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7. Abstract This interface control document between Analytical Services (AL) and Solid Waste Disposal (SWD) establishes the functional responsibilities of each division where interface exist between the two divisions. The document includes waste volumes and timing for use in planning the proper waste management capabilities. The interface control document also facilitates integration of existing or planned capabilities of the Analytical Services and Solid Waste Disposal divisions.		

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Document Title: INTERFACE CONTROL DOCUMENT BETWEEN ANALYTICAL
SERVICES AND SOLID WASTE DISPOSAL DIVISION

Approved by: M L Bell 1-18-95
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INTERFACE CONTROL DOCUMENT BETWEEN ANALYTICAL SERVICES AND SOLID WASTE DISPOSAL

1.0 PURPOSE

This interface control document (ICD) between Analytical Services and Solid Waste Disposal (SWD) establishes a baseline description of the support needed and the wastes that will require management as part of the interface between the two divisions. It is important that each division has a clear understanding of the other division's expectations regarding levels and type of support needed. Figure 1 provides a graphic description of the interface between SWD and Analytical Services.

This document satisfies the requirement for the specified analytical laboratories to provide an annual 30-year forecast for solid waste generation as stated in the Hanford Site Solid Waste Acceptance Criteria (WHC-EP-0063-4, Section 1.3.2) and RLID 5820.2A (Radioactive Waste Management, 3.b.(2) and 3.c.(1)). The information presented in this document will be reevaluated at least annually or when significant changes to either program occur.

This document is part of the baseline documentation for both programs and can be changed only by use of an engineering change notice (ECN) approved by representatives of both Analytical Services and SWD.

2.0 SCOPE

This ICD deals with the waste sampling support needed by SWD and the waste generated by the specified analytical laboratories. The baseline description of wastes includes waste volumes, characteristics and shipping schedules, which will be used to plan the proper support requirements.

The laboratories included in this document are 222-S Laboratory Facility, the Waste Sampling and Characterization Facility (WSCF) and the Chemical Engineering Laboratory. These three facilities provide support to the entire site and are not associated with one major program/facility. The laboratories associated with major facilities or programs such as Engineering/Environmental Development Laboratory at K Basins Operation are not within the scope of this document. Waste generated by these laboratories are included in the major facilities waste forecast and therefore will be incorporated into that facility specific ICD.

Wastes generated by the 325 Laboratory are included in the waste volume forecasts provided by Pacific Northwest Laboratory.

Figure 1. Interfaces Between Analytical Services and Solid Waste Disposal

LEGEND:

NRDWSF - Non-Radiocative Dangerous Waste Storage Facility
 TRUSAF - Transuranic Waste Storage and Assay Facility
 WSCF - Waste Sampling Characterization Facility

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3.0 WASTE CHARACTERIZATION SUPPORT NEEDED BY SWD TO BE PROVIDED BY ANALYTICAL SERVICES

Analytical Services will provide waste characterization of the samples taken by SWD as identified in this section. Any changes to the information regarding these materials will be updated in this document through formal revision requiring an ECN.

While completing the sampling requirement forecast, the following assumptions were made (Hladek, 1994):

- Any soil samples coming from a radiologically controlled area are assumed to require handling as a radioactive sample.
- Pilot TRU Retrieval drum removal occurs in FY 1994-1996. Glovebox examination of such drums begins in FY 1995 and will continue through 1998.
- WRAP 1 LLW processing begins operation in March 1997 at 50% throughput for the first year.
- WRAP 1 TRU processing begins operation in March 1998 at 50% throughput for the first year.
- Full-scale TRU Retrieval begins in April 1998.
- WRAP 2A begins operations in September 1999 at 50% throughput for the first year.
- Samples taken at WRAP 1 from separate packages in a single drum will be one composite sample.

The estimated annual sample volume is summarized in Tables 3-1 through 3-3. Table 3-1 summarizes the total sampling requirement out to the year 2010 for both active and planned SWD projects. The reader should note that the forecast for active projects is completed out to the year 2000 only; therefore the total sampling requirement in Table 3-1 only include planned SWD project sampling estimates for years 2001 to 2010. Tables 3-2 and 3-3 summarizes the sampling requirements for planned and active programs respectively. The sample projections are broken down into the seven categories as requested by Analytical Services. These categories are defined in Table 3-4.

Specific requirements for what types of analyses are required, to what precision and standard, are provided on a facility specific basis in facility sample schedules.

4.0 SOLID WASTE GENERATED BY ANALYTICAL SERVICES REQUIRING MANAGEMENT BY SWD

SWD will manage the solid wastes generated by Analytical Services as identified in Appendix A. Solid wastes generated by Analytical Services will be accepted by Solid Waste

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Disposal provided the waste meets the established criteria outlined in the Hanford Site Solid Waste Acceptance Criteria (WHC-EP-0063-4). SWD will provide storage, treatment and disposal as necessary for the solid waste generated by Analytical Services. Acceptance of unique waste will be handled on a case by case basis. These quantities are expected to be minimal.

Appendices B, C and D contain the baseline waste projections for solid waste generated by Analytical Services requiring storage, treatment, and/or disposal. The waste volumes forecasted are for streams originating from the 222-S Laboratory, WSCF and Chemical Engineering Laboratory. The estimated annual volumes generated are summarized in Table 4-1. Any changes to the information regarding these wastes will be updated in this document through formal revision requiring ECN.

