



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

MAR 04 2004



Mr. Steve Zappe, WIPP Project Leader
Hazardous Waste Permits Program
Hazardous and Radioactive Materials Bureau
New Mexico Environment Department
2905 E. Rodeo Park Drive, Bldg. 1
Santa Fe, NM 87505

Subject: Transmittal of Approved Waste Stream Profile Form SR-W026-221F-HET by
the Central Characterization Project at the Savannah River Site

Dear Mr. Zappe:

The Department of Energy, Carlsbad Field Office (CBFO) has approved the Waste Stream Profile Form SR-W026-221F-HET by the Central Characterization Project at Savannah River Site. Enclosed is a copy of the approved form as required by Section B-4(b)(1) of the WIPP Hazardous Waste Facility Permit No. NM4890139088-TSDF.

If you have any questions on this matter, please contact me at (505) 234-7357 or (505) 706-0066.

Sincerely,

Kerry W. Watson
CBFO Assistant Manager
Office of National TRU Program

Enclosure

cc: w/o enclosure
J. Kieling, NMED
C. Walker, TechLaw
M. Strum, WTS *ED
R. Chavez, WRES *ED
K. Dunbar, WRES
L. Greene, WRES
S. Calvert, CTAC
CBFO M&RC

*ED denotes Electronic Distribution




CCP-TP-002-A2, Rev. 0
CCP Waste Stream Profile FormEffective Date: 06/27//2003
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CCP Waste Stream Profile Form

(1) Waste Stream Profile Number: SR-W026-221F-HET		
(2) Generator site name: SRS		(3) Technical contact: Steven Rose
(3) Generator site EPA ID: SC 1890008989		(3) Technical contact phone number: 505-234-7591
(4) Date of audit report approval by NMED: April 9, 2003		
(4) Title, version number, and date of documents used for WAP Certification: CCP-PO-001, rev. 6, CCP Transuranic Waste Characterization Quality Assurance Project Plan, June 11, 2003 CCP-PO-002, rev. 6, CCP Transuranic Waste Certification Plan, June 11, 2003 CCP-PO-004, rev. 12, CCP/SRS Interface Document, April 8, 2003		
Did your facility generate this waste? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>		(5) If no, provide the name and EPA ID of the original generator: N/A
Waste Stream Information¹		
(6) WIPP ID: W026-221F-HET		(7) Summary Category Group: S5000
(8) Waste Matrix Code Group: Heterogeneous Debris		(9) Waste Stream Name: Post 1990 Heterogeneous Waste from FB Line
(10) Description from the TWBIR: W026-221F-HET: This waste is primarily solids consisting of mainly booties, lab coats, floor sweepings, rags, labware, and other job control wastes.		
(11) Defense TRU Waste: Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>		(11) Check One: CH <input checked="" type="checkbox"/> RH <input type="checkbox"/>
(11) Number of SWBs N/A	(11) Number of Drums 1,163 (55-gallon) current 1,546 (55-gallon) projected	(11) Number of Canisters N/A
(12) Batch Data report numbers supporting this waste stream characterization: See CIS form CCP-TP-002-A4 (pages 17-18 of 26)		
(13) List applicable EPA Hazardous Waste Codes: ² D006, D007, D008, D009, D022, D028, D029, F001, F002, F003, F005		
(14) Applicable TRUCON Content Codes: SR 225A, SR 225C		
Acceptable Knowledge Information¹		
[For the following, enter supporting the documentation used (i.e., references and dates)]		
Required Program Information		
(15) Map of site: CCP-AK-SRS-3, Rev. 2, July 18, 2003, Attachment 2		
(15) Facility mission description: CCP-AK-SRS-3, Rev. 2, July 18, 2003, Section 4.1.4		
(15) Description of operations that generate waste: CCP-AK-SRS-3, Rev. 2, July 18, 2003, Section 4.3		
(15) Waste identification/categorization schemes: CCP-AK-SRS-3, Rev. 2, July 18, 2003, Section 4.4		
(15) Types and quantities of waste generated: CCP-AK-SRS-3, Rev. 2, July 18, 2003, Section 5.2		
(15) Correlation of waste streams generated from the same building and process, as appropriate: CCP-AK-SRS-3, Rev. 2, July 18, 2003, Section 4.2.2		
(15) Waste certification procedures: See CIS form CCP-TP-002-A3 (pages 14-15 of 26)		
Required Waste Stream Information		
(16) Area(s) and building(s) from which the waste stream was generated: CCP-AK-SRS-3, Rev. 2, July 18, 2003, Section 5.1		
(16) Waste stream volume and time period of generation: CCP-AK-SRS-3, Rev. 2, July 18, 2003, Section 5.2		
(16) Waste generating process description for each building: CCP-AK-SRS-3, Rev. 2, July 18, 2003, Section 4.3		
(16) Process flow diagrams: CCP-AK-SRS-3, Rev. 2, July 18, 2003, Section 4.3, Figure 4-1, Figure 4-2		
(16) Material inputs or other information identifying chemical/radionuclide content and physical waste form: CCP-AK-SRS-3, Rev. 2, July 18, 2003, Section 5.4		
(16) Which Defense Activity generated the waste: (check one)		
<input type="checkbox"/> Weapons activities including defense inertial confinement fusion		<input type="checkbox"/> Naval Reactors development
<input type="checkbox"/> Verification and control technology		<input type="checkbox"/> Defense research and development

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<input type="checkbox"/> Defense nuclear waste and material by products management	<input checked="" type="checkbox"/> Defense nuclear material production
<input type="checkbox"/> Defense nuclear waste and materials security and safeguards and security investigations	
Supplemental Documentation	
(17) Process design documents: (See Attachment 1 for Source Document Information) None compiled	
(17) Standard operating procedures: M2, P1-P7, P9-P25	
(17) Safety Analysis Reports: D2	
(17) Waste packaging logs: M6, M7	
(17) Test plans/research project reports: D12	
(17) Site databases: M1, M22	
(17) Information from site personnel: C2, C5, C6, C7, C9, C13, C16, C19, C20, C26, C27, C29, C30	
(17) Standard industry documents: None compiled	
(17) Previous analytical data: D8, M24, M25	
(17) Material safety data sheets: M11	
(17) Sampling and analysis data from comparable/surrogate Waste: None compiled	
(17) Laboratory notebooks: None compiled	
Sampling and Analysis Information	
For the following, when applicable, enter procedure title(s), number(s) and date(s)	
(18) Radiography:	See CIS form CCP-TP-002-A3 (page 12 of 26)
(18) Visual Examination:	See CIS form CCP-TP-002-A3 (page 12 of 26)
Headspace Gas Analysis	
(19) VOCs:	See CIS form CCP-TP-002-A3 (page 13 of 26)
(19) Flammable:	See CIS form CCP-TP-002-A3 (page 13 of 26)
(19) Other gases (specify):	N/A
Homogeneous Solids/Soils/Gravel Sample Analysis	
(20) Total metals:	N/A
(20) PCBs:	N/A
(20) VOCs:	N/A
(20) Nonhalogenated VOCs:	N/A
(20) Semi-VOCs:	N/A
(20) Other (specify):	N/A
Comments:	
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.	
(21) 	S. B. Rose
Signature of Site Project Manager	Printed Name
	Date
2-9-04	
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.	

