification.
- Any waste container from a waste stream (or waste stream lot) which has not undergone either radiographic or visual examination of a statistically representative subpopulation of the waste stream in each shipment, as described in Permit Attachment B7 of the WIPP HWFP.

Each container of waste is certified and shipped only after visual examination or RTR either:

- Did not identify any prohibited items in the waste container, or
- All prohibited items found in a waste container by visual examination or RTR are identified and corrected (i.e., eliminated or removed) through the site non-conformance reporting system.

Method for Determining Waste Material Parameter Weights per Unit of Waste

To estimate the waste material parameter weight percentages for waste stream SR-MD-HOM-A, data were obtained from the WDS/WWIS for AMWTP waste stream BN835 which is a homogeneous waste stream generated by the same Mound process that generated the SR-MD-HOM-A waste stream. The WDS/WWIS data were derived from AMWTP RTR data. The RTR data for 1,977 drums of the BN835 waste stream were analyzed to determine the waste material parameters in the SR-MD-HOM-A waste stream. An analysis of the AMWTP data was performed, the results of which are presented in Table 2.

Table 2. Waste Stream SR-MD-HOM-A Waste Material Parameter Estimates

Waste Material Parameter	Weight Percent	Weight Percent Range
Iron-based Metals/Alloys	<0.1%	0 – 3.4%
Aluminum-based metals/Alloys	0%	0%
Other Metals	<0.1%	0 – 0.1%
Other Inorganic Materials	<0.1%	0 – 14.3%
Cellulosics	0.4%	0 – 11.0%
Rubber	<0.1%	0 – 1.6%
Plastics (waste material)	0.1%	0 – 21.1%
Organic Matrix	0%	0%
Inorganic Matrix	99.4%	72.0 – 100%
Soils/gravel	0%	0%

List of Any AK Sufficiency Determinations Requested for the Waste Stream

No AK Sufficiency Determinations were requested for this waste stream.

Transportation

This waste stream and its chemical constituents have been reviewed for consistency with the listed TRUCON code and they are consistent.

Beryllium was not identified in this waste stream, and therefore, will be less than 1% by weight of the waste in each container.

Radionuclide Information

The two most prevalent radionuclides in this waste stream, by weight, based on the un-decayed data reported in AK are Pu-238 and Pu-239. Since activities at Mound involving heat source plutonium began in 1959, the plutonium contamination may be 50 years old. As a result, Pu-238 will remain the most prevalent isotope, by mass, but U-234 (from decay of Pu-238) will be the second most prevalent isotope by mass. The isotopes expected to be present in this waste stream are listed in Table 3.

Table 3 – Radionuclides in Waste Stream SR-MD-HOM-A

WIPP Tracked	Other Radionuclides Present	
Am-241	Ac-227	Pa-233
Pu-238	Ac-228	Pb-212
Pu-239	Bi-212	Pb-214
Pu-240	Bi-213	Po-210
Pu-242	Bi-214	Pu-241
U-233	Cm-244	Ra-226
U-234	Fr-221	Th-229
U-238	H-3	Th-230
Cs-137	K-40	Tl-208
Sr-90	Np-237	U-235
	Pa-231	Y-90

Payload management will not be implemented for this waste stream.