Table 3-1 Total Sampling Requirement (Number of Samples) for Solid Waste Disposal

Category	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Category 1	944	644	444	244	144	244	200	200	200	200	200	200	200	200	200	200
Category 2	3838	3858	3585	3960	3891	1839	1711	1711	1711	1711	1711	1711	1711	1711	2148	2148
Category 3	423	594	872	1009	419	422	285	285	285	285	285	285	285	285	311	311
Category 4	34	54	163	363	446	490	490	490	490	490	490	490	490	490	527	527
Category 5	0	0	82	282	446	490	490	490	490	490	490	490	490	490	490	490
Category 6	0	0	1	33	86	108	108	108	108	108	108	108	108	108	108	108
Category 7	0	0	5	164	432	542	542	542	542	542	542	542	542	542	542	542

- Sample projections for years 2001 - 2010 include only planned projects. Active SWD projects were not projected beyond the year 2000.
- See Table 3-4 for description of the categories.
- Category 7 samples are from WRAP 1, WRAP 2B will produce larger numbers of alpha and high dose samples, but current programmatic planning forecasts WRAP 2B operation after 2010

Table 3-2 Sampling Requirements (Number of Samples) for Planned Solid Waste Disposal Projects

Sample Source/Category	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
TRU Pilot Retrieval																
Category 2	428	428	45	45												
Category 3	43	43	4	4												
Category 4	4	4	1	1												
Waste Immobilization Demonstration																
Category 1	800	500	300	100												
Category 2	30	50	80	80												
Category 3	240	400	640	640												
Category 4	30	50	80	80												
WRAP Module 1																
Category 2			4	7	273	273	273	273	273	273	273	273	273	273	273	273
Category 3			4	7	273	273	273	273	273	273	273	273	273	273	273	273
Category 4			5	16	446	490	490	490	490	490	490	490	490	490	490	490
Category 5			5	16	446	490	490	490	490	490	490	490	490	490	490	490
Category 6			1	5	86	108	108	108	108	108	108	108	108	108	108	108
Category 7			3	24	432	542	542	542	542	542	542	542	542	542	542	542
Full Scale TRU Retrieval																
Category 2				238	238	238	238	238	238	238	238	238	238	238	675	675
Category 3				12	12	12	12	12	12	12	12	12	12	12	38	38
Category 4															37	37
WRAP Module 2A																
Category 1						100	200	200	200	200	200	200	200	200	200	200
Category 2						600	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200
W-025 Trench Project																
TBD																

- Data was taken from Hladek, 1994
- Categories listed are used to control flow of samples through the laboratory. See Table 3-4 for a description of the categories.

Table 3-3 Sampling Requirement for Active Solid Waste Disposal Facilities

Sample Source/Category	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
NRDWSF (616 Bldg)																
Category 1	144	144	144	144	144	144										
Low-Level Burial Grounds																
Category 3	15	15	15	15	15	15										
TRUSAF																
Category 2	624	624	624	624	624	624										
Central Waste Complex																
Category 2	2652	2652	2652	2652	2652											
Category 3	55	64	67	54	56	57										
Compactor 213-W																
Category 2	104	104	104	104	104	104										
Category 3	70	72	66	67	63	65										
T Plant																
TBD																

- Data were taken from Nielsen, 1994
- Sample requirement was projected through the year 2000 only
- See Table 3-4 for a description of the categories.
- NRDWSF - Non-radioactive Dangerous Waste Storage Facility
- TRUSAF - Transuranic Storage and Assay Facility

Table 3-4 Analytical Services Sample Categories

Category	Beta-Gamma Exposure	Alpha Radioactivity
1 (Nonradioactive)	N/A	N/A
2	< 1 mR/hr	< 10 nCi/g
3	1 to < 10 mR/hr	< 10 nCi/g
4	< 10 mR/hr	< 200 nCi/g
5	10 to < 100 mR/hr	< 200 nCi/g
6	> 100 mR/hr	
7		> 200 nCi/g

Table 4 -1 Analytical Services Solid Waste Volume (ft³) Forecast

Material Source/Category	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	
CH LLW I	17,775	14,856	11,578	11,578	11,578	11,578	11,578	11,578	11,578	11,578	11,578	11,578	11,578	11,578	11,578	
CH LLW III	203	166	129	129	129	129	129	129	129	129	129	129	129	129	129	
CH LLMW I	1,353	1,141	884	884	884	884	884	884	884	884	884	884	884	884	884	
CH LLMW III	203	166	129	129	129	129	129	129	129	129	129	129	129	129	129	
RH LLMW III	120	83	65	65	65	65	65	65	65	65	65	65	65	65	65	
RH TRUM	10	19	19	19	19	19	19	19	19	19	19	19	19	19	19	
Hazardous	196	179	161	161	161	161	161	161	161	161	161	161	161	161	161	
Material Source/Category	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	30 Yr Tot
CH LLW I	11,578	11,578	11,578	11,578	11,578	11,578	11,578	11,578	11,578	11,578	11,578	11,578	11,578	11,578	11,578	356,815
CH LLW III	129	129	129	129	129	129	129	129	129	129	129	129	129	129	129	3,981
CH LLMW I	884	884	884	884	884	884	884	884	884	884	884	884	884	884	884	27,246
CH LLMW III	129	129	129	129	129	129	129	129	129	129	129	129	129	129	129	3,981
RH LLMW III	65	65	65	65	65	65	65	65	65	65	65	65	65	65	65	2,023
RH TRUM	19	19	19	19	19	19	19	19	19	19	19	19	19	19	19	561
Hazardous	161	161	161	161	161	161	161	161	161	161	161	161	161	161	161	4,833

- WCSF Projections will be incorporated when the WCSF solid waste forecast is completed.
- Data taken from Hall, 1994 and Schliebe, 1993

REFERENCES

Department of Energy, September 1993, *Hanford Site Solid Waste Acceptance Criteria*, WHC-EP-0063-4, Westinghouse Hanford Company, Richland Washington.

Gaschott, L., January 1994, *Sample Requirement Projection Through the Year 2000*, CC Mail Message, Westinghouse Hanford Company, Richland Washington.

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Hladek, K.L., June 1994, *Outyear Sampling Requirements*, Internal Memo 87320-94-KLH-084, Westinghouse Hanford Company, Richland Washington.

Schliebe, M.J., June 1993, *Fiscal Year 1994 - 2023 Solid Waste Volume Forecast*, Internal Memo 12130-93-046, Westinghouse Hanford Company, Richland Washington.

APPENDIX A - ANALYTICAL SERVICES

A.1 INTRODUCTION

Analytical Services is chartered to provide laboratory support to the major programs at the Hanford Reservation. Analytical Services provides the technical, managerial, and programmatic functions to complete the waste characterization process. The Analytical Services facilities (within the scope of this document) that are or will be in the near future generating solid waste are:

- 222-S Laboratory
- WSCF
- Chemical Engineering Laboratory

A.2 222-S LABORATORY

The primary mission of 222-S Laboratory is to provide analytical support to the Waste Management and Environmental Restoration programs. Additionally the laboratory prepares and characterizes radiochemical standards for waste characterization analysis completed at various laboratories onsite.

