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

SEP 2 9 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-SOIL, Contaminated Soil from the Mound Site

Dear Mr. Bearzi:

The Department of Energy Carlsbad Field Office has approved the CCP-SRS Waste Stream Profile Form Number SR-MD-SOIL, Contaminated Soil from the Mound 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

David C. Moody
Manager

Enclosure(s)

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

cc: w/o enclosure
J. Kieling, NMED ED
N. Castaneda, CBFO ED
C. Fesmire, CBFO ED
J. R. Stroble, CBFO ED
G. Basabilvazo, CBFO ED
S. McCauslin, CBFO ED
K. Watson, CBFO ED
P. Martinez, CTAC ED
P. Gilbert, LANL ED
G. Lyshik, LANL ED
C. Walker, TechLaw ED
CBFO, M&RC
*ED denotes electronic distribution

CBFO:NTP:NC:GS:10-1547:UFC 5900.00

100946

Attachment 2 – CCP Waste Stream Profile Form

(1) Waste Stream Profile Number: SR-MD-SOIL			
(2) Generator site name: Savannah River Site		(4)Technical contact: Craig Simmons	
(3) Generator site EPA ID: SC1890008989		(6) Technical contact phone number: (505) 234-7216	
(5) Date of audit report approval by New Mexico Environment Department (NMED): 6/13/06, 1/11/07, 2/25/08, 3/13/09, 8/6/09, 3/16/10			
(7) Title, version number, and date of documents used for WAP Certification: CCP-PO-001, *CCP Transuranic Waste Characterization Quality Assurance Project Plan*, Revision 18, June 30, 2010 CCP-PO-002, *CCP Transuranic Waste Certification Plan*, Revision 24, June 30, 2010 CCP-PO-004, *CCP/SRS Interface Document*, Revision 27, May 22, 2009			
(8) Did your facility generate this waste? YES [ ] NO [X]			
(9) If no, provide the name and EPA ID of the original generator: Mound Facility - OH6890008984			
Waste Stream Information[1]			
(10) WIPP ID: SR-W027-999-MD-SOIL[3]		(11) Summary Category Group: S4000	
(12) Waste Matrix Code Group: Soils		(13) Waste Stream Name: Contaminated Soil from the Mound Site	
(14) Description from the TWBIR: Soil mixed with absorbant and some commingled debris.			
(15) Defense TRU Waste: YES [X] NO [ ]			
(16) Check One: CH [X] RH [ ]			
(17) Number of SWBs 1	(18) Number of Drums 109 55-gallon[4]	(19) Number of Canisters 0	
(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] D004, D005, D006, D007, D008, D009, D010, D011, F002, F003, F004, F005, F007, and F009			
(22) Applicable TRUCON Content Numbers: SQ111, SQ211, SQ154			
(23)**Acceptable Knowledge Information**[1]			
(For the following, enter the supporting documentation used [i.e., references and dates])			
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 6.3			
(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, Section 4.4.1, 6.2 & 6.4			
(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. 28, May 12, 2010			
(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 6.1			
(25B) Waste stream volume and time period of generation: CCP-AK-SRS-8, Rev. 5, October 14, 2009, Section 6.2			

(25C)	Waste generating process description for each building: CCP-AK-SRS-8, Rev. 5, October 14, 2009, Section 6.3		
(25D)	Waste Process flow diagrams: None		
(25E)	Material inputs or other information identifying chemical/radionuclide content and physical waste form: CCP-AK-SRS-8, Rev. 5, October 14, 2009, Section 6.4		
(25F)	Waste Material Parameter Weight Estimates per unit of waste: See Table 2 of the Summation of Aspects of AK Summary Report: SR-MD-SOIL		
(26) Which Defense Activity generated the waste: (check one)			
	Weapons activities including defense inertial confinement fusion		Naval Reactors development
	Verification and control technology		Defense research and development
	Defense nuclear waste and material by products management	X	Defense nuclear material production[5]
	Defense nuclear waste and materials security and safeguards and security investigations		
(27)	Supplemental Documentation		
(27A)	Process design documents: See S1 AK#s on Attachment 1 to Summation of Aspects of AK Summary Report		
(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		
(27E)	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 Information[2]			
For the following, when applicable, enter procedure title(s), number(s) and date(s)			
(28)	Radiography: See procedures listed on the attached CIS,		
(29)	Visual Examination: See procedures listed on the attached CIS,		
(30)	Comments: For a list of the waste characterization procedures used and the reference and date of the respective procedures see the list of procedures on the attached CIS.		

Revlewed by AK Expert:	**YES** [X]		**Date:** 08/23/2010	
Reviewed by STR (if necessary):	**YES** [X]	**N/A** [ ]	**Date:** 08/24/2010	

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) 09/16/2010
Signature of Site Project Manager	Printed Name	Date

NOTE:
(1) Use back of sheet or continuation sheets, if required.
(2) If radiography, visual examination, headspace gas analysis, and/or homogeneous solids/soils/gravel sample analysis were used to determine EPA Hazardous Waste Codes, attach signed Characterization Information Summary documenting this determination.
(3) Waste stream SR-MD-SOIL also included historical Transuranic Waste Baseline Inventory Report Identification numbers MD-T003 and MD-T005.
(4) This estimate of 55-gallon drums includes 22.9m^3 of soil currently packaged into large boxes, 55-gallon drums and 1 85-gallon drum.
(5) The defense determination also included defense research and development

CHARACTERIZATION INFORMATION SUMMARY

WSPF # SR-MD-SOIL

Lot 1

TABLE OF CONTENTS

CCP Characterization Information Summary Cover Page

Waste Stream # SR-MD-SOIL Lot #: 1

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

SPM Review: Craig Simmons Date: 8/10/2010

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:

Visual Examination (VE):

CCP-TP-113	Rev. 3	01/25/05	CCP Standard Waste Visual Examination

Radiography (RTR/NDE):

CCP-TP-053	Rev. 8	06/30/10	CCP Standard Real-Time Radiography (RTR) Inspection Procedure
CCP-TP-053	Rev. 7	10/21/09	CCP Standard Real-Time Radiography (RTR) Inspection Procedure
CCP-TP-053	Rev. 6	03/04/08	CCP Standard Real-Time Radiography (RTR) Inspection Procedure

Solids Analysis:

ACCM-8909	Rev. 9	01/20/05	Microwave Assisted Digestion of Homogeneous Solids and Soil/Gravel
ACCM-9500	Rev. 11	12/15/05	Sample Preparation for Semivolatile Organic Compounds and Polychlorinated Biphenyls
ACCM-9500	Rev. 10	07/28/04	Sample Preparation for Semivolatile Organic Compounds and Polychlorinated Biphenyls
ACMM-9270	Rev. 8	01/20/05	Semivolatile Organic Compounds by Gas Chromatography/Mass Spectrometry
ACMM-9270	Rev. 7	07/28/04	Semivolatile Organic Compounds by Gas Chromatography/Mass Spectrometry
ACMM-9260	Rev. 14	12/01/05	Volatile Organic Compounds by Gas Chromatography/Mass Spectrometry
ACMM-9260	Rev. 13	12/21/04	Volatile Organic Compounds by Gas Chromatography/Mass Spectrometry
ACMM-2901	Rev. 3	01/27/05	Determination of Trace Elements by ICP-AES for TRU Waste Characterization
ACMM-2901	Rev. 2	04/07/03	Determination of Trace Elements by ICP-AES for TRU Waste Characterization
ACMM-2810	Rev. 3	01/27/05	Determination of Mercury by CVAA for TRU Waste Characterization
ACMM-2810	Rev. 2	04/07/03	Determination of Mercury by CVAA for TRU Waste Characterization
ACMM-9441	Rev. 11	12/22/04	Determination of Nonhalogenated Volatile Organic Compunds by Gas Chromatography