Waste Stream Profile Form: SR-MD-HOM-A

Source Documents

Source Document Tracking Number	AK #	Title	Document Number	Revision	Date
12	N/A	McCoy's RCRA Unraveled. Second Edition			2002
C001	S7	Record of Communication			12/10/2002
C003	S7 S16	Interview with Bill Franz			3/4/03
C005	S7 S16	Interview/Dan Hopkins			Undated
C008	S2 S7	Interview with Toby Elswick			5/13/2003
C009	S16	Interview with Paul Figgins			5/15/2003
C010	S7 S16	Interview/Clyde Chong			5/15/2003
C011	S7 S16	Interview/Ron Goss			04/22/03, 05/21/03
C012	S7 S16	Interview/Bill Davis			4/25/2003
C013	S2 S7 S16	Interview/AI Combs			5/15/2003
C016	S7	Interview/Ron Saun			6/4/2003
C018	S7	Interview/Rob Robinson & Gary Morris			3-Feb
C019	S16	Interview/Mike Deaton			6/5/2003
C020	S2 S7	Record of Communication Don Luthey			6/10/2003
C024	S16	List of different types of containers			Undated
C041	S9	Rockwell International Letter from J. K. Paynter to B. C. Barrett. Subject: Radionuclide Information Required For TRUPACT II Shipments	WCP8-20		3/23/89
C042	S3 S5 S9 S12	Letters to Thomas L. Clements, EG&G Idaho from R.N. Rogers, LANL, Re: Reactivity of Resins (nitrated)			5/18/83, 6/9/83
DR003	N/A	Discrepancy Resolution. RCRA Characterization of Waste Stream SR-MD-HOM-A.			1/12/2005
I001	S2	Transuranic Waste Baseline Inventory Report 1995		2, 3	Dec-95
I005	S2 S4 S9 S16	Waste Exam Log for RTR Tapes			Undated
I006	S6	Visit By Mound Lab Personnel			5/21/1974
I007	S16	O.U.9 Site Scoping Report			Nov-91
I009	S9	R-130 Search Box	MLM-ML-92-42-0001	1	8/3/1994
I010	N/A	TRAMPAC Requirement Matrix by Drum			Undated
I011	S8 S9	EPA Hazardous Waste Codes found in INEL Stored TRU Waste Content Code			Undated
I015	S16	LP-50 Loading in SW/R Tritium Complex	SE/USQ 95-07		6/7/1995
I017	S6	List of Drums /Date/Source/Operation/Misc/By			Undated

Waste Stream Profile Form: SR-MD-HOM-A

Source Document Tracking Number	AK #	Title	Document Number	Revision	Date
I019	S9	Waste Characterization Services Report		1	Feb-98
I020	S6	Spreadsheet of Waste from SRS Bill Nauman and Glen Siry			Undated
I024	S8 S10 S16	Material Acceptance Report			10/9/1996
I027	S16	Rigid 55 Gallon Liner Drawing			11/15/1977
I031	S13	Plutonium Working Group Report on Environmental, Safety and Health Vulnerabilities Associated with the Departments Plutonium Storage Vol.2-App.B-Part 7			Sep-94
I038	S5	Radioactive impurities in the Polonium Process at Mound Lab.	MLM-1158		6/3/1963
I040	S16	Purchase Requisition for Boxes and Risers	13376		7/2/2001
I042	S16	Transmittal of Mound Waste Box Evaluation	804779		7/14/2000
I045	S16	TRU Waste Certification Task Sludge From the Waste Disposal Plant			Undated
I048	S7	Regulatory Requirements Associated with Transfer of Mound's Transuranic Waste to Another DOE Site			Undated
I049	S13	B&W Waste Management Org Chart			1997
I050	S3	Support to DOE Mound- Building 38 Safety Analysis Report (SAR) and Technical Requirements (TSRs)			11/30/1993
I052	S16	Handling of Encapsulated Waste Materials In T-25 and T-26			12/1/1994
I054	S13	Un-reviewed Safety Question U-1995-015	USQ 1995-015		8/28/1995
I056	S16	Move TRU Drums from Building T and 23 to and from CWP (BD124)	WMIR-2000-016		5/24/2000
I058	S16	TRAMPAC Requirements Summary Matrix			Undated
I059	S16	Mound Exit Project TRU Waste Disposition Needs			8/18/1998
I063	S16	On Site Handling, Repackaging, and Transportation of Nuclear Materials Located In SW-19 and R-127 (UCNI)			Sep-96
I066	S16	Mound Transuranic Waste Feasibility Study			7/8/1998
I070	S16	Mound Site TRU Waste Data Preliminary TRUPACT-II Transportation Compliance Evaluation			Undated
I071	S16	TRU Waste Baseline Inventory Waste Profile from SRS 2003	DOE-CAO-95-1121		5/5/1995
I072	S16	1 S SRS Waste Acceptance Criteria Manual	1 S, 3.06E	8	10/1/2001
I073	S16	Nuclear Filter Technology Certificate of Compliance			6/14/2000
I074	S16	Container Approval Requests and Deviations for Shipments			Undated
I075	S13	Un-reviewed Safety Question, U-1995-017 (SWR Tritium Complex Stack Flow)	USQ 1995-017		8/28/1995
I076	S13	Un-reviewed Safety Question, U-1995-16 (Wet Alarm Surveillance)	USQ 1995-016		8/28/1995
I077	S13	Un-reviewed Safety Questions U-1995-018 (SWR Tritium Complex Ventilation Surveillance)	U-1995-018		8/28/1995