The 222-S Laboratory generates 11 streams which are defined by waste class and container type. The primary source of the low-level waste comes from laboratory waste and equipment, along with lab packs containing sample vials. Laboratory analysis of Tank Farm core samples and site wide sampling generates the majority of low-level mixed waste at the laboratory. Hazardous waste is generated in the 222-S Standards Laboratory. (Hall, 1994)

While completing the 222-S Laboratory solid waste forecast, the following assumptions were made (Hall, 1994):

- Physical form, radionuclide content and waste code will be similar to previous years samples.
- As tank farm core sample quantities increase during fiscal years 95, 96, and 97, waste volumes will increase in all categories.

Compactable low-level waste will be segregated from non compactable items prior to packaging and low-level waste in general will be segregated from mixed waste. The anticipated shipping schedule for all waste streams is 25% of total yearly volume per quarter (Hall, 1994). The waste streams are described in Tables A.1 through A.11. The 1994 222-S Laboratory Solid Waste Volume Forecast is in Appendix B.

A.3 WSCF

The WSCF facility will complete waste characterization analysis on air, water, and soil samples. Sample constituents will primarily be low-level radioactive isotopes and non-radiological hazardous materials taken from various effluent streams on the Hanford Site. The facility is schedule to start operating in FY 95.

WSCF will most likely generate 7 waste streams, which have been defined by waste class and container type. Those are:

- Low-Level Waste Category I in 55 Gallon Drums;
- Low-Level Mixed Waste Category I in 55 Gallon Drums;
- Noncompactable Low-Level Waste Category I in nonreturnable boxes;
- Compactable Low-Level Waste Category I in returnable boxes;
- Hazardous Waste in 8 Gallon Drums;
- Hazardous Waste in 30 Gallon Drums; and
- Hazardous Waste in 55 Gallon Drums.

The Low-Level Mixed Waste in drums will primarily be laboratory samples in lab packs. The boxes will contain segregated compactable and non-compactable laboratory supplies and equipment. The facility anticipates generating 1-3 boxes per year for each container type, which would be shipped every 3-4 months. Detail information on the individual waste streams will be incorporated into this document when the facility solid waste forecast is completed.

A.4 CHEMICAL ENGINEERING LABORATORY

The Chemical Engineering Laboratory has a site wide mission providing pilot testing for new plant processing systems. The laboratory generates three hazardous waste streams. The streams consist of nitrate hydroxide waste, organics and pure chemicals in lab packs. The waste streams are described in Tables A.12 through A.14. The 1993 Chemical Engineering Laboratory Solid Waste Volume Forecast is in Appendix D.

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**Table A.1 Drummed Contact-Handled Low-Level Waste Category I
Generated at the 222-S Analytical Laboratory**

STREAM DESCRIPTION

Waste Class:	Contact-Handled Low-Level Category I (CH-LLW-I)
Waste Stream Description:	Laboratory waste and equipment
Year(s) of Generation:	The stream will be active annually through 2024

CONTAINER DESCRIPTION

Container Type:	55 Gallon Drums
Container External Volume:	9.2 ft ³
Number of Containers Generated Annually:	1995 - 330; 1996 - 280; 1997 - 2024 - 210
Percent of Total Annual Volume:	17%

PHYSICAL FORM DESCRIPTION

Annual Volume (ft ³) Generated:	1995 - 3,022; 1996 - 2,526; 1997 - 2024 - 1,968
Density:	TBD
Annual Weight Generated:	TBD
Physical Form:	Predominantly Combustible Debris Waste (5440)
Waste Form and Content:	19% Solid Process Residue 60% Combustible Debris Waste 21% Other Debris Waste See Appendix B, Page 16 for content detail

HAZARDOUS CONSTITUENTS DESCRIPTION:

Not applicable

RADIOLOGICAL DESCRIPTION:

See Appendix B, Page 34

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**Table A.2 Boxed Contact-Handled Low-Level Waste Category I
Generated at the 222-S Analytical Laboratory**

STREAM DESCRIPTION

Waste Class:	Contact-Handled Low-Level Category I (CH-LLW-I)
Waste Stream Description:	Laboratory waste and equipment
Year(s) of Generation:	The stream will be active annually through 2024

CONTAINER DESCRIPTION

Container Type:	4' x 4' x 8' Box W/Skids
Container External Volume:	143 ft ³
Number of Containers Generated Annually:	1995 - 100; 1996 - 86; 1997 - 2024 - 67
Percent of Total Annual Volume:	83 %

PHYSICAL FORM DESCRIPTION

Annual Volume (ft ³) Generated:	1995 - 14,753; 1996 - 12,330; 1997 - 2024 - 9,610
Density:	TBD
Annual Weight Generated:	TBD
Physical Form:	Uncategorized Heterogenous Debris Waste (5490)
Waste Form and Content:	3 % Inorganic Particulates 1 % Contaminated Soils 96 % Debris Waste See Appendix B, Page 17 for content detail

HAZARDOUS CONSTITUENTS DESCRIPTION:

Not applicable

RADIOLOGICAL DESCRIPTION:

See Appendix B, Page 36

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Table A.3 Drummed Contact-Handled Low-Level Waste Category III Generated at the 222-S Analytical Laboratory

STREAM DESCRIPTION

Waste Class:	Contact-Handled Low-Level Category III (CH-LLW-III)
Waste Stream Description:	Laboratory waste and equipment
Year(s) of Generation:	The stream will be active annually through 2024

CONTAINER DESCRIPTION

Container Type:	55 Gallon Drums
Container External Volume:	9.2 ft ³
Number of Containers Generated Annually:	1995 - 22; 1996 - 18; 1997 - 2024 - 14
Percent of Total Annual Volume:	100%