Project Level Data Validation / DQO Reconciliation:

CCP-TP-001	Rev. 18	08/09/10	CCP Project Level Data Validation and Verification
CCP-TP-001	Rev. 17	09/24/07	CCP Project Level Data Validation and Verification
CCP-TP-001	Rev. 16	04/26/07	CCP Project Level Data Validation and Verification
CCP-TP-001	Rev. 15	11/22/06	CCP Project Level Data Validation and Verification
CCP-TP-001	Rev. 14	11/16/06	CCP Project Level Data Validation and Verification
CCP-TP-001	Rev. 13	07/21/06	CCP Project Level Data Validation and Verification
CCP-TP-001	Rev. 12	05/25/06	CCP Project Level Data Validation and Verification
CCP-TP-001	Rev. 11	03/23/05	Project Level Data Validation and Verification
CCP-TP-002	Rev. 22	06/30/10	CCP Reconciliation of DQOs and Reporting Characterization Data
CCP-TP-002	Rev. 21	08/04/09	CCP Reconciliation of DQOs and Reporting Characterization Data
CCP-TP-002	Rev. 20	08/18/08	CCP Reconciliation of DQOs and Reporting Characterization Data
CCP-TP-002	Rev. 19	12/22/06	CCP Reconciliation of DQOs and Reporting Characterization Data
CCP-TP-002	Rev. 18	11/16/06	CCP Reconciliation of DQOs and Reporting Characterization Data
CCP-TP-002	Rev. 17	10/10/06	CCP Reconciliation of DQOs and Reporting Characterization Data
CCP-TP-002	Rev. 16	06/06/06	CCP Reconciliation of DQOs and Reporting Characterization Data
CCP-TP-002	Rev. 15	08/16/05	CCP Reconciliation of DQOs and Reporting Characterization Data
CCP-TP-003	Rev. 17	11/09/09	CCP Data Analysis for S3000, S4000, and S5000 Characterization
CCP-TP-003	Rev. 16	10/02/07	CCP Data Analysis for S3000, S4000, and S5000 Characterization
CCP-TP-003	Rev. 15	11/16/06	CCP Data Analysis for S3000, S4000, and S5000 Characterization
CCP-TP-003	Rev. 14	09/03/03	Sampling Design and Data Analysis for RCRA Characterization
CCP-TP-005	Rev. 19	07/06/10	CCP Acceptable Knowledge Documentation
CCP-TP-005	Rev. 18	11/16/06	CCP Acceptable Knowledge Documentation
CCP-TP-005	Rev. 17	06/05/06	CCP Acceptable Knowledge Documentation
CCP-TP-005	Rev. 16	02/27/06	CCP Acceptable Knowledge Documentation
CCP-TP-005	Rev. 15	03/31/05	CCP Acceptable Knowledge Documentation

CIS 02

CCP-TP-030	Rev. 28	05/12/10	CCP CH TRU Waste Certification and WWIS/WDS Data Entry
CCP-TP-030	Rev. 27	12/14/09	CCP CH TRU Waste Certification and WWIS/WDS Data Entry
CCP-TP-030	Rev. 26	05/27/09	CCP CH TRU Waste Certification and WWIS Data Entry
CCP-TP-030	Rev. 25	01/22/09	CCP CH TRU Waste Certification and WWIS Data Entry
CCP-TP-030	Rev. 24	08/20/08	CCP CH TRU Waste Certification and WWIS Data Entry
CCP-TP-030	Rev. 23	03/12/08	CCP CH TRU Waste Certification and WWIS Data Entry
CCP-TP-030	Rev. 22	07/24/07	CCP CH TRU Waste Certification and WWIS Data Entry
CCP-TP-030	Rev. 21	05/21/07	CCP CH TRU Waste Certification and WWIS Data Entry
CCP-TP-030	Rev. 20	02/07/07	CCP CH TRU Waste Certification and WWIS Data Entry
CCP-TP-030	Rev. 19	11/16/06	CCP CH TRU Waste Certification and WWIS Data Entry
CCP-TP-030	Rev. 18	05/01/06	CCP TRU Waste Certification and WWIS Data Entry
CCP-TP-030	Rev. 17	12/29/05	CCP TRU Waste Certification and WWIS Data Entry
CCP-TP-030	Rev. 16	04/22/05	CCP TRU Waste Certification and WWIS Data Entry

WAP Certification:

CCP-PO-001	Rev. 18	06/30/10	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-001	Rev. 16	10/31/07	CCP Transuranic Waste Characterization Quality Assurance Project Plan
CCP-PO-001	Rev. 15	06/10/07	CCP Transuranic Waste Characterization Quality Assurance Project Plan
CCP-PO-001	Rev. 14	03/28/07	CCP Transuranic Waste Characterization Quality Assurance Project Plan
CCP-PO-001	Rev. 13	11/16/06	CCP Transuranic Waste Characterization Quality Assurance Project Plan
CCP-PO-001	Rev. 12	03/22/06	CCP Transuranic Waste Characterization Quality Assurance Project Plan
CCP-PO-001	Rev. 11	03/10/05	CCP Transuranic Waste Characterization Quality Assurance Project Plan
CCP-PO-002	Rev. 24	06/30/10	CCP Transuranic Waste Certification Plan
CCP-PO-002	Rev. 23	04/07/10	CCP Transuranic Waste Certification Plan
CCP-PO-002	Rev. 22	01/12/10	CCP Transuranic Waste Certification Plan
CCP-PO-002	Rev. 21	01/26/09	CCP Transuranic Waste Certification Plan
CCP-PO-002	Rev. 20	11/02/07	CCP Transuranic Waste Certification Plan
CCP-PO-002	Rev. 19	05/22/07	CCP Transuranic Waste Certification Plan
CCP-PO-002	Rev. 18	11/16/06	CCP Transuranic Waste Certification Plan
CCP-PO-002	Rev. 17	11/16/06	CCP Transuranic Waste Certification Plan
CCP-PO-002	Rev. 16	11/16/06	CCP Transuranic Waste Certification Plan
CCP-PO-002	Rev. 15	03/22/06	CCP Transuranic Waste Certification Plan
CCP-PO-002	Rev. 14	12/29/05	CCP Transuranic Waste Certification Plan
CCP-PO-002	Rev. 13	05/09/05	CCP Transuranic Waste Certification Plan
CCP-PO-004	Rev. 27	05/22/09	CCP/SRS Interface Document
CCP-PO-004	Rev. 26	08/26/08	CCP/SRS Interface Document
CCP-PO-004	Rev. 25	05/20/08	CCP/SRS Interface Document
CCP-PO-004	Rev. 24	06/28/07	CCP/SRS Interface Document
CCP-PO-004	Rev. 23	01/31/07	CCP/SRS Interface Document
CCP-PO-004	Rev. 22	11/16/06	CCP/SRS Interface Document
CCP-PO-004	Rev. 21	03/31/06	CCP/SRS Interface Document
CCP-PO-004	Rev. 20	11/02/05	CCP/SRS Interface Document
CCP-PO-004	Rev. 19	03/14/05	CCP/SRS Interface Document