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I078	S13	Un-reviewed Safety Question U-1995-025 (SW/R Building Stack Monitor Upgrades)	U-1995-025		1/3/1996
I079	S13	Un-reviewed Safety Questions U-1995-008 (SW & T Building Special Unloads)	U-1995-008		8/2/1995
I081	S16	Material Type Codes	MD-70205		7/25/1994
I084	S16	Waste Category - TRU Boxes			Undated
I085	S13	WIPP Low-level TRU Waste Acceptance Criteria			5/13/1977
I086	S16	TRU Waste Box 558			12/3/02
I087	S16	Record of Telecon from Jay Doty/Calculations of Soil/H2O content for WTS packaging			Undated
I090	N/A	OU9 Volume 7 Waste Management			Feb-93
I092	S16	Go West Data Base From SRS			04/14/05
M003	S13 S16	TRUPACT-II Shipment of Mound Pu-239 Material			7/26/2000
M004	S13 S16	"Summary Report on Mound Boxes," E-mail to KellyCR@wipp.carlsbad.nm.us [Clint Kelley]			3/31/2000
M005	S13	" Response to Internal Audit 1079" Inter-Office Memo to Elizabeth Adams-Auditor with attached Audit Report 1079-"WIPP Certification Process," conducted March 14-31, 1988			4/29/1988
M008	S13	Reynolds Electrical & Engineering Co., Inc.- Deviation Report and associated correspondence			9/16/87
M010	S16	Comparison of Hydrogen Estimates for Mound TRU Drums With Savannah River Site Authorization Basis.			9/13/2001
M011	S16	Filter Vents Quote from NucFil for Alternate Filters	12124		12/3/2001
M013	S13	Specification: Design and Build-Portable Venting Device for Radioactive Waste Containers			10/25/2000
M015	S16	Letter to R. L Wainwright, Area Manager, U. S. AEC, Re: Program to Reduce the Generation of Transuranium (TRU) Contaminated Solid Waste			1/23/1975
M016	S13	Letter to J.L. Hebb, Re: Status of Pu Waste and TRU Implementation			2/25/1974
M018	S16	Letter to W.W. Hickman, Waste Management Manager, Aerojet Nuclear Co., Re: Shipment of Mound Laboratory's TRU Waste to the NRTS for Retrievable Storage			10/22/1973
M019	S13	Mound Documentation Inventory			Undated
M020	S13	Letter to P.L. Abellera, Re: WD Bldg. Mezzanine Pipe Insulation			1/12/1987
M026	S13	Records Retention	EDK8801		1/11/1988
M028	S13	Letter to T. C. Elswick, Re: Waste Management Items			8/5/1982
M029	S13 S16	Memo to W.P. Davis and T.C. Elswick, Re: SAND Boxes			9/3/1982
M032	S13	"Re-audit of the TRU Waste Certification Activities at Monsanto Research Corporation" and "Mound Response to the WIPP WACCC Re-audit"			5/20/1987, 7/9/87