PHYSICAL FORM DESCRIPTION

Annual Volume (ft ³) Generated:	1995 - 203; 1996 - 166; 1997 - 2024 - 129
Density:	TBD
Annual Weight Generated:	TBD
Physical Form:	Uncategorized Heterogenous Debris Waste (5490)
Waste Form and Content:	16 % Inorganic Particulates 23 % Contaminated Soils 61 % Debris Waste See Appendix B, Page 16 for content detail

HAZARDOUS CONSTITUENTS DESCRIPTION

Not applicable

RADIOLOGICAL DESCRIPTION

See Appendix B, Page 39

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Table A.4 Drummed Contact-Handled Low-Level Mixed Waste Category I Generated at the 222-S Analytical Laboratory

STREAM DESCRIPTION

Waste Class:	Contact-Handled Low-Level Mixed Category I (CH-LLMW-I)
Waste Stream Description:	Laboratory waste, equipment and sample vials
Year(s) of Generation:	The stream will be active annually through 2024

CONTAINER DESCRIPTION

Container Type:	55 Gallon Drums
Container External Volume:	9.2 ft ³
Number of Containers Generated Annually:	1995 - 150; 1996 - 120; 1997 - 2024 - 96
Percent of Total Annual Volume:	100%

PHYSICAL FORM DESCRIPTION

Annual Volume (ft ³) Generated:	1995 - 1,353; 1996 - 1,141; 1997 - 2024 - 884
Density:	TBD
Annual Weight Generated:	TBD
Physical Form:	Table four needs to be completed
Waste Form and Content:	3 % Lead 21 % Solid Process Residue x % Debris Waste x % Special Wastes See Appendix B, Page 23 A for content detail

HAZARDOUS CONSTITUENTS DESCRIPTION

See Appendix B, Page 23 A

RADIOLOGICAL DESCRIPTION

See Appendix B, Page 40

Table A.5 Drummed Contact-Handled Low-Level Mixed Waste Category III Generated at the 222-S Analytical Laboratory

STREAM DESCRIPTION

Waste Class:	Contact-Handled Low-Level Mixed Category III (CH-LLMW-III)
Waste Stream Description:	Laboratory waste, equipment and sample vials
Year(s) of Generation:	The stream will be active annually through 2024

CONTAINER DESCRIPTION

Container Type:	55 Gallon Drums
Container External Volume:	9.2 ft ³
Number of Containers Generated Annually:	1995 - 22; 1996 - 18; 1997 - 2024 - 14
Percent of Total Annual Volume:	100 %

PHYSICAL FORM DESCRIPTION

Annual Volume (ft ³) Generated:	1995 - 203; 1996 - 166; 1997 - 2024 - 129
Density:	TBD
Annual Weight Generated:	TBD
Physical Form:	Uncategorized Lab Packs (6190)
Waste Form and Content:	10 % Lead 21 % Solid Process Residue 38 % Debris Waste 31 % Lab Packs See Appendix B, Page 23 B for content detail

HAZARDOUS CONSTITUENTS DESCRIPTION

See Appendix B, Page 23 B

RADIOLOGICAL DESCRIPTION

See Appendix B, Page 42

Table A.6 Drummed Remote-Handled Low-Level Mixed Waste Category III Generated at the 222-S Analytical Laboratory

STREAM DESCRIPTION

Waste Class:	Remote-Handled Low-Level Mixed Category III (RH-LLMW-III)
Waste Stream Description:	Laboratory waste and equipment
Year(s) of Generation:	The stream will be active annually through 2024

CONTAINER DESCRIPTION

Container Type:	55 Gallon Drums
Container External Volume:	9.2 ft ³
Number of Containers Generated Annually:	1995 - 13; 1996 - 9; 1997 - 2024 - 7
Percent of Total Annual Volume:	100%

PHYSICAL FORM DESCRIPTION

Annual Volume (ft ³) Generated:	1995 - 120; 1996 - 83; 1997 - 2024 - 65
Density:	TBD
Annual Weight Generated:	TBD
Physical Form:	Uncategorized Heterogeneous Debris Waste (5490)
Waste Form and Content:	20% Lead 12% Solid Residue 68% Debris Waste See Appendix B, Page 23 C for content detail

HAZARDOUS CONSTITUENTS DESCRIPTION

See Appendix B, Page 23 C

RADIOLOGICAL DESCRIPTION

See Appendix B, Page 44

**Table A.7 Drummed Remote-Handled Transuranic Mixed Waste Generated
at the 222-S Analytical Laboratory**

STREAM DESCRIPTION

Waste Class:	Remote-Handled Transuranic (RH-TRUM)
Waste Stream Description:	Laboratory waste and equipment
Year(s) of Generation:	The stream will be active annually through 2024

CONTAINER DESCRIPTION

Container Type:	55 Gallon Drums
Container External Volume:	9.2 ft ³
Number of Containers Generated Annually:	1995 - 1; 1996 - 2024 - 2
Percent of Total Annual Volume:	100%

PHYSICAL FORM DESCRIPTION

Annual Volume (ft ³) Generated:	1995 - 10; 1996 - 2024 19
Density:	TBD
Annual Weight Generated:	TBD
Physical Form:	Uncategorized Heterogenous Debris Waste (5490)
Waste Form and Content:	10% Organic Absorbed Liquid/Sludge 90% Debris Waste See Appendix B, Page 23 D for content detail

HAZARDOUS CONSTITUENTS DESCRIPTION

See Appendix B, Page 23 D

RADIOLOGICAL DESCRIPTION

See Appendix B, Page 46

**Table A.8 Drummed (55 Gallon) Hazardous Waste Generated at the
222-S Analytical Laboratory**

STREAM DESCRIPTION

Waste Class:	Hazardous Waste
Waste Stream Description:	Laboratory waste, equipment and lab packs
Year(s) of Generation:	The stream will be active annually through 2024

CONTAINER DESCRIPTION

Container Type:	55 Gallon Drums
Container External Volume:	9.2 ft ³
Number of Containers Generated Annually:	1995 - 6; 1996 - 5; 1997 - 2024 - 4
Percent of Total Annual Volume:	48 %

PHYSICAL FORM DESCRIPTION

Annual Volume (ft ³) Generated:	1995 - 56; 1996 - 48; 1997 - 2024 - 39
Density:	TBD
Annual Weight Generated:	TBD
Physical Form:	Organic Lab Packs (6110)
Waste Form and Content:	26 % Inorganic Particulates 26 % Debris Waste 48 % Lab Packs See Appendix B, Page 23 E for content detail