CES 03

CCP Correlation of Container Identification Numbers to Batch Data Report Numbers

Waste Stream: # SR-MD-SOIL Lot # 1

Container ID Number	NDA BDR	RTR BDR	VE BDR	Solids Sampling BDR	Solids Analytical BDR	Load Management/ Overpack Yes
MDL0506146	SRNDA917	N/A	SRVEMS0005	N/A	N/A	
MDL0506095	SRNDA918	N/A	SRVEMS0004	N/A	N/A	
MDL0506073	SRNDA917	N/A	SRVEMS0001	N/A	N/A	
MDL0506689	SRSGS282	SR4RTR0053	N/A	N/A	N/A	
MDL0506656	SRSGS282	SR4RTR0053	N/A	N/A	N/A	
MDL0506581	SRSGS282	SR4RTR0053	N/A	N/A	N/A	
MDL0504556	SRSGS282	SR4RTR0053	N/A	N/A	N/A	
MDL0504373	SRSGS282	SR4RTR0053	N/A	N/A	N/A	
MDL0503949	SRSGS282	SR4RTR0053	N/A	N/A	N/A	
MDL0502426	SRSGS282	SR4RTR0053	N/A	N/A	N/A	
** These containers were randomly selected for solids sampling and analysis and are included for verification of hazardous waste number assignment for the waste stream only.						
**MDL0506223	N/A	N/A	N/A	WCS-0501	ALD05015N ALD05023M ALD05021S ALD05021V	N/A
**MDL0506233	N/A	N/A	N/A	WCS-0501	ALD05015N ALD05023M ALD05021S ALD05021V	N/A
**MDL0506246	N/A	N/A	N/A	WCS-0502	ALD05018N ALD05023M ALD05024S ALD05026V	N/A
**MDL0506267	N/A	N/A	N/A	WCS-0501	ALD05018N ALD05023M ALD05024S ALD05026V	N/A
**MDL0506281	N/A	N/A	N/A	WCS-0501	ALD05015N ALD05023M ALD05021S ALD05021V	N/A

Signature of Site Project Manager

Craig Simmons
Printed Name

8/10/2010
Date

CIS 04

CCP Solids Analysis VOC UCL_{90} Evaluation Form

WSPF #: SR-MD-Soil **Waste Stream Lot Number** 1 through 1

ANALYTE	Transform Data Used (No, Data-Log, SQRT, other)	# Samples above MDL (1)	# Samples	Maximum (ppmv)	Mean (ppmv)	SD (ppmv)	UCL_{90} (ppmv)	PRQL (ppmv)	Transformed PRQL (N/A or Value)	UCL_{90} > PRQL Yes	EPA Code
Benzene	No	0	5	0.09500	0.09000	0.00500	0.09343	10	N/A		
Bromoform	No	0	5	0.09500	0.09000	0.00500	0.09343	10	N/A		
Carbon Disulfide	No	0	5	0.19000	0.18000	0.00791	0.18542	10	N/A		
Carbon Tetrachloride	No	0	5	0.09500	0.09000	0.00500	0.09343	10	N/A		
Chlorobenzene	No	0	5	0.09500	0.09000	0.00500	0.09343	10	N/A		
Chloroform	No	0	5	0.09500	0.09000	0.00500	0.09343	10	N/A		
1,2-Dichloroethane	No	0	5	0.09500	0.09000	0.00500	0.09343	10	N/A		
1,1-Dichloroethylene	No	0	5	0.09500	0.09000	0.00500	0.09343	10	N/A		
trans-1,2-Dichloroethylene	No	0	5	0.09500	0.09000	0.00500	0.09343	10	N/A		
Ethyl benzene	No	0	5	0.09500	0.09000	0.00500	0.09343	10	N/A		
Methylene chloride	No	0	5	0.19000	0.18000	0.00791	0.18542	10	N/A		
1,1,2,2-Tetrachloroethane	No	0	5	0.09500	0.09000	0.00500	0.09343	10	N/A		
Tetrachloroethylene	No	0	5	0.09500	0.09000	0.00500	0.09343	10	N/A		
Toluene	No	0	5	0.09500	0.09000	0.00500	0.09343	10	N/A		
1,1,1-Trichloroethane	No	0	5	0.19000	0.18000	0.00791	0.18542	10	N/A		
1,1,2-Trichloroethane	No	0	5	0.09500	0.09000	0.00500	0.09343	10	N/A		
Trichloroethylene	No	0	5	0.09500	0.09000	0.00500	0.09343	10	N/A		
Trichlorofluoromethane	No	0	5	0.19000	0.18000	0.00791	0.18542	10	N/A		
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	No	0	5	0.38000	0.36000	0.01768	0.37212	10	N/A		
Vinyl chloride	No	0	5	0.09500	0.09000	0.00500	0.09343	10	N/A		
m,p-Xylene[d]	No	0	5	0.19000	0.18000	0.00791	0.18542	10	N/A		
o-Xylene	No	0	5	0.09500	0.09000	0.00500	0.09343	10	N/A		
Acetone	Log	0	5	0.53063	0.46308	0.04019	0.49063	100	4.61		
Butanol	Log	0	5	0.53063	0.46308	0.04019	0.49063	100	4.61		
Methanol	Log	0	5	0.53063	0.46308	0.04019	0.49063	100	4.61		
Methyl ethyl ketone	No	0	5	1.15000	1.07000	0.04472	1.10066	100	N/A		

CTS 005

CCP Solids Analysis VOC UCL_{90} Evaluation Form

WSPF #: SR-MD-Soil **Waste Stream Lot Number** 1 through 1

ANALYTE	Transform Data Used (No, Data-Log, SQRT, other)	# Samples above MDL (1)	# Samples	Maximum (ppmv)	Mean (ppmv)	SD (ppmv)	UCL_{90} (ppmv)	PRQL (ppmv)	Transformed PRQL (N/A or Value)	UCL_{90} > PRQL Yes	EPA Code
Ethyl ether	No	0	5	1.15000	1.07000	0.04472	1.10066	100	N/A		
Isobutanol	Log	0	5	0.53063	0.46308	0.04019	0.49063	100	4.61		
Pyridine	Log	0	5	0.53063	0.46308	0.04019	0.49063	100	4.61		
1,4-Dichloroethanebenzene[c]	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A		
Ortho-Dichlorobenzene[c]	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A		
Formaldehyde[a(2)]	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A		
Hydrazine[b(2)]	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A		

[a] Required only for homogenous solids and soil/gravel waste from Los Alamos National Laboratory and Savannah River Site.

[b] Required only for homogenous solids and soil/gravel wast from Oak Ridge National Laboratory and Savannah River Site.

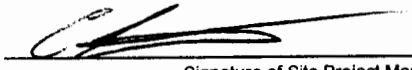
[c] Can also be analyzed as an SVOC. If analyzed as an SVOC, the QAO's of CCP-TP-001, Table B3-6 apply..

[d] 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 B4 of the WAP, 1/2 of the MDL value is used in calculating the mean concentration.)

(2) Waste stream SR-MD-SOIL was generated and packaged at the Mound Site and later shipped to SRS for characterization. Because the soil/gravel in this waste stream is from the Mound site and does not contain homogenous solids or soils/gravel from SRS, analysis for analytes specific to SRS homogenous solids and soils/gravels (Formaldehyde and Hydrazine) was not performed.