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M033	S13	Audit of TRU Waste Certification Activities at Monsanto Research Corporation, Miamisburg Ohio, March 12-13, 1985; [Response] TRU Waste Certification Program Audit; and Approval			03/85 to 9/25/85
M034	S16	Memo on 3 subjects 1) Use of Insta-Foam Froth Pak, 2) Equipment Removal, 3) Use of the Cardboard Liner in the FRP Box			2/27/1981
M035	S16	Specified in the letter: MRC Specification SPA750048, "Testing and Inspection Spec.- Open Head Polyethylene Drum Liner"			7/11/1979
M036	S16	Specification Drum 55 gal. DOT-17C	ES-50365 B		Undated
M037	S16	Change Notice of Offsite Packaging Criteria (IDO-10074) for Revised Metal Container Painting Requirements-RHB-263-81			8/11/1981
M038	S16	Specification- Drum 30 gal. DOT-17H, WMP-572005	ES-50421A		7/22/1981
M039	S16	Specification-Container, Waste : DOT 7A Steel Box (Mill Bin), WMP-572010	ES-50303 B		7/22/1981
M040	S16	Letter to D.A. Edling, Re: "Idaho TRU Waste Criteria" with attached Letter to H.N. Hill and D. Ofte, Area Managers, DOE Dayton and Rocky Flat Area Offices, Re: "Revision of the Off-Site Packaging Criteria for Receipt of TRU Waste at the INEL RWMC			9/19/80, 7/30/80
M041	S16	Letter to R. K. Blauvelt, Re: "Change Notice of Offsite Packaging Criteria Report IDO-10074-RMS-61-81" and attached "Specification-Sponge Rubber Gasket DOT 17C 55-Gallon Drum"			5/13/1981
M043	S16	Letter to B.G. Twinning, Manager, AL, Re: Mound TRU Waste Shipments to INEL	DAO:RJG:N-14-2		10/21/1988
M053	S13	Letter to J.E. Conaway, Re: Storage at the Burial Ground of Mound Laboratory Plutonium 238 Scrap			4/10/1970
M054	S16	Letter to J.P. Hamric, Director, Nuclear Fuel Cycle Div. ID, Re: Packaging Criteria for TRU Waste Shipments to INEL			9/5/1978
M055	S16	Memorandum to D. Agnew, et. al., Re: WTS Line Removal Problems/Suggestions			10/23/1981
M059	S16	Mound MDL Numbers			6/30/2002
M063	S9 S16	Straight Bill Of Lading.	Shipper No. TRU05010		5/21/2005
P002	S16	Acceptable TRU Packaging for Interim Storage and/or Terminal Isolation			10/31/1977
P003	S16	Volume Reduction System for Solid and Liquid TRU Waste from the Nuclear Fuel Cycle Quarterly Report			1976
P015	S16	Tools for Decontamination and Decommissioning of Nuclear Facilities			11/16/1986
P016	S16	Mound's Decommissioning Experience, Tooling, and Techniques			1982
P018	S16	Reinvestigation of the January 1969 Plutonium-238 Waste Transfer Line Break			9/16/1974
P020	S16	Characterization of Mounds Hazardous, Radioactive, and Mixed Waste	MLM-ML-90-48-0001		8/15/1990
P022	S13	DTWI WBS 5.06-12 Mound Laboratory Plant Site Summary		0	3/5/1993