HAZARDOUS CONSTITUENTS DESCRIPTION

See Appendix B, Page 23 E

RADIOLOGICAL DESCRIPTION

Not Applicable

**Table A.9 Drummed (8 Gallon) Hazardous Waste Generated at the
222-S Analytical Laboratory**

STREAM DESCRIPTION

Waste Class:	Hazardous
Waste Stream Description:	Lab packs containing organic standards
Year(s) of Generation:	The stream will be active annually through 2024

CONTAINER DESCRIPTION

Container Type:	8 Gallon Drums
Container External Volume:	1.49 ft ³
Number of Containers Generated Annually:	1995 - 12; 1996 - 10; 1997 - 2024 - 8
Percent of Total Annual Volume:	15%

PHYSICAL FORM DESCRIPTION

Annual Volume (ft ³) Generated:	1995 - 18; 1996 - 15; 1997 - 2024 - 12
Density:	TBD
Annual Weight Generated:	TBD
Physical Form:	Organic Lab Packs (6110)
Waste Form and Content:	20% Inorganic Particulates 80% Lab Packs See Appendix B, Page 23 F for content detail

HAZARDOUS CONSTITUENTS DESCRIPTION

See Appendix B, Page 23 F

RADIOLOGICAL DESCRIPTION

Not Applicable

**Table A.10 Drummed (30 Gallon) Hazardous Waste Generated at the
222-S Analytical Laboratory**

STREAM DESCRIPTION

Waste Class:	Hazardous
Waste Stream Description:	Lab packs containing organic standards
Year(s) of Generation:	The stream will be active annually through 2024

CONTAINER DESCRIPTION

Container Type:	30 Gallon Drums
Container External Volume:	4.4 ft ³
Number of Containers Generated Annually:	1995 - 8; 1996 - 7; 1997 - 2024 - 6
Percent of Total Annual Volume:	30%

PHYSICAL FORM DESCRIPTION

Annual Volume (ft ³) Generated:	1995 - 35; 1996 - 30; 1997 - 2024 - 25
Density:	TBD
Annual Weight Generated:	TBD
Physical Form:	Organic Lab Packs (6110)
Waste Form and Content:	20% Inorganic Particulate 80% Lab Packs See Appendix B, Page 23 G for content detail

HAZARDOUS CONSTITUENTS DESCRIPTION

See Appendix B, Page 23 G

RADIOLOGICAL DESCRIPTION

Not Applicable

**Table A.11 Boxed Hazardous Waste Generated at the
222-S Analytical Laboratory**

STREAM DESCRIPTION

Waste Class:	Hazardous
Waste Stream Description:	Lab packs containing organic standards
Year(s) of Generation:	The stream will be active annually through 2024

CONTAINER DESCRIPTION

Container Type:	12 B Box
Container External Volume:	2.0 ft ³
Number of Containers Generated Annually:	1995, 1996 - 4; 1997 - 2024 - 3
Percent of Total Annual Volume:	7%

PHYSICAL FORM DESCRIPTION

Annual Volume (ft ³) Generated:	1995 - 8; 1996 - 7; 1997 - 2024 - 6
Density:	TBD
Annual Weight Generated:	TBD
Physical Form:	Organic Lab Packs (6110)
Waste Form and Content:	20% Inorganic Particulates 80% Lab Packs See Appendix B, Page 23 H for content detail

HAZARDOUS CONSTITUENTS DESCRIPTION

See Appendix B, Page 23 H

RADIOLOGICAL DESCRIPTION

Not Applicable

Table A.12 Drummed (55 Gallon) Hazardous Waste Generated at the Chemical Engineering Analytical Laboratory

STREAM DESCRIPTION

Waste Class:	Hazardous
Waste Stream Description:	Nitrate Hydroxide (mid to high pH) resulting from laboratory operations.
Year(s) of Generation:	The stream will be active annually through 2024

CONTAINER DESCRIPTION

Container Type:	55 Gallon Drum
Container External Volume:	9.2 ft ³
Number of Containers Generated Annually:	10
Percent of Total Annual Volume:	93 %

PHYSICAL FORM DESCRIPTION

Annual Volume (ft ³) Generated:	92
Density:	TBD
Annual Weight Generated:	TBD
Physical Form:
Waste Form and Content:	50% Inorganic Particulates 50% Other Special Wastes See Appendix D, Page 6 for content detail

HAZARDOUS CONSTITUENTS DESCRIPTION

See Appendix D, Page 6

RADIOLOGICAL DESCRIPTION

Not Applicable

**Table A.13 Drummed (30 Gallon) Hazardous Waste Generated at the
Chemical Engineering Analytical Laboratory**

STREAM DESCRIPTION

Waste Class:	Hazardous
Waste Stream Description:	Organic waste generated during laboratory operations
Year(s) of Generation:	The stream will be active annually through 2024

CONTAINER DESCRIPTION

Container Type:	30 Gallon Drum
Container External Volume:	4.4 ft ³
Number of Containers Generated Annually:	1
Percent of Total Annual Volume:	4%

PHYSICAL FORM DESCRIPTION

Annual Volume (ft ³) Generated:	4.4
Density:	TBD
Annual Weight Generated:	TBD
Physical Form:
Waste Form and Content:	50% Organic Particulates 50% Other Special Wastes See Appendix D, Page 8 for content detail

HAZARDOUS CONSTITUENTS DESCRIPTION

See Appendix D, Page 8

RADIOLOGICAL DESCRIPTION

Not Applicable

**Table A.14 Drummed (8 Gallon) Hazardous Waste Generated at the
Chemical Engineering Analytical Laboratory**

STREAM DESCRIPTION

Waste Class:	Hazardous
Waste Stream Description:	Pure chemicals not consumed during laboratory operations
Year(s) of Generation:	The stream will be active annually through 2024

CONTAINER DESCRIPTION

Container Type:	8 Gallon Drum
Container External Volume:	1.49 ft ³
Number of Containers Generated Annually:	2
Percent of Total Annual Volume:	3 %