SUMMATION OF ASPECTS OF AK SUMMARY REPORT: SR-W026-221F-HET**Overview:**

Beginning operations in 1954, the Savannah River Site (SRS) FB-Line produced weapons-grade Pu used in the assembly of atomic weapons. This mission meets the criteria as an atomic energy defense activity consistent with the listing in Section 10101(3) of the Nuclear Waste Policy Act of 1982. The waste stream in this report was generated since January 25, 1990 and up to the present.

The FB-Line was a defense nuclear material production facility where dilute Pu solutions were concentrated and purified into weapons-grade Pu metal for weapons use throughout the period of generation. In addition, beginning May 1999, one portion of the FB-Line began operations for the Material Characterization Program that unpacked, sampled, and repackaged fissile materials from both SRS and off-site facilities.

As a result of various activities conducted in support of the mission (e.g., operation, maintenance, construction, repair, cleaning, and facility modifications), the facility generated TRU waste. Waste contaminated primarily with defense-related Pu material was generated by these activities at SRS.

This summation of the AK Summary Report includes information to support Waste Stream Profile Form (WSPF) Number SR-W026-221F-HET for Heterogeneous Debris Waste relating to the facility's history, configuration, equipment, process operations, and waste management practices. Information contained in this summary was obtained from numerous sources, including facility safety basis documentation, historical document archives, generator and storage facility waste records and documents including SRS Burial Ground Records and databases, and interviews with operational and waste management personnel. Additional details are discussed in CCP-AK-SRS-3, *Central Characterization Project Acceptable Knowledge Summary Report for Savannah River Site Waste Streams: SR-W026-221F-HET, SR-W026-221F-HOM, SR-W026-221F-HEPA*, Revision 2, dated July 18, 2003.

Waste Stream Identification Summary:

Site Where TRU Waste Was Generated:	Savannah River Site
Waste Stream Name:	Post 1990 Heterogeneous Waste from FB-Line
Waste Stream Number:	SR-W026-221F-HET
Dates of Waste Generation:	January 1990 to present
Facility Where TRU Waste Was Generated:	Building 221-F, FB-Line
Waste Stream Volume:	1,163 drums (55-gallon) current 1,546 drums (55-gallon) projected
Summary Category Group:	S5000 – Debris Waste
Waste Stream TWBIR Identification:	W026-221F-HET (and waste re-assigned from T001-221F-HET ¹)
Waste Stream MWIR Identification:	SR-W026

¹ In the TWBIR, the waste stream T001-221F-HET was initially assigned as a non-hazardous waste stream. However, after completion of the Acceptable Knowledge, waste stream T001-221F-HET was determined to be mixed and the volume has been re-assigned by SRS to W026-221F-HET, which is a mixed waste stream.

Site-Specific Item Description Code: Content Code 001 (Job control waste)

Waste Matrix Code Group: Heterogeneous Debris

RCRA Hazardous Waste Codes: D006, D007, D008, D009, D022, D028, D029, F001, F002, F003, F005

Waste Matrix Code: S5300 – Organic Debris

TRUPACT-II Content Code (TRUCON): SR 225A, SR 225C

Waste Stream Description and Physical Form:

The primary operations conducted in FB-Line included: weapons grade plutonium production, scrap recovery, and material characterization of uranium and plutonium from on-site and off-site. Routine operational activities (housekeeping/cleaning, process equipment adjustments, radiological surveys, etc.) and preventive and corrective maintenance were the major waste producers.

The waste stream (job control waste – content code 001) is assigned the waste matrix code (WMC) S5300 because the waste is estimated to be 80% by volume, or more, organic debris materials.

Examples of job control waste include: paper, wipes, cloth rags, uniforms, coveralls, gloves, gaskets, seals, hoses, plastic bags and sheeting, tape, personal protective equipment, plastic bottles, breathing air hoses, wood/nails, scaffold hardware, electric wire, leaded gloves, windows, labware, sponges, miscellaneous rubber, plexiglas, leather, firebrick, glassware, ceramic, small tools, miscellaneous metal hardware, crucibles, pipes, tubing and fittings, instruments, motors, hot plates, and shipping containers.

Point of Generation**Location**

The SRS is located in South Carolina on approximately 310 square miles. It is bounded on the southwest by the Savannah River and occupies parts of Aiken, Barnwell, and Allendale counties. The FB-Line facility is located inside the 221-F Building in the 200-F Area of the SRS.

Area and Building of Generation

All waste from this waste stream was generated by the FB-Line facility located inside the 221-F Canyon Building.

Description of Waste Generating Process

This waste stream was generated primarily from maintenance, housekeeping, and cleaning in the facility where the mission was production of Pu for atomic weapons, plutonium scrap recovery, and characterization of uranium and plutonium materials from on-site and off-site facilities. The waste in this waste stream was generated after January 1990 to the present. Debris waste was generated from the activities and processes listed below.

Maintenance/Housekeeping Activities:

Maintenance and housekeeping activities conducted on FB-Line included the following: lead-lined glove replacements; filter change-outs; changing panels on cabinets and huts; equipment repair; inspection and cleaning of exhaust ducts to remove plutonium accumulation; removal and

replacement of contaminated equipment; floor sweeping; calcium disposal; construction, breakdown, and disposal of huts adjacent to cabinets; bagging trash out of glove boxes and cabinets; disposal of excess samples and residue solidified and returned from C-Lab; and decontamination using non-hazardous products.

Weapons Grade Plutonium Production and Scrap Recovery:

Purified Pu isotopes contained in a dilute nitric acid and hydroxylamine nitrate solution were transferred from the 221-F Canyon Building process to the FB-Line where it was processed to either Pu metal or plutonium oxide. The unit operations included concentration of plutonium nitrate by cation exchange, precipitation of Pu, filtration, washing, warm air-drying, oxidation, reduction with calcium metal to purified Pu metal. Plutonium in solid scrap form was dissolved and recovered through the use of solvent extraction.

Material Characterization of uranium and plutonium from on-site and off-site:

A material characterization campaign commenced in 1999. During this campaign, uranium and plutonium material from SRS and other DOE sites was unpackaged, sampled and repackaged. No chemicals were used in this process.

RCRA Determinations

Hazardous Waste Determinations

Waste generated in this facility does not qualify for any of the exclusions outlined in 40 CFR 260 or 261. Radiography or visual examination confirms the absence of liquids and containerized gases, therefore the waste are not ignitable, corrosive, or reactive.