Signature of Site Project Manager

Craig Simmons
Printed Name

8/10/2010
Date

CCP Solids Analysis SVOC UCL_{90} Evaluation Form

WSPF #: SR-MD-Soil **Waste Stream Lot Number** 1 through 1

ANALYTE	Transform Data Used (No, Data-Log, SQRT, other)	# Samples above MDL (1)	# Samples	Maximum (ppmv)	Mean (ppmv)	SD (ppmv)	UCL_{90} (ppmv)	PRQL (ppmv)	Transformed PRQL (N/A or Value)	UCL_{90} > PRQL Yes	EPA Code
2-Methylphenol (cresols)	No	0	5	0.20000	0.13800	0.05215	0.17376	40	N/A		
3&4 -Methylphenol (cresols)	No	0	5	0.40500	0.27700	0.10581	0.34955	40	N/A		
1,4-Dichlorobenzene [a]	No	0	5	0.20000	0.13800	0.05215	0.17376	40	N/A		
Ortho-Dichlorobenzene [a]	No	0	5	0.20000	0.13800	0.05215	0.17376	40	N/A		
2,4-Dinitrophenol	No	0	5	0.40500	0.27700	0.10581	0.34955	40	N/A		
2,4-Dinitrotoluene	No	0	5	0.20000	0.13800	0.05215	0.17376	2.6	N/A		
Hexachlorobenzene	No	0	5	0.20000	0.13800	0.05215	0.17376	2.6	N/A		
Hexachloroethane	No	0	5	0.20000	0.13800	0.05215	0.17376	40	N/A		
Nitrobenzene	No	0	5	0.20000	0.13800	0.05215	0.17376	40	N/A		
Pentachlorophenol	No	0	5	0.20000	0.13800	0.05215	0.17376	40	N/A		

[a] Can also be analyzed as an VOC. If analyzed as an 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 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

8/10/2010
Date

CES 07

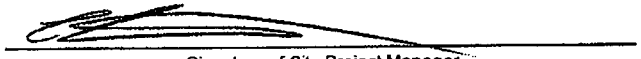
CCP Solids Analysis Metals UCL_{90} Evaluation Form

WSPF #: SR-MD-Soil **Waste Stream Lot Number** 1 through 1

ANALYTE	Transform Data Used (No, Data-Log, SQRT, other)	# Samples above MDL (1)	# Samples (2)	Maximum (ppmv)	Mean (ppmv)	SD (ppmv)	UCL_{90} (ppmv)	PRQL (ppmv)	Transformed PRQL (N/A or Value)	UCL_{90} > PRQL Yes	EPA Code
Antimony	No	5	5	0.85000	0.75200	0.07396	0.80271	100	N/A		
Arsenic	Log	5	5	1.56862	1.34289	0.13673	1.43665	100	4.61		
Barium	Log	5	5	4.39445	4.12563	0.18697	4.25383	2000	7.60		
Beryllium	No	5	5	0.93000	0.83800	0.07823	0.89164	100	N/A		
Cadmium	No	3	5	0.23000	0.14400	0.08764	0.20409	20	N/A		
Chromium	Log	5	5	3.63759	3.04605	0.34905	3.28538	100	4.61		
Lead	Log	5	5	2.39790	2.22319	0.10645	2.29618	100	4.61		
Mercury	Log	5	5	-0.94161	-1.52300	0.41789	-1.23646	4	1.39		
Nickel	SQRT	5	5	4.47214	4.09050	0.29106	4.29007	100	10.00		
Selenium	No	1	5	0.79000	0.39800	0.21913	0.54825	20	N/A		
Silver	Log	5	5	-0.11653	-0.48582	0.23795	-0.32266	100	4.61		
Thallium	No	0	5	0.50000	0.49900	0.00224	0.50053	100	N/A		
Vanadium	Log	5	5	3.43399	3.21758	0.15100	3.32112	100	4.61		
Zinc	No	5	5	57.00000	49.80000	7.04982	54.63386	100	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 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

8/10/2010
Date

238

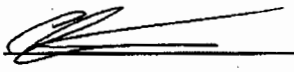
CCP Solid VOCs Summary Data

Waste Stream Number SR-MD-SOIL 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 8/10/2010

CJS 09

CCP Solid SVOCs Summary Data

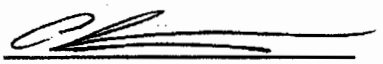
Waste Stream Number SR-MD-Soil Waste Stream Lot Number 1

Tentatively Identified Compound	Maximum Observed Estimated Concentrations (ppmv)	# Samples Containing TIC	% Detected
Diethyl Phthalate[1]	1.70	5	100.00%

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

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

(1) The lab reported on the Data Report Narrative for each of the two BDRs that the presence of Diethyl Phtalate in the laboratory blanks and all of the samples indicate that the detections are due to laboratory contamination. The subject TIC is listed in 40CFR261 Appendix VIII; however, based on the laboratory determination that the TIC is attributable to laboratory contamination; a reevaluation AK is not warranted for this condition and the TIC will not be added to the Target Analyte list for this waste stream.

SPM Signature  Date 8/10/2010

CIS 010

CCP RTR/VE Summary of Prohibited Items and AK Confirmation

Waste Stream #: SR-MD-Soil 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.

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 and VE are acceptable characterization methods because RTR and VE meet all of the Data Quality Objectives for NDE of waste stream SR-MD-SOIL.

Site Project Manager Signature	Craig Simmons	8/10/2010
	Printed Name	Date

CIS 011

CCP Reconciliation with Data Quality Objectives

WSF# SR-MD-SOIL Lot # 1

Sampling Completeness

RTR/VE:

Number of Valid Samples: 10 Number of Total Samples Analyzed: 10

Percent Complete: 100 (QAO is 100%)

NDA

Number of Valid Samples: 10 Number of Total Samples Analyzed: 10

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 (1)

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%)

CCP Reconciliation with Data Quality Objectives

WSF# SR-MD-SOIL 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-SOIL 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	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	Craig Simmons	8/10/2010
	Printed Name	Date

SUMMATION OF ASPECTS OF AK SUMMARY REPORT: SR-MD-SOIL

Overview

Waste Stream SR-MD-SOIL is contact-handled soil generated during decontamination and decommissioning (D&D) and remediation activities at the Mound Site in Miamisburg, Ohio. The containers of soil were transferred from the Mound Facility to the Savannah River Site for characterization and storage. Mound was an integrated research, development, and production facility performing work in support of both DOE weapons and energy programs. The primary mission as it relates to the generation of TRU waste was the processing of Pu-238 for the fabrication of radioisotopic heat sources for space and military applications.

Waste stream SR-MD-SOIL was generated by Mound operations in support of defense nuclear materials production and defense research and development. Therefore, this waste stream is defense related waste.

This Summation of Aspects of AK Summary Report includes information to support Waste Stream Profile Form (WSPF) number SR-MD-SOIL, contaminated soil from the Mound Site. The primary source of information for this summation was CCP-AK-SRS-8, *Central Characterization Project Acceptable Knowledge Summary Report for Mound Site Transuranic Waste Stored at the 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.* CCP-AK-SRS-8 includes information obtained from numerous sources, including facility safety basis documentation, historical document archives, generator and storage facility waste records and documents including databases and interviews with operational and waste management personnel.

Waste Stream Identification Summary

Waste Stream Name:	Contaminated Soil from the Mound Site
Waste Stream Number:	SR-MD-SOIL
Site Where TRU Waste Was Generated:	Mound Site
Facility Where TRU Waste Was Generated:	Special Metallurgical (SM) Building and from various remediation areas
Site Where TRU Waste is Currently Stored:	Savannah River Site
Waste Stream Volume- Current:	109 55-gallon drums[1] 1 SWB
Waste Stream Volume- Projected	0 55-gallon drums 0 SWBs
Dates of Waste Generation:	1988 to 2005
TRUPACT-II Content Code (TRUCON) :	SQ111, SQ211
Summary Category Group:	S4000 – Soil/Gravel
Waste Matrix Code:	S4200

[1]This estimate of 55-gallon drums includes 22.9m^3 of soil currently packaged into large boxes, 55-gallon drums and 1 85-gallon drum.

Waste Matrix Code Group:	Soils
Waste Stream TWBIR Identification:	SR-W027-999-MD-SOIL[2]
RCRA EPA Hazardous Waste Numbers:	D004, D005, D006, D007, D008, D009, D010, D011, F002, F003, F004, F005, F007, and F009

Waste Stream Description and Physical Form

Waste stream SR-MD-SOIL is comprised of soil and, to a lesser degree, rock, concrete, rebar, and piping. Absorbents such as Florco (magnesium, aluminum silicate and quartz silica) and Petrosorb (fuller's earth and quartz silica) were also added to soil containers.