PHYSICAL FORM DESCRIPTION

Annual Volume (ft ³) Generated:	3
Density:	TBD
Annual Weight Generated:	TBD
Physical Form:	Uncategorized Lab Packs (6190)
Waste Form and Content:	50 % Organic Particulates 50 % Lab Packs See Appendix D, Page 10 for content detail

HAZARDOUS CONSTITUENTS DESCRIPTION

See Appendix D, Page 10

RADIOLOGICAL DESCRIPTION

Not Applicable

WHC-SD-WM-PICD-005, REV 0

APPENDIX B - 1994 222-S Laboratory Solid Waste Volume Forecast

**Westinghouse
Hanford Company****Internal
Memo**

From: Environmental Services
Phone: 373-5719 T6-07
Date: July 18, 1994
Subject: 1994 222-S LABORATORY SOLID WASTE VOLUME FORECAST

8E750-94-033

To: O. J. Valero H5-33

cc: J. M. Kier T3-01
W. D. Leggett T6-07 w/o attachment
M. L. Martin T6-20
R. P. Marshall T6-14 w/o attachment
RRN/LB File

Reference: Memo, R. J. Roberts to W. D. Leggett, "Fiscal Year 1994 Hazardous and Radioactive Solid Waste Volume Forecast Request," dated May 13, 1994.

Attached is the 1994 222-S Laboratory Solid Waste Volume Forecast requested in the above Reference. This document estimates the volume of hazardous and radioactive waste to be generated by the 222-S Laboratory from 1995 through 2024. It also provides estimated distributions for waste class, container type, physical form, waste code, and radioactivity for this waste volume. Included in the forecast is the completed Questionnaire which provides the assumptions and other background information that support the forecast.

Should you have any questions concerning the information contained in the forecast, please contact R. R. Nielson or J. A. Harris.

M. J. Hall, Manager
Environmental Services

aca

Attachment

COVER SHEET

1994 SOLID WASTE FORECAST REQUEST FORM

Generator (Project/Facility) WHC 222S Analytical Labs

<u>Waste Class</u>	<u>Contact</u>	<u>Phone</u>
<u>LLW</u>	<u>J.A.(Judy) Harris/R.R.(Bob) Nielson</u>	<u>3-1219/2458</u>
<u>LLMW</u>	<u>J.A.(Judy) Harris/R.R.(Bob) Nielson</u>	<u>3-1219/2458</u>
<u>HAZ</u>	<u>J.A.(Judy) Harris/R.R.(Bob)</u>	<u>3-1219/2458</u>
<u>TRU</u>	<u>N/A</u>	<u></u>
<u>TRUM</u>	<u>J.A.(Judy) Harris/R.R.(Bob) Nielson</u>	<u>3-1219/2458</u>
<u>LEVEL III APPROVAL</u>	<u>W. D. Leggett (Bill)</u>	<u>3-5669</u>

FOR INFORMATION ONLY

RECEIVED

JUL 20 1994

K. L. HLADEK

(Fill out and/or correct above and keep this sheet with forecast)

COVER SHEET

1994 SOLID WASTE FORECAST REQUEST FORM

Generator (Project/Facility) WHC 222S Analytical Labs

<u>Waste Class</u>	<u>Contact</u>	<u>Phone</u>
<u>LLW</u>	<u>R.R.(Bob) Nielson</u>	<u>3-2458</u>
<u>LLMW</u>	<u>R.R.(Bob) Nielson</u>	<u>3-2458</u>
<u>HAZ</u>	<u>R.R.(Bob) Nielson</u>	<u>3-2458</u>
<u>TRU</u>	<u>N/A</u>	<u></u>
<u>TRUM</u>	<u>N/A R.R. Nielson</u>	<u>3-2458</u>
<u>LEVEL III APPROVAL</u>	<u>W. D. Leggett (Bill)</u>	<u>3-5669</u>

(Fill out and/or correct above and keep this sheet with forecast)

COORDINATOR SHEET

Department: OPS/Hanford Analytical Services

1994 Coordinator: R.R.(Bob) Nielson 3-2458

Project/Facility Number	1994 Contact	1994 Level III Approval
222-S Laboratory Process & Analytical Lab.	J.A. Harris R.R. Nielson	W.D. Leggett

(Fill out and/or correct above and keep this sheet with forecast)

PROJECTED SOLID WASTE EXTERNAL VOLUMES (FT3)

TABLE 1 page 1 of 5

REPORT SHIELDED RH WASTE AS RH WASTE NOT CH WASTE

FOR WASTE CLASSIFICATION ONLY

WASTE CLASS	ESTIMATE	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009
CH-LLW-I	EST.(CuFt)	17,775	14,856	11,578												
	MIN. %	90														
	MAX. %	110														
CH-LLW-III	EST.(CuFt)	203	166	129												
	MIN. %	90														
	MAX. %	110														
CH-LLW-GTCIII	EST.(CuFt)															
	MIN. %															
	MAX. %															
RH-LLW-I	EST.(CuFt)															
	MIN. %															
	MAX. %															
RH-LLW-III	EST.(CuFt)															
	MIN. %															
	MAX. %															
RH-LLW-GTC III	EST.(CuFt)															
	MIN. %															
	MAX. %															
CH-LLMW-I	EST.(CuFt)	1,353	1,141	884												
	MIN. %	90														
	MAX. %	110														
CH-LLMW-III	EST.(CuFt)	203	166	129												
	MIN. %	90														
	MAX. %	110														
CH-LLMW-GTCIII	EST.(CuFt)															
	MIN. %															
	MAX. %															
RH-LLMW-I	EST.(CuFt)															
	MIN. %															
	MAX. %															

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PROJECTED SOLID WASTE EXTERNAL VOLUMES (FT3)