The chemicals and metals used in the area that are associated with the assigned RCRA hazardous waste codes are listed below:

acetone	carbon disulfide
benzene	carbon tetrachloride
chloroform	chlorobenzene
1,1-dichloroethylene	cyclohexanone
isobutanol [2-Propanol]	ethyl acetate
methanol	ethyl ether
methylene chloride	ethyl benzene
toluene	xylene
1,1,1-trichloroethane	Methyl isobutyl ketone
tetrachloroethylene	n-butyl alcohol
trichloroethylene	cadmium
trichlorotrifluoroethane (Freon)	chromium
1,2-dichloroethane	lead
	mercury

Ignitability

Ignitable materials are not present in FB-Line TRU waste stream. The waste does not exhibit the characteristic of ignitability as identified in 40 CFR 261.21. Liquids with flashpoints <140°F were used in FB-Line. However, liquids were prohibited in TRU waste during the time period of waste generation. Ignitable compressed gases were used in FB-Line but have been removed from this waste stream. The F003 hazardous waste code is applied to the waste stream because solvents were used even though the characteristic is for ignitability. However, as no liquids were allowed

in the waste stream, the F-listed chemicals do not exist as liquids and therefore are not ignitable. The hazardous waste code for ignitability (D001) does not apply to this waste stream.

Corrosivity

Corrosive materials are not present in this waste stream. The waste does not exhibit the characteristic of corrosivity as identified in 40 CFR 261.22. This waste is not liquid. The corrosivity characteristic (D002) does not apply to this waste stream.

Reactivity

The waste stream does not exhibit the characteristic of reactivity as identified in 40 CFR 261.23. Calcium metal was present in the FB-Line process and associated activities that generated the waste. Calcium was separated from this job control waste and is not part of this waste stream. Therefore, the waste code for reactivity (D003) is not assigned to this waste stream.

Toxicity Characteristic

The wastes in this waste stream exhibit the characteristic of toxicity per 40 CFR 261.24 for the following metal and halogenated organic contaminants:

Cadmium (D006)

Cadmium was used for shielding in cation columns. Based on this information, the D006 hazardous waste code was assigned to this waste stream.

Chromium (D007)

Chromium was used in chromated coolant water and was present in enamel paint used in the area. Based on this information, the D007 hazardous waste code was conservatively assigned to this waste stream.

Lead (D008)

Sources of lead include various forms of shielding such as leaded rubber gloves, aprons, and bricks. Lead was also present in the enamel paint used in the area. Based on this information, the D008 hazardous waste code was assigned to the waste stream.

Mercury (D009)

Sources of mercury in the waste include thermometers, manometers and fluorescent light bulbs. Based on this information, the D009 hazardous waste code has been assigned to this waste stream.

Chloroform (D022)

Chloroform was detected in headspace gas samples within the waste stream, however the UCL90 was below the PRQL. The data originated from the former SRS TRU Waste Program and they conservatively applied this hazardous waste code. The D022 hazardous waste code will be retained as a conservative measure.

1,2-Dichloroethane (D028)

1,2-Dichloroethane was detected in headspace gas samples within the waste stream, however the UCL90 was below the PRQL. The data originated from the former SRS TRU Waste Program and they conservatively applied this hazardous waste code. The D028 hazardous waste code will be retained as a conservative measure.

1,1-Dichloroethylene (D029)

1,1-Dichloroethylene was detected in headspace gas samples within the waste stream, however the UCL90 was below the PRQL. The data originated from the former SRS TRU Waste Program

Headspace Gas/Volatile Organic Compound Information

Lot #1 of waste stream SR-W026-221F-HET consists of a total of 60 drums. No target analytes were detected above PRQL. Acetone was found above the MDL in over half of the containers (but less than PRQL). Two TICs were identified in <25% of the drums sampled and were identified as 2-Methyl, 2-Propanol (CAS 75-65-0) and Isopropyl alcohol (CAS 67-63-0). No additional hazardous waste codes were added to the waste stream based on headspace gas sampling (HSGS). HSGS analysis confirms the acceptable knowledge for this waste stream. The specifics of this information are included in the attached Characterization Information Summary report.

Radionuclide Information**Radiological Characterization**

This waste stream is contaminated primarily with Pu-239 and Pu-240. It consists of the following radioisotopes and corresponding ranges of weight percent (wt %) distributions of the radionuclides present:

WIPP Tracked Radionuclides		Other Radionuclides	
Sr-90	Trace (defined as <2%)	H-3	Trace
Cs-137	Trace	C-14	Trace
U-233	Trace	Ni-59	Trace
U-234	Trace	Co-60	Trace
U-238	0 to 100% (see below) ^A	Se-79	Trace
Pu-238	0 to 1%	Tc-99	Trace
Pu-239	0 to 100%	Ru-106	Trace
Pu-240	0 to 35%	Sn-126	Trace
Pu-242	Trace	I-129	Trace
Am-241	0 to 8%	Ba-137m	Trace
		Ce-144	Trace
		Pm-147	Trace
		Th-232	Trace
		U-235	0 to 24%
		U-236	Trace
		Np-237	Trace
		Pu-241	0 to 3%
		Am-242	Trace
		Am-243	Trace
		Cm-243	Trace
		Cm-244	Trace
		Cm-245	Trace
		Cm-246	Trace
		Cm-247	Trace

^A There is a sub-population of approximately 40 drums that were Special Generation Waste having U-238 as the most prevalent isotope and Pu-239 as the second most prevalent isotope.

Attachment 1, Source Documents

- C2 Internal Correspondence, PCB Committee: Meeting No. 1, circa June 1981.
- C5 Acceptable Knowledge Interview Record, G.F. Lunsford & R.E. Lynn, "Identification of Off-Site Scrap Material," April 13, 1999.
- C6 Acceptable Knowledge Interview Record, G.F. Lunsford & M.B. Reuis, "FB-Line Practice Relating to Number of Layers of Confinement", April 1999.
- C7 Acceptable Knowledge Interview Record, G.F. Lunsford & M.B. Reuis, "Absorption and Neutralization of Free Liquids," July 22, 1998 and April 20, 1999.
- C9 Acceptable Knowledge Interview Record, G.F. Lunsford & C.E. Byrd/C.E. Byrd, "Use of Decontamination Agents in the FB-Line Facility," March 2, 1999.
- C13 Telecon Record, G.F. Lunsford with P.J. Spitzer, Starting Date for Refurbished Special Recovery Cabinets 6-8, August 5, 1999.
- C16 Interview of FB-Line Personnel by J. Whitworth and J. Harrison, 1/16/01
- C19 Interview of J. W. McClard: (trans)-1,2-Diochloroethylene and formaldehyde use in FB-Line, G. F. Lunsford, SRS, 05/19/2001
- C20 Record of Communication with D. Gracy, November 2002
- C26 Interview of FB-Line Waste Certification Manager Stephen Bellamy by W. Estill, September 4, 2002.
- C27 Communication with C. Allgood re: Blue Dot program at FB-Line and HB-Line, September 9, 2002
- C29 Communication with J. Lunsford, re: Isotopic for Requested Off-Site Accounts, 5/29/03.
- C30 Communication with J. Lunsford, re: FBL AK Containers not in TWC, 4-2-03.
- D2 Science Applications International Corporation, Safety Analysis-200 Area Savannah River Plant FB-Line Operations, DPSTSA-200-10, SUPP-9, April 1988.
- D8 E.F. Kay, FB-Line Facility Radioisotopic Sampling Plan, NMP-STE-94-0068, Rev. 1, June 27, 1994.
- D12 G.F. Molen, L.W. Gray, *The FB-Line Facility: A Training Aid Document*, DPST-86-449, September 1986.
- M1 AK Tracking Spreadsheet, September 6, 2002
- M2 J.R. Shappell, Specification for Procurement of TRU Waste Storage Drums, NMP-WMG-910067, Revision 1, May 17, 1991.
- M6 SRS Controlled Form, "TRU Waste Data Package" (Example), Form Number: OSR 7-872 (with completed forms) and "TRU Waste Container Characterization" Forms Number OSR 29-90, July 12, 1994.
- M7 SRS Controlled Form, "Radioactive Solid Waste Burial Ground Record" (Example), Form Number: OSR 7-375A (with completed forms).
- M11 MSDSs, Printed February 12, 1988 and July 29, 2002.
- M22 Lunsford, J., "Uncontrolled SRS Database for Post-1999 FB-Line Waste," Jeff Lunsford, July 12, 2002.
- M24 Analysis of Headspace Gas Data from the SRS TRU Waste Certification Program, March 2003.
- M25 1996 and 1997 CEEP Data.
- P1 DPSOL 221-FB-2502-NS, Savannah River Site Separations Department, *Packaging General and Cabinet Waste Into Red Pails*, Revisions 4, August 1989.
- P2 DPSOL 221-FB-2504-NS, Savannah River Site Separations Department, *Drumming Red Waste Pails and Shipment To the Burial Ground*, Revisions 4-16, August 1989 to June 26, 1996.
- P3 SOP 221-FB-2505-NS, Savannah River Site Separations Department, *Packaging TRU (Process Cabinet) Waste Into A TRU Drum Liner*, Revisions 0-15, August 14, 1991 to September 19, 2000.
- P4 DPSOL 221-FB-2506-NS, Savannah River Site Separations Department, *Packaging TRU (Excluding Process Cabinet Waste) Into A TRU Drum Liner*, Revisions 5-8, September 1989.
- P5 SOP 221-FB-2506-NS, Savannah River Site Separations Department, *Packaging TRU Hut Waste (Excluding Process Cabinet Waste) Into A TRU Drum Liner*, Revisions 9-12, July 24, 1992.