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

Point of Generation

Location

Waste stream SR-MD-SOIL was generated at the Mound Site in Miamisburg, Ohio. The waste is currently stored at the Savannah River Site in Aiken, South Carolina.

Area and/or Building of Generation

This waste stream was generated during D&D of the Special Metallurgical (SM) Building and from remediation areas described herein. Areas remediated included portions of the Waste Transfer System (WTS) underground transfer lines that transported liquid waste from various site buildings to the Waste Disposal (WD) Building for treatment. In addition, contaminated areas beneath and adjacent to the SM Building have also generated soil that is part of this waste stream.

Generating Processes

Description of the Waste Generating Processes

The WTS pipeline commenced operation in 1968, and carried acidic and caustic wastewater from the Plutonium Processing (PP) Building to the WD Building. During a routine transfer of plutonium nitrate solution in 1969, the pipeline ruptured leading to Pu-238 contamination. The rupture of this pipeline also caused the area surrounding the old Sewage Disposal (SD) facility (which was adjacent to WD Building) to become contaminated with Pu-238. In 1970, elevated alpha activity was observed at the SD influent tanks during routine monitoring. Subsequent sampling of the sanitary and process sewer lines indicated that seepage from the process lines had contaminated the sanitary lines which were made from vitrified clay. Soil removal from this area was completed in 1974 and the waste was shipped to Idaho. Additional remediation of this area in 1988 generated the soil in this waste stream, which is stored at Savannah River Site.

Soil was also generated in 2004 and 2005 from the remediation of Potential Release Site (PRS)-438. PRS-438 was an area with contaminated soil and a segment of the WTS underground transfer lines between the Semi-Works (SW) and the Research (R) Buildings and north of WD Building.

[2]Waste stream SR-MD-SOIL also included historical Transuranic Waste Baseline Inventory Report Identification numbers MD-T003 and MD-T005.

The area under and immediately surrounding SM Building was contaminated with Pu-238. The contamination was primarily located beneath the operations side of the building and the tanks outside the building. The soil in this waste stream was from beneath the SM Building floor; specifically Room 10.

Soil was also generated in 2005 by the SM West Asphalt Project. The "West Asphalt" area is immediately adjacent to, and west of the SM/PP stack running west to the roadway and approximately 30 meters north. This location on the SM/PP hill is known to historically contain several radiologically contaminated areas.

A brief description of the areas and buildings at Mound that generated TRU waste and may have contributed to the constituents in this soil waste stream are provided below.

SM Building – The SM facility was the original building used for Pu-238 processing until operations were transferred to PP Building.

PP Building – The PP facility was used primarily for production of Pu-238 heat source capsules and Pu-238 recovery processes. The Pu-238 processing activities ended in 1980. The only TRU waste generating activities in operation since that time were various programs in the north analytical line and building support functions.

R Building – The R facility was initially used for research and development (R&D) for the polonium-210 program. The polonium program was phased out by 1971. Plutonium-238 research began in about 1959. Most of the Pu-238 work ended in about 1978 although a few activities continued into the 1990s. R&D work involving tritium was also conducted starting in the early 1980s.

SW Building – The SW facility consisted of many laboratories used for a variety of activities. Areas consisted of a number of rooms with alpha and gamma radiation and project capabilities.

WD/Waste Disposal Annex (WDA) Building – The WD facility was the central facility for the treatment of liquid radioactive wastes at Mound. The WDA treated alpha waste water from SM and PP buildings. The beta waste water treatment system began in 1967.

WTS and Hillside – The WTS includes underground transfer lines that transported liquid waste from site buildings to WD Building for treatment. The WTS remediation included the underground pipeline that ran from SW/R to WD and the two underground pipelines that ran from SM/PP to the pump house (Building 41) and then to WD through two underground pipelines. The Hillside is located adjacent to WD, and is the site of a 1969 spill resulting from a ruptured pipeline.

SD Plant – The SD Plant was built to process sanitary waste. It was taken out of service in the 1970s when it became too small and was replaced by a new sanitary sewage disposal plant. The area surrounding the old SD Plant became contaminated due to the 1969 rupture of the WTS pipeline and from a waste line break near Building 48 in 1970.

Table 1 identifies toxicity characteristic (TC) and F-listed constituents identified in waste stream SR-MD-SOIL.

Table 1 – TC and F-Listed Constituents in Waste Stream SR-MD-SOIL

Constituent	CAS #	EPA Hazardous Waste Numbers
1,1,1-Trichloroethane	71-55-6	F002
1,1,2-Trichloroethane	79-00-5	F002
1,1,2-Trichloro-1,2,2-trifluoroethane	76-13-1	F002
Acetone	67-64-1	F003
Arsenic	7440-38-2	D004
Barium	7440-39-3	D005
Benzene	71-43-2	F005
n-Butyl alcohol	71-36-3	F003
Cadmium	7440-43-9	D006
Carbon disulfide	75-15-0	F005
Chlorobenzene	108-90-7	F002
Chromium	7440-47-3	D007
Cyanides (spent cyanides from electroplating operations)	57-12-5	F007, F009
Cyclohexanone	108-94-1	F003
Ethyl acetate	141-78-6	F003
Ethyl benzene	100-41-4	F003
Ethyl ether	60-29-7	F003
Ortho-Dichlorobenzene	95-50-1	F002
2-Ethoxyethanol	110-80-5	F005
Isobutanol	78-83-1	F005
Lead	7439-92-1	D008
Mercury	7439-97-6	D009
Methanol	67-56-1	F003
Methyl isobutyl ketone	108-10-1	F003
Methyl ethyl ketone	78-93-3	F005
Methylene chloride	75-09-2	F002
2-Nitropropane	79-46-9	F005
Pyridine	110-86-1	F005
Selenium	7782-49-2	D010
Nitrobenzene	98-95-3	F004
Silver	7440-22-4	D011
Tetrachloroethylene	127-18-4	F002
Toluene	108-88-3	F005
Trichloroethylene	79-01-6	F002
Xylene	1330-20-7	F003

RCRA Determinations - Hazardous Waste Determinations

Ignitability, Corrosivity, & Reactivity

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 (VE) 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

The waste 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.

Ignitable liquids such as ethanol, isopropanol and potassium permanganate were used at the Mound facility and were identified as SD and WD influents. These liquids contaminated the soil but the waste is not liquid and is not ignitable. RTR and/or VE are performed to ensure liquids do not exceed the amount allowed by the WIPP Waste Analysis Plan (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.

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 stream does not exhibit the characteristic of ignitability (D001) (References P041, P065, P078, P105, P117, P120, P121, and U019).

Corrosivity

The waste does not meet the definition of corrosivity as defined in 40 CFR 261.22. Acids and caustics used in the SM Building and identified in WD and SD influent include hydrochloric acid, hydrofluoric acid, nitric acid, phosphoric acid, ammonium hydroxide, sodium hydroxide and sulfuric acid. Because the waste is not a liquid, the waste is not corrosive. Acid waste water from the pipe rupture was neutralized by the soil carbonates (Reference P013).

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 stream does not exhibit the characteristic of corrosivity (D002) (References P041, P065, P078, P105, P117, P120, P121, and U019).

Reactivity

The waste 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.

Explosives have not been identified in this waste stream (References I010, P041, P065, P078, P105, P117, P120, P121, and U019). Calcium metal was used in the 1960s to reduce plutonium tetrafluoride to metal. After the reduction process, the Pu-238 metal was broken away from the slag, and the metal was cleaned with a brush to remove adherent slag and calcium metal. The slag and calcium metal were sent to plutonium recovery, and therefore, are not part of this waste stream (Reference I090).