TABLE 1 page 2 of 5

REPORT SHIELDED RH WASTE AS RH WASTE NOT CH WASTE

WASTE CLASS	ESTIMATE	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024
CH-LLW-I	EST.(CuFt)	11,578														✓
	MIN. %	90														✓
	MAX. %	110														✓
CH-LLW-III	EST.(CuFt)	129														✓
	MIN. %	90														✓
	MAX. %	110														✓
CH-LLW-GTCIII	EST.(CuFt)															
	MIN. %															
	MAX. %															
RH-LLW-I	EST.(CuFt)															
	MIN. %															
	MAX. %															
RH-LLW-III	EST.(CuFt)															
	MIN. %															
	MAX. %															
RH-LLW-GTC III	EST.(CuFt)															
	MIN. %															
	MAX. %															
CH-LLMW-I	EST.(CuFt)	884														✓
	MIN. %	90														✓
	MAX. %	110														✓
CH-LLMW-III	EST.(CuFt)	129														✓
	MIN. %	90														✓
	MAX. %	110														✓
CH-LLMW-GTCIII	EST.(CuFt)															
	MIN. %															
	MAX. %															
RH-LLMW-I	EST.(CuFt)															
	MIN. %															
	MAX. %															

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PROJECTED SOLID WASTE EXTERNAL VOLUMES (FT3)

TABLE 1 page 3 of 5

REPORT SHIELDED RH WASTE AS RH WASTE NOT CH WASTE

WASTE CLASS	ESTIMATE	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009
RH-LLMW-III	EST.(CuFt)	120	83	65	—											✓
	MIN. %	90	—	—	—											✓
	MAX. %	110	—	—	—											✓
RH-LLMW-GTCIII	EST.(CuFt)															
	MIN. %															
	MAX. %															
CH-TRU	EST.(CuFt)															
	MIN. %															
	MAX. %															
RH-TRU	EST.(CuFt)															
	MIN. %															
	MAX. %															
CH-TRUM	EST.(CuFt)															
	MIN. %															
	MAX. %															
RH-TRUM	EST.(CuFt)	10	19	—	—											✓
	MIN. %	90	—	—	—											✓
	MAX. %	110	—	—	—											✓
HAZ.	EST.(CuFt)	117	100	82	—											✓
	MIN. %	90	—	—	—											✓
	MAX. %	110	—	—	—											✓

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PROJECTED SOLID WASTE EXTERNAL VOLUMES (FT3)

TABLE 1 page 4 of 5

REPORT SHIELDED RH WASTE AS RH WASTE NOT CH WASTE

WASTE CLASS	ESTIMATE	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024
RH-LLMW-III	EST.(CuFt)	65														✓
	MIN. %	90														✓
	MAX. %	110														✓
RH-LLMW-GTCIII	EST.(CuFt)															
	MIN. %															
	MAX. %															
CH-TRU	EST.(CuFt)															
	MIN. %															
	MAX. %															
RH-TRU	EST.(CuFt)															
	MIN. %															
	MAX. %															
CH-TRUM	EST.(CuFt)															
	MIN. %															
	MAX. %															
RH-TRUM	EST.(CuFt)	19														✓
	MIN. %	90														✓
	MAX. %	110														✓
HAZ.	EST.(CuFt)	82														✓
	MIN. %	90														✓
	MAX. %	110														✓

WMC-SD-WM-PICD-005, REV 0

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HELD WASTE

TABLE 1 page 5 of 5

PROJECTED SOLID WASTE EXTERNAL VOLUMES (FT3)

REPORT SHIELDED RH WASTE AS RH WASTE NOT CH WASTE

WASTE CLASS	1994 ESTIMATE (CuFt)
CH-LLW-I	N/A
CH-LLW-III	
CH-LLW-GTCIII	
RH-LLW-I	
RH-LLW-III	
RH-LLW-GTCIII	
CH-LLMW-I	
CH-LLMW-III	
CH-LLMW-GTCIII	
RH-LLMW-I	
RH-LLMW-III	
RH-LLMW-GTCIII	
CH-TRU	
RH-TRU	
CH-TRUM	
RH-TRUM	
HAZARDOUS	✓

NOTE: Report on this page any currently stored waste volumes that do not have a shipping schedule. Do not include volumes that are reported from 1995 through 2024.

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STEP 1: CIRCLE ONE WASTE CLASS

Container Type and Volume %

TABLE 2 Page 1 of 4

CH-LLW-I

CH-LLW-III

CH-LLW-GTC-III

RH-LLW-I

RH-LLW-III

STEP 2: RH-LLW-GTC-III

COMPLETE A SEPARATE TABLE 2 FOR EACH WASTE CLASS IDENTIFIED IN TABLE 1

STEP 3: Indicate Volume % of Waste Class Packaged in Identified Containers

CONTAINERS	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	HELD
55 Gal Drum 9.2 CuFt	17																														
85 GAL DRUM 12.1 CuFt																															
4 X 4 X 8 Box W/Skids 143 CuFt	83																														
4 X 4 X 8 Box W/O Skids 128 CuFt																															
4 X 4 X 8 Metal 128 CuFt																															
B-25 103.2 CuFt																															
OTHER																															
* TOTAL (0 or 100%)	100																														

* Total for each year MUST equal 0 or 100%

Other - Indicate container type, external dimensions, and external volume (cuft, gal). _____

The containers listed above conform to the acceptance criteria in WHC-EP-0063-4 (Hanford Site Solid Waste Acceptance Criteria).

"OTHER" containers may be accepted.

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Container Type and Volume %

TABLE 2 Page 1 of 4

STEP 1: CIRCLE ONE WASTE CLASS

CH-LLW-I

CH-LLW-III

CH-LLW-GTC-III

RH-LLW-I

RH-LLW-III

STEP 2: RH-LLW-GTC-III

COMPLETE A SEPARATE TABLE 2 FOR EACH WASTE CLASS IDENTIFIED IN TABLE 1

STEP 3: Indicate Volume % of Waste Class Packaged in Identified Containers

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CONTAINERS	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	HELD
55 Gal Drum 9.2 CuFt	100																														
85 GAL DRUM 12.1 CuFt																															
4 X 4 X 8 Box W/Sklds 143 CuFt																															
4 X 4 X 8 Box W/O Sklds 128 CuFt																															
4 X 4 X 8 Metal 128 CuFt																															
B-25 103.2 CuFt																															
OTHER																															
* TOTAL (0 or 100%)	100																														

* Total for each year MUST equal 0 or 100%

Other - Indicate container type, external dimensions, and external volume (cuft, gal). _____

The containers listed above conform to the acceptance criteria in WHC-EP-0063-4 (Hanford Site Solid Waste Acceptance Criteria).