- P6 SOP 221-FB-2506-NS, Savannah River Site Separations Department, Packaging TRU Hut Waste (Excluding Process Cabinet Waste) and TRU Decontamination Waste Into A TRU Drum Liner, Revisions 13-21, June 2, 1994.
- P7 SOP 221-FB-2544, Savannah River Site Separations Department, *Controlled Procurement and Handling of Chemical and Blue Dot (Hazardous) Products*, Revision 0, October 17, 1990.
- P9 SOP 221-FB-1167-NS, Savannah River Site Separations Department Procedure, *Removing Hydraulic Fluid From Mechanical Line Hydraulic Sumps*, Revision 8, August 29, 1999.
- P10 SOP 221-FB-1521-NS, Savannah River Site Separations Department Procedure, *Cleaning Wet Cabinet Sumps or Pipe Duct Sumps and Neutralizing Sump Waste*, Revision 12, January 28, 1999.
- P11 SOP 221-FB-1565-NS, Savannah River Site Separations Department Procedure, *Cold Chemical Cleanup*, Revision 5, February 1, 1999.
- P12 SOP-221- FB-1125-NS, *Handling Mechanical Line Cabinet Sweepings*, Rev. 2, April 12, 1991 through August 23, 1999.
- P13 SOP-221-FB-1166, *Handling and Weighing of Calcium*, Rev. 6, April 22, 1991 through January 14, 1992
- P14 SOP-221-FB-1515-NS, *Constructing a Plastic Hut (UCNI)*, Rev. 15, July 5, 1991.
- P15 DPSOL 221-FB-2500, *Introducing or Removing Material Through Bag Ports*, Rev. 1, September 1, 1989 through April 7, 2000.
- P16 SOP 221-FB-2505-A-NS, *Packaging Material Characterization Cabinet Waste Into a Drumliner*, Revisions 0-8, August 19, 1999 through March 19, 2002.
- P17 SOP-221-FB-, *Packaging and Handling HEPA Filter Waste*, September 1990 to December 6, 2000.
- P18 SOP-221-FB-1183, *Plutonium Packaging, Storage and Transfer Record*, Revision 1, September 15, 1994.
- P19 SOP 221-FB-1508, Savannah River Site Separations Department Procedure, *Decontamination and Decontamination Waste Handling Activities*, Revision 11, October 31, 1997.
- P20 SOP-221-FAC-2510, *Low-Level and Low-Level Mixed Waste Handling and Certification*, Revisions 5-6, April 20, 1994.
- P21 "Measuring 55-Gallon Waste Drums on the Drum Counter (U)", SOP 221-FB-2507-NS, Revs. 3-4, March 1999-June 1999.
- P22 "TRU Drum Assembly (U)," *Separations/Waste Handling*, Rev.0, January 1995 and Rev.1, April 1, 1996.
- P23 "Transporting, Assaying, and Storing Red-Pail Waste (U)", SOP 221-FB-2502-B-NS, *Separations/Waste Handling*, Revs. 10-16, 18-19, March 1998-July 2000.
- P24 "Low Level Waste Handling and Certification (AC) (U)", SOP 221-FB-2510, Revs. 5 and 6, August 1993- April 1994.
- P25 DPSOL 643-G-2020, *SRP Waste Management Programs, TRU Waste Data Package Requirements*, Revision 0, September, 1985.

The following convention was used to assign the Source Document Tracking Number:

- | | |
|---|---------------------------------------|
| C | Correspondance |
| D | Documents (e.g. published reports) |
| M | Miscellaneous (e.g. unpublished data) |
| P | Procedures |

CHARACTERIZATION INFORMATION SUMMARY

There are drums in Lot 1 that are designated for Overpacking / Load Management purposes only. Refer to the Correlation of Container Identification Numbers to identify these containers.

SR-W026-221F-HET , LOT 1

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Correlation of Container Identification Numbers to Batch Data Report Numbers	007
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Headspace Gas Summary Data	011
RTR / VE Summary of Prohibited Items and AK Confirmation	013
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CCP Characterization Information Summary Cover Page

WSP: # SR-W026-221F-HET

Lot #: 1

AK Expert Review: Anne K. Hallman Date: 7-15-03

STR Review (if necessary): N/A Date: _____

SPQAO Review: John F. Allen Date: 07-15-2003

SPM Review: Mark Percy Date: 7-15-2003

SPQAO signature indicates that the information presented in this package is consistent with analytical batch reports.