Cyanides were present in aqueous liquids treated in SD and WD Buildings and residual cyanides could therefore be present in the soil. However, residual cyanide contamination would not cause the soil to exhibit the characteristic of reactivity (References I045, I090, and P100).

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 the waste stream does not exhibit the characteristic of reactivity (D003) (References I010, P041, P065, P078, P105, P117, P120, P121, and U019).

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 regulatory threshold, the applicable EPA HWN is conservatively applied to the waste stream.

The soil may contain toxicity characteristic metals based on the following identified sources. Toxicity characteristic metal compounds were used in Mound processes and were identified in SD and WD influent that contaminates this waste. The toxicity characteristic metals arsenic, barium, cadmium, chromium, lead, mercury, selenium, and silver were identified as reagents used in analysis, were present in the R Building chemical inventory, and were listed as trace contaminants in the soil. Soil was sampled around the SW Building prior to remediation of the area and 29 samples were analyzed for total metals. Several toxicity characteristic metals were detected in small quantities but none above the regulatory threshold. These data are directly applicable to the soil from PRS-438 which accounts for the majority of this waste stream (Reference M062). Soil samples were also collected at 25 locations at the SM West Asphalt Area and analyzed for toxicity characteristic metals. Several toxicity characteristic metals were detected in small quantities but none above the regulatory threshold (Reference M061). Even though the analytical results indicate the metals do not exceed their respective regulatory thresholds, the data do not represent the entire population of soil (References M061 and M062). For this reason, EPA hazardous waste numbers D004, D005, D006, D007, D008, D009, D010, and D011 are conservatively applied to waste stream SR-MD-SOIL (Reference DR002).

Soil cores were extracted from several sampling points around the SW Building prior to remediation. While there was no evidence of volatile organics in previous samplings, organic solvents were used in the R and SW buildings. For this reason, field screening for organics was performed and organics were detected in four samples. These four samples were analyzed for total organic analysis. Methyl ethyl ketone was the only toxicity characteristic organic detected. Benzene, tetrachloroethylene, and trichloroethylene were not detected in the samples. Other toxicity characteristic organics were not analyzed. These data are directly applicable to the soil from PRS-438 which accounts for the majority of this waste stream (Reference M062). Soil samples were also collected at 25 locations at the SM West Asphalt Area and analyzed for volatile and semi-volatile organics. Tetrachloroethylene was detected in 5 of the samples at SM West Asphalt Area (Reference M061).

The toxicity characteristic organics benzene, methyl ethyl ketone, nitrobenzene, pyridine, tetrachloroethylene, and trichloroethylene may be present in the soil. These compounds were used for their solvent properties, and therefore, the more specific F-listed hazardous waste numbers are assigned. Therefore, D018 (benzene), D035 (methyl ethyl ketone), D036 (nitrobenzene), D038 (pyridine), D039 (tetrachloroethylene), and D040 (trichloroethylene) are not assigned to the waste stream.

F-Listed Waste

Waste stream SR-MD-SOIL was mixed with or derived from F-listed hazardous waste from non-specific sources as listed in Title 40 CFR 261.31. F002, F003, F004, F005, F007, and F009 listed solvents were used in processes that contaminate this soil waste stream (References C011, C016, C019, DR002, I045, I090, P020, P065, P096, and P100).

Aqueous solutions containing trace quantities of organic solvents (e.g. 1,1,1-Trichloroethane, methyl ethyl ketone, acetone, toluene) from the R, SW, SM and/or PP Buildings were treated in the WD Building. Several aqueous solutions containing trace quantities of organic solvents were also treated in the old SD

facility. This waste stream includes soil from under and west of SM Building and from remediation of underground liquid waste transfer lines north and south of SD Building and WD Building and is therefore potentially contaminated with these liquids (References C011, C016, C019, DR002, I045, I090, P020, P065, P096, and P100).

Although 1,1,1-trichloroethane, methylene chloride, tetrachloroethylene, and trichloroethylene were identified in the AK Record, these solvents were not used in a "large-scale" degreasing operation such as cold cleaning or vapor. This soil waste stream was not generated as a result of large-scale degreasing operations. Therefore, EPA hazardous waste number F001 is not assigned to this waste stream.

Cyanide plating baths were treated in the SD Building. Seepage from the underground lines entering the SD Building may have contaminated the surrounding soil. Therefore, EPA HWNs F007 and F009 are assigned to waste stream SR-MD-SOIL (References DR002 and I090).

Although the waste is not ignitable, F003 is assigned based on historical application of this HWN (Reference DR002).

The following F-listed constituents contaminate the waste and are applied.

(F002)
1,1,1-Trichloroethane, 1,1,2-trichloroethane, 1,1,2-trichloro-1,2,2-trifluoroethane, chlorobenzene, ortho-dichlorobenzene, methylene chloride, tetrachloroethylene, trichloroethylene

(F003)
Acetone, n-butyl alcohol, cyclohexanone, ethyl acetate, ethyl benzene, ethyl ether, methanol, methyl isobutyl ketone, xylene

(F004)
Nitrobenzene

(F005)
2-Ethoxyethanol, 2-nitropropane, benzene, carbon disulfide, isobutanol, methyl ethyl ketone, pyridine, toluene

(F007)
Spent cyanide plating bath solutions from electroplating operations

(F009)
Spent stripping and cleaning solutions from electroplating operations

U, K, and P-Listed Chemicals

Waste stream SR-MD-SOIL is not mixed with a discarded commercial chemical product, an off-specification species, a container residue, or a spill residue thereof (40 CFR 261.33). Numerous U- and P-listed chemicals were identified in Mound facilities; however, none of the AK documentation reviewed indicates that pure product or unused chemicals were placed into TRU waste. The organic solvents were in spent aqueous solutions discharged through the WTS for treatment and do not meet the definition of a U-listed waste.

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, EPA HWN U134 is not assigned to waste stream SR-MD-SOIL. (References I090 and P100).

Beryllium and beryllium compounds may contaminate this waste stream. Based on AK documentation reviewed, the form of beryllium does not meet the definition of commercial chemical product beryllium powder (40 CFR 261.33). Therefore, the waste stream does not meet the definition of P015 waste.

Other Soil Waste Streams

No other Mound soil waste streams have been shipped to the WIPP.

Solids Sampling/Analysis Information

Solid sampling and analysis was completed on (5) randomly selected containers in Lot #1 of this waste stream. No new EPA HWNs are added as a consequence of solid sampling and analysis. No target analyte UCL_{90} values exceeded respective target analyte PRQLs.

One TIC, diethyl phthalate, was identified as present in greater than 25 percent of the samples. The Data Report Narrative for associated batch data reports identified that diethyl phthalate was present in the laboratory blanks and all of the associated samples indicate that the detection of diethyl phthalate is due to laboratory contamination. Therefore the TIC is not added to the target analyte list.

Conclusion

The following EPA hazardous waste numbers are assigned to this waste stream: D004, D005, D006, D007, D008, D009, D010, D011, F002, F003, F004, F005, F007, and F009.

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 TRU waste stream.

Prohibited Items

The absence of prohibited items is determined and documented through acceptable knowledge and characterization activities. RTR or VE is performed on each container in this waste stream to verify the absence of prohibited items. The following items have been determined as not present in the waste:

- Liquid Waste
- Non-radioactive pyrophoric materials
- 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
- Non-mixed hazardous wastes
- 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.

Each container of waste is certified and shipped only after RTR or VE:

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

Justification for the Selection of Radiography or VE

Containers in Lot 1 of this waste stream were characterized using RTR and VE. RTR and VE are the acceptable characterization methods for waste stream SR-MD-SOIL. RTR and VE meet all of the Data Quality Objectives for NDE of waste stream SR-MD-SOIL.