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P025	S3	Operational Controls for SW/R Complex	MD-10480		Jun-97
P027	S3	EG&G Mound Building 38 Accident Analysis of Internal (Operational) Events (Results and Findings)			Jun-94
P033	S2	SW/R Building Calorimetry Operating Procedure	MD-10304		8/7/1997
P034	S14	Estimated Discard Limits for Plutonium-238 Recovery Processing in the Plutonium Processing Building	MLM-MU-75-63-0004		3/26/1975
P035	S7	WD Building Room 10			8/28/2001
P036	S3	Hazard Evaluation of the Special Metallurgical (SM) Building at Mound Laboratory	MLM-MU-76-66-0001		8/6/1976
P038	S13	T Building Structural History and Process History Summary Background Document			2-Nov
P041	S2 S16	Technical Manual-TRU Waste Management	MD-70205		06/24/1976- 02/02/1989
P044	S14 S16	FSAR Building 38	ML95410001	11	11/9/1995
P049	S2	TRU Drum Venting Factsheet and TRU Drum Venting System Pre-Operational Process Hazards Review	WSRC-PH-95-11	2	2/2/1996
P050	S2	TRU Waste Drum Venting and Purging System	NFT-SR-0001	14	1/13/2000
P058	S16	Mound Site Waste Management Reports and Site Plans 1977-1980			6/1/1977
P061	S16	Citing Criteria Document		2	Mar-96
P063	S16	Mound Site Waste Management Reports and Site Plans 1972 to 1976			6/27/1972
P065	S13 S16	Mound WIPP Certification Program for Newly Generated Contact Handled (CH) Transuranic Waste	MD-10203		6/1/85, 6/10/86, 9/1/88, 4/14/89
P067	S3	Revised U-233 Re-Pack Project	SE/USQ-1995-0004	2	1/17/1995
P068	S2 S16	1396 "Notice of Intent to File Suit"			12/18/1984
P069	S2 S16	Engineering change Notice TRU Waste Metal Box Loading and Sealing	MD-70205		4/25/1985
P070	S14	Mound Laboratory Annual Report CY 1974	MLM-MU-75-70-0001		Oct-75
P072	S3	Final Safety Analysis Report for the SW/R Tritium Complex	MLM-ML-92-42-0001		2/4/1992
P073	S9 S16	On Site Transportation and Handling of Radioactive and Hazardous Materials	MD-10246	4	9/18/2000
P075	S16	Safe TRU Waste System	77-10-166		10/31/1977
P076	S16	USERS Handbook: Waste Accountability Shipping and Packaging (issue 14 is inactive).	MD-10173	1, 13, 14	3/00, 8/4/98 & 6/15/81
P078	N/A	Mound Plant Waste Acceptance Criteria	MD-81070	1, 2	10/14/92, 5/31/94, 10/4/95
P079	S16	Management of Hazardous Waste, Radioactive Mixed Waste, Trash and Recyclable Metals.	MD-70523	2	3/28/1995
P086	S12	Mound Laboratory Environmental Plutonium Study	MLM-2249		9/15/1975
P095	S10	List and Directory of Chemicals and MSDS Sheets			Various

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P096	S6	1996 and 1998 Chemical Inventory and 1991 Carcinogen list.			1996, 1998, 1991
P098	S9	Verification Reports			7/7/2000
P103	S10	Nutek Product Bulletin, Nutek 600 EL, Low Foam Nuclear Decontamination Cleaner			Undated
P105	S16	Revision of the Off-Site Packaging Criteria for Receipt of Transuranic Waste at the INEL RWMC			7/30/1980
P109	S16	DOT-E-5948		10	6/26/2000
P111	S16	Site Treatment Plan for the Mixed Wastes at the Mound Facility Miamisburg, Ohio, Background and Plan Volumes		8	9/15/1995
P120	S16	Radioactive Waste Procedures-Loading/Sealing Transuranic Waste Destined for SRS in Drums	MD-10167, ECN No. 040131MD	2	11/8/04
P121	S16	SRS Waste Acceptance Criteria Manual, 1S, E-Area TRU Pads Transuranic Waste Acceptance Criteria	3.06	11	4/30/05
P122	N/A	Acceptable Knowledge Summary for Solidified Acid/Caustic Waste (BN835)	AMWTP-RPT-TRUW-23		8/8/2006
U001	S16	2990 Information on Shipments to SRS			Various
U002	S4	Trash Categories/Content Codes and Waste Categories			Undated
U004	S16	Miscellaneous Container Information			various
U005	S6	List of Radionuclides/Chemicals			Undated
U006	S16	Questions about TRU waste dated 4/17/2000 and logbook entries dated 4-5-88			4/20/2002
U007	S16	Content Code Assessments for INEL Contact Handled Stored TRU Waste	WM-F1-82-021		Oct-82
U009	S13	Mound Site TRU Waste Data Preliminary TRUPACT-II Transportation Compliance Evaluation			Undated