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:

CCP-TP-011, CCP Radiography Inspection Operating Procedures, May 16, 2002
CCP-TP-011, CCP Radiography Inspection Operating Procedures, October 18, 2001
CCP-TP-011, CCP Radiography Inspection Operating Procedures, August 29, 2001
CCP-TP-011, CCP Radiography Inspection Operating Procedures, August 1, 2001
CCP-TP-011, CCP Radiography Inspection Operating Procedures, July 2, 2001
CCP-TP-011, CCP Radiography Inspection Operating Procedures, June 1, 2001
CCP-TP-011, CCP Radiography Inspection Operating Procedures, May 21, 2001
CCP-TP-011, CCP Radiography Inspection Operating Procedures, April 27, 2001

Visual Examination:

SW15.7-SOP-TVEF-01, TVEF Operations, September 30, 2002
SW15.7-SOP-Weigh-01, June 4, 2001

Headspace Gas Analysis:

CCP-TP-007, CCP Single Sample Manifold Headspace Gas Sampling and Analysis Procedure, February 3, 2003
CCP-TP-007, CCP Single Sample Manifold Headspace Gas Sampling and Analysis Procedure, October 18, 2002

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CCP-TP-007, CCP Single Sample Manifold Headspace Gas Sampling and Analysis Procedure, September 26, 2002

CCP-TP-007, CCP Single Sample Manifold Headspace Gas Sampling and Analysis Procedure, September 4, 2002

CCP-TP-007, CCP Single Sample Manifold Headspace Gas Sampling and Analysis Procedure, July 23, 2002

CCP-TP-007, CCP Single Sample Manifold Headspace Gas Sampling and Analysis Procedure, January 28, 2002

CCP-TP-007, CCP Single Sample Manifold Headspace Gas Sampling and Analysis Procedure, December 7, 2001

CCP-TP-007, CCP Single Sample Manifold Headspace Gas Sampling and Analysis Procedure, August 30, 2001

CCP-TP-009, CCP Single Sample Manifold Data Handling Procedure, February 5, 2003

CCP-TP-009, CCP Single Sample Manifold Data Handling Procedure, September 26, 2002

CCP-TP-009, CCP Single Sample Manifold Data Handling Procedure, September 20, 2002

CCP-TP-009, CCP Single Sample Manifold Data Handling Procedure, January 30, 2002

CCP-TP-009, CCP Single Sample Manifold Data Handling Procedure, September 4, 2001

CCP-TP-009, CCP Single Sample Manifold Data Handling Procedure, August 28, 2001

CCP-TP-009, CCP Single Sample Manifold Data Handling Procedure, July 30, 2001

CCP-TP-009, CCP Single Sample Manifold Data Handling Procedure, July 20, 2001

CCP-TP-009, CCP Single Sample Manifold Data Handling Procedure, June 4, 2001

CCP-TP-009, CCP Single Sample Manifold Data Handling Procedure, April 24, 2001

CCP-TP-029, CCP Single Sample Manifold Headspace Gas Sampling and Analysis Methods and Equipment Calibration, February 12, 2003

CCP-TP-029, CCP Single Sample Manifold Headspace Gas Sampling and Analysis Methods and Equipment Calibration, October 18, 2002

CCP-TP-029, CCP Single Sample Manifold Headspace Gas Sampling and Analysis Methods and Equipment Calibration, September 26, 2002

CCP-TP-029, CCP Single Sample Manifold Headspace Gas Sampling and Analysis Methods and Equipment Calibration, September 20, 2002

CCP-TP-029, CCP Single Sample Manifold Headspace Gas Sampling and Analysis Methods and Equipment Calibration, January 30, 2002

CCP-TP-029, CCP Single Sample Manifold Headspace Gas Sampling and Analysis Methods and Equipment Calibration, October 9, 2001

CCP-TP-029, CCP Single Sample Manifold Headspace Gas Sampling and Analysis Methods and Equipment Calibration, August 28, 2001

CCP-TP-029, CCP Single Sample Manifold Headspace Gas Sampling and Analysis Methods and Equipment Calibration, July 30, 2001

CCP-TP-032, CCP Single Sample Manifold Data Validation Procedure, February 3, 2003

CCP-TP-032, CCP Single Sample Manifold Data Validation Procedure, October 1, 2002

CCP-TP-032, CCP Single Sample Manifold Data Validation Procedure, September 26, 2002

CCP-TP-032, CCP Single Sample Manifold Data Validation Procedure, September 20, 2002

CCP-TP-032, CCP Single Sample Manifold Data Validation Procedure, January 29, 2002

CCP-TP-032, CCP Single Sample Manifold Data Validation Procedure, August 28, 2001

CCP-TP-032, CCP Single Sample Manifold Data Validation Procedure, July 22, 2001

CCP-TP-032, CCP Single Sample Manifold Data Validation Procedure, June 14, 2001

CCP-TP-032, CCP Single Sample Manifold Data Validation Procedure, April 24, 2001

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Data Generation Review (SRS):

WP-AP-0016, WIPP Disposal Program Data Generation Level Review for Visual Examination, February 15, 2001

Project Level Data Validation/DQO Reconciliation:

CCP-TP-001, CCP Project Level Data Validation and Verification, February 3, 2003
CCP-TP-001, CCP Project Level Data Validation and Verification, May 15, 2002
CCP-TP-001, CCP Project Level Data Validation and Verification, March 8, 2002
CCP-TP-001, CCP Project Level Data Validation and Verification, December 14, 2001
CCP-TP-001, CCP Project Level Data Validation and Verification, August 27, 2001
CCP-TP-001, CCP Project Level Data Validation and Verification, July 23, 2001
CCP-TP-001, CCP Project Level Data Validation and Verification, May 25, 2001
CCP-TP-001, CCP Project Level Data Validation and Verification, April 23, 2001

CCP-TP-002, CCP Reconciliation of DQOs and Reporting Characterization Data, June 27, 2003
CCP-TP-002, CCP Reconciliation of DQOs and Reporting Characterization Data, April 30, 2003
CCP-TP-002, CCP Reconciliation of DQOs and Reporting Characterization Data, October 24, 2002
CCP-TP-002, CCP Reconciliation of DQOs and Reporting Characterization Data, June 19, 2002
CCP-TP-002, CCP Reconciliation of DQOs and Reporting Characterization Data, June 6, 2002
CCP-TP-002, CCP Reconciliation of DQOs and Reporting Characterization Data, March 7, 2002
CCP-TP-002, CCP Reconciliation of DQOs and Reporting Characterization Data, February 18, 2002
CCP-TP-002, CCP Reconciliation of DQOs and Reporting Characterization Data, January 21, 2002
CCP-TP-002, CCP Reconciliation of DQOs and Reporting Characterization Data, October 4, 2001
CCP-TP-002, CCP Reconciliation of DQOs and Reporting Characterization Data, September 13, 2001
CCP-TP-002, CCP Reconciliation of DQOs and Reporting Characterization Data, August 2, 2001
CCP-TP-002, CCP Reconciliation of DQOs and Reporting Characterization Data, June 2, 2001

CCP-TP-003, CCP Sampling Design and Data Analysis for RCRA Characterization, June 28, 2003
CCP-TP-003, CCP Sampling Design and Data Analysis for RCRA Characterization, January 25, 2003
CCP-TP-003, CCP Sampling Design and Data Analysis for RCRA Characterization, January 20, 2003
CCP-TP-003, CCP Sampling Design and Data Analysis for RCRA Characterization, December 4, 2002
CCP-TP-003, CCP Sampling Design and Data Analysis for RCRA Characterization, October 10, 2002
CCP-TP-003, CCP Sampling Design and Data Analysis for RCRA Characterization, August 23, 2002
CCP-TP-003, CCP Sampling Design and Data Analysis for RCRA Characterization, June 3, 2002