Method for Determining Waste Material Parameter Weights per Unit of Waste

The Waste Material Parameters (WMPs) for waste stream SR-MD-SOIL were estimated by reviewing data from container characterization forms. SRS observed the packaging of the waste at Mound and estimated the material parameters at the time of generation, then entered the information on the container characterization forms. Data for 19 containers from waste stream SR-MD-SOIL were evaluated and are representative of the waste stream. A statistical analysis of the data was performed; the results are presented in Table 2. This evaluation is documented in a memorandum as required by CCP-TP-005, *CCP Acceptable Knowledge Documentation*.

The WMPs, average weight percent and weight percent range are presented in Table 2.

Table 2. Waste Stream SR-MD-SOIL Waste Material Parameter Estimates

Waste Material Parameter	Average Weight Percent	Weight Percent Range
Iron-based Metals/Alloys	3.3%	0 – 21.3%
Aluminum-based Metals/Alloys	0.0%	0 – 0.0%
Other Metals	0.0%	0 – 0.0%
Other Inorganic Materials	0.0%	0 0.0%
Cellulosics	0.0%	0 – 0.0%
Rubber	0.0%	0 – 0.0%
Plastics	0.1%	0 – 10.8%
Organic Matrix	1.9%	0 – 13.5%
Inorganic Matrix	0.0%	0 – 0.0%
Soils/Gravel	94.7%	75.3 – 100%

List of AK Sufficiency Determinations

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

Radiological Characterization

The two most prevalent radionuclides in this waste stream, by weight, are Pu-238 and U-234. The isotopes expected to be present in this waste stream are listed in Table 3.

Table 3 – Summary of Waste Stream SR-MD-SOIL Radionuclides

WIPP Tracked Radionuclides	Additional Reported Radionuclides						
Am-241	Ac-227	Cm-244	Ho-166m	Pb-206	Pu-236	Th-227	Tl-208
Cs-137	Ac-228	Co-60	K-40	Pb-210	Pu-241	Th-228	U-232
Pu-238	Ba-133	Cs-134	Na-22	Pb-211	Ra-223	Th-229	U-235
Pu-239	Bi-212	Eu-152	Np-237	Pb-212	Ra-226	Th-230	U-237
Pu-240	Bi-213	Eu-154	Pa-231	Pb-214	Ra-228	Th-232	Y-90
Pu-242	Bi-214	Fr-221	Pa-233	Po-209	Rn-219	Th-234	
Sr-90	Cf-252	H-3		Po-210	Sb-125		
U-233							
U-234							
U-238							

Payload management will be implemented in accordance with the WIPP Waste Acceptance Criteria, Appendix E. The percentage of the waste stream that is above 100 nCi/g is approximately 60%. The percentage of the waste stream that is below 100 nCi/g is 40%. However, each payload container shipped to WIPP will be certified in accordance with CCP-PO-002, CCP Transuranic Waste Certification Plan as containing more than 100 nCi/g of transuranic alpha emitting isotopes with half-lives greater than 20 years.

Attachment 1, AK Source Documents

Source Document Tracking Number	AK #	Title	Document Number	Author	Date
C001	S7	Interview/Kurt Menger, Tom Reilly, Skip Bowers, Ed Dillon	N/A	Jeff Lunsford, Julia Whitworth	12/10/2002
C003	S7	Interview/Bill Franz	N/A	Jerri McTaggart	3/4/2003
C005	S7	Interview/Dan Hopkins	N/A	Gutierrez, Guerin	4/21/2003
C007	S7	Interview/Dr. Bernie Kokenge	N/A	Gutierrez, McTaggart, Blauvelt	4/24/2003
C008	S2, S8	Interview/Toby Elswick	N/A	McTaggert, Gutierrez, Blauvelt, Rovansek	5/13/2003
C010	S7	Interview/Clyde Chong	N/A	McTaggert, Gutierrez, Blauvelt	5/15/2003
C011	S7	Interview/Ron Goss	N/A	McTaggert, Gutierrez, Blauvelt	04/22/03, 05/21/03
C012	S7	Interview/Bill Davis	N/A	McTaggert, Gutierrez, Blauvelt	4/25/2003
C013	S2, S7	Interview/Al Combs	N/A	McTaggert, Gutierrez, Blauvelt, Rovansek	5/15/2003
C016	S7	Interview/Ron Saun	N/A	McTaggert, Gutierrez	6/4/2003
C018	S7	Interview/Rob Robinson & Gary Morris	N/A	Jerri McTaggart	2/18/2003
C019	NA	Interview/Mike Deaton	NA	McTaggert, Gutierrez, Blauvelt	6/5/2003
C020	S2, S7	Interview/Don Luthey	N/A	Gutierrez, McTaggart, Blauvelt	6/10/2003
C040	S7	E-mails from C. Sienkiewicz to J. Harrison, Re: Mound Soil and Soil Packaging Questions	N/A	See title	7/6/05 and 7/5/05
C041	S9	Rockwell International Letter from J. K. Paynter to B. C. Barrett. Subject: Radionuclide Information Required For TRUPACT II Shipments	WCP8-20	See title	3/23/1989
C042	S3, S5, S9, S12	Letters to Thomas L. Clements, EG&G Idaho from R.N. Rogers, LANL, Re: Reactivity of Resins (nitrated)	N/A	R. N. Rogers	5/18/1983, 6/9/1983
DR002	NA	Discrepancy Resolution. RCRA Characterization of Waste Stream SR-MD-SOIL, Revision 1.	NA	NA	8/17/2005
DR006	S9	Discrepancy Resolution for Soil with Smaller Amounts of Debris	NA	J. Harrison	8/17/2005
I001	S2	Transuranic Waste Baseline Inventory Report 1995	N/A	N/A	12/1/1995
I005	S2, S4, S9	Waste Exam Log for RTR Tapes	N/A	SRS	2001
I006	S6	Visit By Mound Lab Personnel	N/A	J.S. Johnson	5/21/1974
I009	S9	R-130 Search Box	MLM-ML-92-42-0001	N/A	8/3/1994
I010	NA	TRAMPAC Requirement Matrix by Drum	NA	NA	NA
I011	S8, S9	EPA Hazardous Waste Codes found in INEL Stored TRU Waste Content Code	N/A	N/A	6/2/1993
I012	S3	Un-reviewed Safety Question Modify Vacuum Pump Enclosure U-1995-028	N/A	Melvin E. Babcock	11/1/1995
I013	S2	SE/USQ-TESOC.954.02.R2 Extended Storage	N/A	N/A	2/6/1995