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CCP-TP-003, CCP Sampling Design and Data Analysis for RCRA Characterization, March 20, 2002
CCP-TP-003, CCP Sampling Design and Data Analysis for RCRA Characterization, March 18, 2002
CCP-TP-003, CCP Sampling Design and Data Analysis for RCRA Characterization, January 17, 2002
CCP-TP-003, CCP Sampling Design and Data Analysis for RCRA Characterization, November 1, 2001
CCP-TP-003, CCP Sampling Design and Data Analysis for RCRA Characterization, October 4, 2001
CCP-TP-003, CCP Sampling Design and Data Analysis for RCRA Characterization, August 1, 2001

CCP-TP-030, CCP WWIS Data Entry and TRU Waste Certification, March 26, 2003
CCP-TP-030, CCP WWIS Data Entry and TRU Waste Certification, January 8, 2003
CCP-TP-030, CCP WWIS Data Entry and TRU Waste Certification, September 19, 2002
CCP-TP-030, CCP WWIS Data Entry and TRU Waste Certification, June 27, 2002
CCP-TP-030, CCP WWIS Data Entry and TRU Waste Certification, May 21, 2002
CCP-TP-030, CCP WWIS Data Entry and TRU Waste Certification, October 24, 2001
CCP-TP-030, CCP WWIS Data Entry and TRU Waste Certification, October 10, 2001
CCP-TP-030, CCP WWIS Data Entry and TRU Waste Certification, September 5, 2001
CCP-TP-030, CCP WWIS Data Entry and TRU Waste Certification, June 8, 2001

WAP Certification:

CCP-PO-001 CCPTransuranic Waste Characterization Quality Assurance Project Plan, June 11, 2003
CCP-PO-001 CCPTransuranic Waste Characterization Quality Assurance Project Plan, February 5, 2003
CCP-PO-001 CCPTransuranic Waste Characterization Quality Assurance Project Plan, May 31, 2002
CCP-PO-001 CCPTransuranic Waste Characterization Quality Assurance Project Plan, January 14, 2002
CCP-PO-001 CCPTransuranic Waste Characterization Quality Assurance Project Plan, July 27, 2001
CCP-PO-001 CCPTransuranic Waste Characterization Quality Assurance Project Plan, May 10, 2001
CCP-PO-001 CCPTransuranic Waste Characterization Quality Assurance Project Plan, February 27, 2001

CCP-PO-002 CCP Transuranic Waste Certification Plan, June 11, 2003
CCP-PO-002 CCP Transuranic Waste Certification Plan, February 12, 2003
CCP-PO-002 CCP Transuranic Waste Certification Plan, May 17, 2002
CCP-PO-002 CCPTransuranic Waste Certification Plan, January 21, 2002
CCP-PO-002 CCPTransuranic Waste Certification Plan, July 27, 2001
CCP-PO-002 CCPTransuranic Waste Certification Plan, May 10, 2001
CCP-PO-002 CCPTransuranic Waste Certification Plan, March 7, 2001

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CCP-PO-004 CCP/SRS Interface Document, April 8, 2003
CCP-PO-004 CCP/SRS Interface Document, September 20, 2002
CCP-PO-004 CCP/SRS Interface Document, June 27, 2002
CCP-PO-004 CCP/SRS Interface Document, May 9, 2002
CCP-PO-004 CCP/SRS Interface Document, February 8, 2002
CCP-PO-004 CCP/SRS Interface Document, November 2, 2001
CCP-PO-004 CCP/SRS Interface Document, October 18, 2001
CCP-PO-004 CCP/SRS Interface Document, September 17, 2001
CCP-PO-004 CCP/SRS Interface Document, September 10, 2001
CCP-PO-004 CCP/SRS Interface Document, August 17, 2001
CCP-PO-004 CCP/SRS Interface Document, June 14, 2001
CCP-PO-004 CCP/SRS Interface Document, June 7, 2001
CCP-PO-004 CCP/SRS Interface Document, April 24, 2001

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Numbers to Batch Data Report Numbers

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Correlation of Container Identification Numbers to Batch Data Report Numbers							
WSP: # SR-W026-221F-HET		Lot #: 1					
Container ID Number	On-Line Headspace Gas BDR	NDA BDR	RTR BDR	VE BDR	Solids Sampling BDR	Solids Analytical BDR	Load Management/Over pack Yes
SR234877	031403A	SRS-NDA-030308	SRRTRO440	N/A	N/A	N/A	
SR235043	010903A	SRS-NDA-020623	SRRTRO271	N/A	N/A	N/A	
SR328465	031403B	SRS-NDA-030308	SRRTRO440	N/A	N/A	N/A	
SR328557	032103A	SRS-NDA-030316	SRRTRO438	N/A	N/A	N/A	YES
SR328561	022803A	SRS-NDA-020626	SRRTRO271	N/A	N/A	N/A	YES
SR328562	063002A	SRS-NDA-020626	SRRTRO271	N/A	N/A	N/A	
SR328907	022803A	SRS-NDA-020626	SRRTRO271	N/A	N/A	N/A	YES
SR329035	063002B	SRS-NDA-020626	SRRTRO271	N/A	N/A	N/A	
SR595802	032103B	SRS-NDA-030315	SRRTRO438	N/A	N/A	N/A	
SR609190	032103A	SRS-NDA-030315	SRRTRO438	N/A	N/A	N/A	YES
SR609326	032403B	SRS-NDA-030315	SRRTRO438	N/A	N/A	N/A	
SR609335	032103B	SRS-NDA-030316	SRRTRO438	N/A	N/A	N/A	
SR609605	032403B	SRS-NDA-030315	SRRTRO438	N/A	N/A	N/A	
SR609618	032403A	SRS-NDA-030315	SRRTRO438	N/A	N/A	N/A	
SR609622	032103B	SRS-NDA-030315	SRRTRO438	N/A	N/A	N/A	
SR609641	032103B	SRS-NDA-030316	SRRTRO438	N/A	N/A	N/A	
SR609618	062802B	SRS-NDA-020623	SRRTRO289	N/A	N/A	N/A	
SR609984	032103A	SRS-NDA-030316	SRRTRO438	N/A	N/A	N/A	
SR610810	062502A	SRS-NDA-020619	SRRTRO264	N/A	N/A	N/A	
SR610830	022403A	SRS-NDA-020618	SRRTRO285	N/A	N/A	N/A	
SR610832	062902A	SRS-NDA-020618	SRRTRO264	N/A	N/A	N/A	YES
SR610834	062202B	SRS-NDA-020617	SRRTRO263	N/A	N/A	N/A	
SR610835	062902A	SRS-NDA-020619	SRRTRO264	N/A	N/A	N/A	YES
SR610836	062902A	SRS-NDA-020619	SRRTRO264	N/A	N/A	N/A	YES
SR610839	062902A	SRS-NDA-020618	SRRTRO264	N/A	N/A	N/A	YES
SR610916	010603B	SRS-NDA-020621	SRRTRO268	N/A	N/A	N/A	
SR610921	062902A	SRS-NDA-020618	SRRTRO285	N/A	N/A	N/A	YES
SR610940	062502A	SRS-NDA-020619	SRRTRO264	N/A	N/A	N/A	
SR610941	022803A	SRS-NDA-030218	SRRTRO428	N/A	N/A	N/A	YES
SR611046	063002B	SRS-NDA-020623	SRRTRO270	N/A	N/A	N/A	
SR611152	062502A	SRS-NDA-020620	SRRTRO267	N/A	N/A	N/A	

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CCP Correlation of Container Identification
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Correlation of Container Identification Numbers to Batch Data Report Numbers							
WSP: # SR-W026-221F-HET				Lot #: 1			
Container ID Number	On-Line Headspace Gas BDR	NDA BDR	RTR BDR	VE BDR	Solids Sampling BDR	Solids Analytical BDR	Load Management/Over- pack Yes
SR611156	082502A	SRS-NDA-020820	SRRTRO267	N/A	N/A	N/A	
SR611163	082202B	SRS-NDA-020817	SRRTRO262	N/A	N/A	N/A	YES
SR611171	032103A	SRS-NDA-030315	SRRTRO438	N/A	N/A	N/A	
SR611175	093002B	SRS-NDA-020818	SRRTRO264	N/A	N/A	N/A	YES
SR611302	032103B	SRS-NDA-030316	SRRTRO439	N/A	N/A	N/A	
SR611306	082202B	SRS-NDA-020817	SRRTRO262	N/A	N/A	N/A	
SR611309	082502A	SRS-NDA-020821	SRRTRO269	N/A	N/A	N/A	
SR611311	032403B	SRS-NDA-030315	SRRTRO438	N/A	N/A	N/A	
SR611314	032403B	SRS-NDA-030315	SRRTRO438	N/A	N/A	N/A	
SR611323	032403A	SRS-NDA-030316	SRRTRO439	N/A	N/A	N/A	
SR611451	082802A	SRS-NDA-020818	SRRTRO262	N/A	N/A	N/A	YES
SR611458	093002A	SRS-NDA-020818	SRRTRO262	N/A	N/A	N/A	YES
SR611459	093002B	SRS-NDA-020819	SRRTRO264	N/A	N/A	N/A	YES
SR611471	093002B	SRS-NDA-020818	SRRTRO265	N/A	N/A	N/A	YES
SR611478	082802B	SRS-NDA-020822	SRRTRO266	N/A	N/A	N/A	
SR611479	082802B	SRS-NDA-020822	SRRTRO266	N/A	N/A	N/A	
SR611480	082802B	SRS-NDA-020823	SRRTRO270	N/A	N/A	N/A	
SR611489	100802B	SRS-NDA-020819	SRRTRO266	N/A	N/A	N/A	YES
SR611490	093002A	SRS-NDA-020819	SRRTRO266	N/A	N/A	N/A	YES
SR611493	082202B	SRS-NDA-020818	SRRTRO265	N/A	N/A	N/A	
SR611494	082802B	SRS-NDA-020822	SRRTRO266	N/A	N/A	N/A	
SR611657	082502A	SRS-NDA-020820	SRRTRO266	N/A	N/A	N/A	
SR611681	093002B	SRS-NDA-020818	SRRTRO263	N/A	N/A	N/A	YES
SR611694	093002A	SRS-NDA-020819	SRRTRO266	N/A	N/A	N/A	YES
SR611706	082802B	SRS-NDA-020821	SRRTRO269	N/A	N/A	N/A	
SR611710	093002A	SRS-NDA-020819	SRRTRO266	N/A	N/A	N/A	YES
SR611722	082802B	SRS-NDA-020822	SRRTRO266	N/A	N/A	N/A	
SR611729	082802B	SRS-NDA-020822	SRRTRO270	N/A	N/A	N/A	

Mark Percy
Signature of Site Project Manager

Mark Percy
Printed Name

7/15/2003
Date

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CCP Headspace Gas UCL90 Evaluation Form

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CCP Headspace Gas UCL₉₀ Evaluation Form

WSPF #: SR-W026-221F-HET

Waste Stream Lot Number: 1

ANALYTE	Transform Data Used (No, Data- Log, SQTI, other)	# Samples	# Samples above MDL	Maximum (ppmv)	Mean (ppmv)	SD (ppmv)	UCL ₉₀ (ppmv)	PRQL (ppmv)	Transformed PRQL (N/A or Value)	UCL ₉₀ > PRQL Yes	EPA Code
Benzene	LOG	60	2	2.28	0.07	0.53	0.16	10	2.30		
Bromoform	LOG	60	0	0.69	0.06	0.45	0.14	10	2.30		
Carbon tetrachloride	LOG	60	0	0.20	-0.13	0.22	-0.10	10	2.30		
Chlorobenzene	LOG	60	0	0.73	0.31	0.31	0.36	10	2.30		
Chloroform	LOG	60	6	5.32	0.40	0.96	0.56	10	2.30		
Cyclohexane ^a	N/A	0	---	---	---	---	---	---	N/A		
1,1-Dichloroethane	LOG	60	0	0.55	0.23	0.28	0.28	10	2.30		
1,2-Dichloroethane	SQRT	60	0	1.31	1.03	0.20	1.06	10	3.16		
1,1-Dichloroethylene	NO	60	0	1.40	0.98	0.30	1.03	10	N/A		
cis-1,2-Dichloroethylene	SQRT	60	0	1.45	1.18	0.24	1.22	10	3.16		
trans-1,2-Dichloroethylene	NO	60	0	1.19	0.95	0.28	0.99	10	N/A		
Ethyl benzene	LOG	60	0	0.55	0.16	0.24	0.20	10	2.30		
Ethyl ether	LOG	60	0	0.91	0.35	0.43	0.43	10	2.30		
Formaldehyde ^c	N/A	0	---	---	---	---	---	10	N/A		
Hydrazine ^a	N/A	0	---	---	---	---	---	10	N/A		
Methylene chloride	LOG	60	8	2.33	0.65	0.73	0.77	10	2.30		
1,1,2,2-Tetrachloroethane	NO	60	0	2.39	1.54	0.68	1.66	10	N/A		
Tetrachloroethylene	LOG	60	0	0.77	0.17	0.39	0.24	10	2.30		
Toluene	SQRT	60	1	1.92	1.11	0.24	1.15	10	3.16		
1,1,1-Trichloroethane	LOG	60	11	3.53	-0.24	1.26	0.03	10	2.30		
Trichloroethylene	LOG	60	0	0.24	0.22	0.32	0.16	10	2.30		
1,1,2-Trichloro-1,2,2-trifluoroethane	NO	60	0	1.55	1.21	0.26	1.25	10	N/A		
1,2,4-Trimethylbenzene ^a	N/A	0	---	---	---	---	---	---	N/A		
1,3,5-Trimethylbenzene ^a	N/A	0	---	---	---	---	---	---	N/A		

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CCP Headspace Gas UCL90 Evaluation FormEffective Date: 06/28/2003
Page 2 of 2CCP Headspace Gas UCL₉₀ Evaluation Form