Source Document Tracking Number	AK #	Title	Document Number	Author	Date
		of Tritiated Water			
I017	S6	List of Drums	N/A	SRS/Mound	Undated
I019	S9	Waste Characterization Services Report	N/A	Canberra	2/1/1998
I020	S6	Spreadsheet of Waste from SRS Bill Nauman and Glen Siry	N/A	SRS	Undated
I024	S8, S10	Material Acceptance Report	N/A	Mound	10/9/1996
I035	S1	MCS Mobil Characterization Services Tech. Manual for Radiography of TRU Boxes and Drums Vol. 1	RFP no.. SC-110716	N/A	Undated
I038	S5	Radioactive impurities in the Polonium Process at Mound Lab.	MLM-1158	R.C. Lange	6/3/1963
I045	NA	TRU Waste Certification Task Sludge From the Waste Disposal Plant	NA	NA	NA
I048	S7	Regulatory Requirements Associated with Transfer of Mound's Transuranic Waste to Another DOE Site	N/A	N/A	Undated
I050	S3	Support to DOE Mound- Building 38 Safety Analysis Report (SAR) and Technical Requirements (TSRs)	N/A	Thomas G. Ryan	11/30/1993
I090	NA	OU9 Volume 7 Waste Management	NA	NA	02/93
M042	NA	Current Scope of Activities at Mound (a presentation)	N		
M061	S5, S9, S12	Miscellaneous Information on West Asphalt: Sample and Analysis Plan-West Asphalt (SM/PP Hill), E. Jendrek, no date; E-mails to L. Turner from E.F. Jendrek, 1) Re: Validation of West Asphalt Soil Sampling, 9/16/03, 2) Validation of West Asphalt Soil Sampling, 2/18/04; Data Review & Validation-West Asphalt Radiological, E. Jendrek, no date; Spreadsheets: West Asphalt Gamma Spec. Characterization, Metals, Semi-volatiles, and Volatiles.	N/A	Various-see title	Various-see title
M062	S5, S12	Miscellaneous Information on Soil Sampling of R & SW Buildings: R and SW Buildings-Sampling & Analysis Plan, 4/02; E-mail to L. Turner from E.F. Hendrek, Re: Data Evaluation Summary, R/SW Phase 1 Soil Sampled May-June, 2002, 1/12/05; Table B-1, Analytical Results for TCLP Metals and Volatiles, not dated; Data Review & Validation-R/SW Phase 1 Metals, E. Jendrek, no date; and Data Review & Validation-R/SW Phase 1 PCB, E. Hendrek, no date.	N/A	Various-see title	Various-see title
M063	S9	Straight Bill Of Lading.	Shipper No. TRU05010	U.S DOE, c/o CH2M Hill Mound, Inc.	5/21/2005
M064	S9	"E-mail Correspondence (and attached RTR data) from Steve Rose to Jeff Harrison. Subject: SR-MD-SOIL."	N/A	Steve Rose	10/10/2005
P013	S12	Assessment of the AWC TRU Clean Process for use on Mound Soils and Sediments	N/A	D.R. Rogers	3/23/1989
P017	S2, S9	The Mound Site Survey Project for the Characterization of Radioactive Materials in the Site Soils	N/A	Robert L. Stought, Don A Edling, and Douglas G. Praper	5/16/1988
P020	NA	Characterization of Mounds Hazardous, Radioactive, and Mixed Waste	MLM-ML-90-48-0001	Audeen W. Fentiman	8/15/1990

Source Document Tracking Number	AK #	Title	Document Number	Author	Date
P025	S3	Operational Controls for SW/R Complex	MD-10480	Mound	6/1/1997
P027	S3	EG&G Mound Building 38 Accident Analysis of Internal (Operational) Events (Results and Findings)	N/A	James L. Jones, and Thomas G. Ryan	6/1/1994
P033	S2	SW/R Building Calorimetry Operating Procedure	MD-10304	D. V. Eckman, et. al.	8/7/1997
P034	S2	Estimated Discard Limits for Plutonium-238 Recovery Processing in the Plutonium Processing Building	MLM-MU-75-63-0004	D.F. Luthy and W. Bond	3/26/1975
P035	S7	WD Building Room 10	N/A	Floyd Hertwick	8/28/2001
P036	S3	Hazard Evaluation of the Special Metallurgical (SM) Building at Mound Laboratory	MLM-MU-76-66-0001	Thomas M. Flanagan	8/6/1976
P041	S2	Technical Manual-TRU Waste Management	MD-70205	Mound	06/24/1976-02/02/1989
P049	S2	TRU Drum Venting Fact Sheet and TRU Drum Venting System Pre-Operational Process Hazards Review	WSRC-PH-95-11	Mound	2/2/1996
P050	S2	TRU Waste Drum Venting and Purging System	NFT-SR-0001	NFT Incorporated	1/13/2000
P052	S9, S12	TRU Waste Certification	MLM-3096	Edward L. Lewis	9/30/1983
P057	S2	D&D Operations Procedures	MD-10167	P.E. Figgins	3/22/95, 12/5/1995
P065	NA	Mound WIPP Certification Program for Newly Generated Contact Handled (CH) Transuranic Waste	MD-10203	J.A. Morley, et. al.	6/1/85, 6/10/86, 9/1/88, 4/14/89
P067	S3	Revised U-233 Re-Pack Project	SE/USQ-1995-0004 (R2)	Richard L. Higgins	1/17/1995
P068	S2	1396 "Notice of Intent to File Suit"	N/A	Mary G. Wilson	12/18/1984
P069	S2	Engineering change Notice TRU Waste Metal Box Loading and Sealing	MD-70205	H Bond and F. Morris	4/25/1985
P072	S3	Final Safety Analysis Report for the SW/R Tritium Complex	MLM-ML-92-42-0001	Terrence L. Buxton	2/4/1992
P073	S2, S9	On Site Transportation and Handling of Radioactive and Hazardous Materials	MD-10246	Mound	9/18/2000
P078	NA	Mound Plant Waste Acceptance Criteria	MD-81070	NA	10/14/1992 05/31/1994
P079	S2	Management of Hazardous Waste, Radioactive Mixed Waste, Trash and Recyclable Metals.	MD-70523	Mound	3/28/1995
P086	S12	Mound Laboratory Environmental Plutonium Study	MLM-2249	D.R. Rogers	9/15/1975
P095	S10	List and Directory of Chemicals and MSDS Sheets	N/A	N/A	Various
P096	S6	1996 and 1998 Chemical Inventory and 1991 Carcinogen list.	N/A	N/A	1996, 1998, 1991
P098	S9	Verification Reports	N/A	N/A	7/7/2000
P099	S2, S4, S9, S12	WD Soil Removal Project	AT-33-1-GEN-53	H. A. Black	11/1/1974
P100	NA	Mound Quality Control Plan for the Control of Radioactive Waste	NA	NA	10/1982
P103	S10	Nutek Product Bulletin, Nutek 600 EL, Low Foam Nuclear Decontamination Cleaner	N/A	Nutek	Various

Source Document Tracking Number	AK #	Title	Document Number	Author	Date
P105	NA	Revision of the Off-Site Packaging Criteria for Receipt of Transuranic Waste at the INEL RWMC	NA	NA	7/30/1980
P108	S2	DOE Hazardous Chemical Waste Site Visit Report	N/A	Albuquerque Operations	Undated
P117	S2	Radioactive Waste Procedures-Loading/Sealing Transuranic Waste Destined for SRS in Boxes	MD-10167, ECN No. 040132MD	R.S. Tunning	10/21/2004
P120	NA	Radioactive Waste Procedures-Loading/Sealing Transuranic Waste Destined for SRS in Drums	MD-10167, Operation 800	NA	11/8/2004
P121	NA	SRS Waste Acceptance Criteria Manual, 1S, E Area TRU Pads Transuranic Waste Acceptance Criteria	3.06, Rev. 11	NA	04/30/2005
U002	S4	Trash Categories/Content Codes and Waste Categories	N/A	N/A	Undated
U005	S6	List of Radionuclides/Chemicals	N/A	Mound	Undated
U019	S2	Waste Management Instruction-Packaging of Highly Contaminated Soil from PRS 438	N/A	Mound	1/10/2005

Alphanumeric Designations
C Correspondence
D Documents
DR Discrepancy Resolution
M Miscellaneous
P Procedures and Published Documents
U Unpublished Documents

AK Numbers
S1 Process Design Documents
S2 Standard Operating Procedure
S3 Safety Analysis Reports
S4 Waste Packaging Logs
S5 Test plans/research project reports
S6 Site databases
S7 Information from site personnel
S8 Standard industry documents
S9 Previous analytical data
S10 Material safety data sheets
S11 Laboratory Notebooks
S12 Comparable or surrogate sampling and analysis data
NA Not a supplemental source document, but cited in the AK Summation