WSPF #: SR-W026-221F-HET

Waste Stream Lot Number: 1

ANALYTE	Transform Data Used (No, Data- Log, SQTl, other)	# Samples	# Samples above MDL	Maximum (ppmv)	Mean (ppmv)	SD (ppmv)	UCL ₉₀ (ppmv)	PRQL (ppmv)	Transformed PRQL (N/A or Value)	UCL ₉₀ > PRQL Yes	EPA Code
m-Xylene ^b	LOG	60	1	1.50	0.41	0.35	0.47	10	2.30		
p-Xylene ^b	LOG	60	1	1.50	0.41	0.35	0.47	10	2.30		
o-Xylene	LOG	60	0	0.65	0.20	0.33	0.26	10	2.30		
Acetone	LOG	60	32	4.79	2.37	1.19	2.57	100	4.61		
Butanol	LOG	60	2	3.28	1.66	0.49	1.74	100	4.61		
Methanol	LOG	60	3	4.04	1.55	0.69	1.65	100	4.61		
Methyl ethyl ketone	LOG	60	9	2.65	1.68	0.44	1.75	100	4.61		
Methyl isobutyl ketone	LOG	60	3	4.31	1.56	0.54	1.65	100	4.61		

^aThese compounds are from the TRAMPAC and are flammable VOCs that do not appear in the QAPJP or the WIPP WAP. These are not part of the target analysis list, but samples may be analyzed for these compounds.

^bThese 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."

^cRequired only for homogenous solids and soil/gravel waste from Los Alamos National Laboratory and Savannah River Site.

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

Comments:

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CCP Headspace Gas Summary Data

WSP: # SR-W026-221F-HET

Lot (s) #: 1

Tentatively Identified Compound	Maximum Observed Estimated Concentrations (ppmv)	# Samples Containing TIC	% Detected

Data Confirms Acceptable Knowledge? Yes ☒ No ☐

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

SPM Signature

Mark Percy

Date:

7/15/2003

CCP RTR/VE Summary of Prohibited Items and AK Confirmation

WSP #: SR-W026-221F-HET

Lot # 1

[illegible]

Mark Percy
Site Project Manager Signature

Mark Percy
Printed Name

7/15/2003
Date

CCP Reconciliation with Data Quality Objectives

SPQAO Sampling Completeness

RTR:

Number of valid samples: 60 Number of total samples analyzed: 60
Percent Complete: 100 (QAO is 100%)

NDA:

Number of valid samples: 60 Number of total samples analyzed: 60
Percent Complete: 100 (QAO is 100%)

HSG:

Number of valid samples: 60 Number of total samples collected: 60
Percent Complete: 100 (QAO is $\geq 90\%$)
Number of valid samples: 60 Number of total samples analyzed: 60
Percent Complete: 100 (QAO is $\geq 90\%$)

Total VOC:

Number of valid samples: N/A Number of total samples collected: N/A
Percent Complete: N/A (QAO is $\geq 90\%$)
Number of valid samples: N/A Number of total samples analyzed: N/A
Percent Complete: N/A (QAO is $\geq 90\%$)

Total SVOC:

Number of valid samples: N/A Number of total samples collected: N/A
Percent Complete: N/A (QAO is $\geq 90\%$)
Number of valid samples: N/A Number of total samples analyzed: N/A
Percent Complete: N/A (QAO is $\geq 90\%$)

Total Metals:

Number of valid samples: N/A Number of total samples collected: N/A
Percent Complete: N/A (QAO is $\geq 90\%$)
Number of valid samples: N/A Number of total samples analyzed: N/A
Percent Complete: N/A (QAO is $\geq 90\%$)

SPQAO Signature and Date:

John F. Gian 07-15-2003

I certify that sufficient data have been collected to determine the following Program-required waste parameters:

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CCP Reconciliation with Data Quality Objectives

WSP#: SR-W026-221F-HET

Lot#: 1

	Y/N/NA	Reconciliation Parameter
1.	Y (5)	Waste Matrix Code.
2.	Y (5)	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 (1)	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.	Y	<u>Potential Flammability</u> . Is there sufficient AK or analytical data to demonstrate that the waste meets the potential flammability limits (Headspace Gas, BDR and Summary Sheet)?
6.	Y (2)	Mean concentrations, upper 90% confidence limit (UCL ₉₀) values for the mean concentration, standard deviations, and the number of samples collected for each VOC in the headspace gas of each container were calculated and compared with the program required quantitation limits, as reported in CCP-TP-003-A3, and additional EPA Hazardous Waste codes were assigned as required. Samples were randomly collected (when appropriate).
7a.	N/A (3)	Mean concentrations, UCL ₉₀ values for the mean concentration, standard deviations, and the number of samples collected for total VOCs were calculated and compared with the program required quantitation limits and regulatory thresholds, as reported in the Characterization Information Summary, CCP-TP-003-A4, and additional EPA Hazardous Waste codes were assigned as required. Samples were randomly collected.
7b.	N/A (3)	Mean concentrations, upper 90% confidence limit (UCL ₉₀) values for the mean concentration, standard deviations, and the number of samples collected for total SVOCs were calculated and compared with the program required quantitation limits and regulatory thresholds, as reported in the Characterization Information Summary, CCP-TP-003-A5, and additional EPA Hazardous Waste Codes were assigned as required. Samples were randomly collected.
7c.	N/A (3)	Mean concentrations, upper 90% confidence limit (UCL ₉₀) values for the mean concentration, standard deviations, and the number of samples collected for total metals were calculated and compared with the program required quantitation limits and regulatory thresholds, as reported in the Characterization Information Summary, CCP-TP-003-A6, and additional EPA Hazardous Waste codes were assigned as required. Samples were randomly collected.
8.	Y	The data demonstrates whether the waste stream exhibits are toxicity characteristic under 40 CFR 261, Subpart C.

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CCP Reconciliation with Data Quality Objectives

WSP#: SR-W026-221F-HET

Lot#: 1

	Y/N/NA	Reconciliation Parameter			
9	Y	Waste stream can be classified as hazardous or nonhazardous at the 90-percent confidence level.			
10.	Y	Sufficient number of waste containers have been visually examined to determine the UCL ₉₀ for the miscertification rate is less than 14%.			
11.	Y	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.	Y	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 stream or waste stream lot.			
			Completeness	Comparability	Representativeness
		Radiography	Y	Y	Y
		Headspace Gas Sampling And Analysis	N/A (4)	N/A (4)	N/A (4)
		Headspace Gas Analysis	Y	Y	Y
		Solids Sampling	N/A (3)	N/A (3)	N/A (3)
		Total VOCs	N/A (3)	N/A (3)	N/A (3)
14.		Total SVOCs	N/A (3)	N/A (3)	N/A (3)
		Total Metals	N/A (3)	N/A (3)	N/A (3)

Mark Percy
Signature of Site Project Manager

Mark Percy
Printed Name

10/9/2003
Date

(1) There are drums in Lot 1 designated for Overpacking / Load Management whereby the final shipping payload container will contain TRU radioactive waste.. Refer to the Correlation of Container Identification Numbers to Batch Data Report Numbers to identify these drums.

(2) No additional EPA Hazardous Waste Codes assigned.

(3) This is an S500 Summary Category Group Waste Stream.

(4) On Line Sampling System.

(5) None of the containers in this Lot underwent Visual Examination.

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