"OTHER" containers may be accepted.

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STEP1: CIRCLE ONE WASTE CLASS

1-MWT77-HO

III-MW77-HC

III-CTG-MW77-HC

1-MW77-H8

III-MW-111

III-CLG-MWT-HR

STEP 2:

STEP 3: Indicate Volume % of Waste Class Packaged in Identified Containers

COMPLETE A SEPARATE TABLE 2 FOR EACH WASTE CLASS IDENTIFIED IN TABLE 1

[illegible]

B.13

* Total for each year MUST equal 0 or

%001

Other - Indicates container type, external dimensions, and external volume (cuft, gal).

The containers listed above conform to the acceptance criteria in WHC-EP-0063-4 (Hanford Site Solid Waste Acceptance Criteria). "OTHER" containers may be accepted.

Container Type and Volume %

TABLE 2 Page 2 of 4

STEP1: CIRCLE ONE WASTE CLASS

CH-LLMW-I
CH-LLMW-III
 CH-LLMW-GTC-III
 RH-LLMW-I
 RH-LLMW-III
 RH-LLMW-GTC-III

STEP 2:

STEP 3: Indicate Volume % of Waste Class Packaged in Identified Containers

COMPLETE A SEPARATE TABLE 2 FOR EACH WASTE CLASS IDENTIFIED IN TABLE 1

CONTAINERS	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	HELD
55 Gal Drum 9.2 CuFt	100																														
85 GAL DRUM 12.1 CuFt																															
4 X 4 X 8 Box W/Sklds 143 CuFt																															
4 X 4 X 8 Box W/O Sklds 128 CuFt																															
4 X 4 X 8 Metal 128 CuFt																															
B-25 103.2 CuFt																															
OTHER																															
* TOTAL (0 or 100%)	100																														

* Total for each year MUST equal 0 or

100%

Other - Indicate container type, external dimensions, and external volume (cuft, gal).

The containers listed above conform to the acceptance criteria in WHC-EP-0063-4 (Hanford Site Solid Waste Acceptance Criteria).

"OTHER" containers may be accepted.

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Container Type and Volume %

TABLE 2 Page 2 of 4

STEP1: CIRCLE ONE WASTE CLASS

CH-LLMW-I
CH-LLMW-III
CH-LLMW-GTC-III
RH-LLMW-I
RH-LLMW-III
RH-LLMW-GTC-III

COMPLETE A SEPARATE TABLE 2 FOR EACH WASTE CLASS IDENTIFIED IN TABLE 1

STEP 2:

STEP 3: Indicate Volume % of Waste Class Packaged in Identified Containers

CONTAINERS	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	HELD
55 Gal Drum 9.2 CuFt	100																														
85 GAL DRUM 12.1 CuFt																															
4 X 4 X 8 Box W/Skids 143 CuFt																															
4 X 4 X 8 Box W/O Skids 128 CuFt																															
4 X 4 X 8 Metal 128 CuFt																															
B-25 103.2 CuFt																															
OTHER																															
* TOTAL (0 or 100%)	100																														

* Total for each year MUST equal 0 or

100%

Other - Indicate container type, external dimensions, and external volume (cuft, gal). _____

The containers listed above conform to the acceptance criteria in WHC-EP-0063-4 (Hanford Site Solid Waste Acceptance Criteria).

"OTHER" containers may be accepted.

WHC-SD-WM-PICD-005, REV 0

STEP 1: CIRCLE ONE WASTE CLASS

CH-TRU
CH-TRUM

RH-TRU
RH-TRUM

Container Type and Volume %

TABLE 2 Page 3 of 4

COMPLETE A SEPARATE TABLE 2 FOR EACH WASTE CLASS IDENTIFIED IN TABLE 1

STEP 2:

STEP 3: Indicate Volume % of Waste Class Packaged in Identified Containers

CONTAINERS	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	HELD
55 Gal Drum 9.2 CuFt	100																														
85 GAL DRUM 12.1 CuFt																															
4 X 4 X 8 Box W/Skids 143 CuFt																															
4 X 4 X 8 Box W/O Skids 128 CuFt																															
4 X 4 X 8 Metal 128 CuFt																															
SWB 73.4 CuFt																															
OTHER																															
* TOTAL (0 or 100%)	100																														

* Total for each year MUST equal 0 or 100%

Other - Indicate container type, external dimensions, and external volume (cuft, gal).

The containers listed above conform to the acceptance criteria in WHC-EP-0063-4 (Hanford Site Solid Waste Acceptance Criteria).

"OTHER" containers may be accepted.

WHC-SD-WM-PICD-005, REV 0

STEP1: CIRCLE WASTE CLASS

Container Type and Volume %

TABLE 2 Page 4 of 4

HAZARDOUS

ONLY

STEP 2:

STEP 3: Indicate Volume % of Waste Class Packaged in Identified Containers

CONTAINERS	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	HELD
55 Gal Drum 9.2 CuFt	48																														
30 GAL DRUM 4.4 CuFt	30																														
4 X 4 X 8 Box W/Sklds 143 CuFt																															
4 X 4 X 8 Box W/O Sklds 128 CuFt																															
4 X 4 X 8 Metal 128 CuFt																															
OTHER	15																														
* TOTAL (0 or 100%)																															

* Total for each year MUST equal 0 or 100%

Other - Indicate container type, external dimensions, and external volume (cuft, gal). 8 gallon Drum, $V = 1.49 \text{ ft}^3$

The containers listed above conform to the acceptance criteria in WHC-EP-0063-4 (Hanford Site Solid Waste Acceptance Criteria).

"OTHER" containers may be accepted.

STEP1: CIRCLE WASTE CLASS

Container Type and Volume %

TABLE 2 Page 4 of 4

HAZARDOUS

ONLY

STEP 2:

STEP 3: Indicate Volume % of Waste Class Packaged in Identified Containers

CONTAINERS	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	HELD
55 Gal Drum 9.2 CuFt																															
30 GAL DRUM 4.4 CuFt																															
4 X 4 X 8 Box W/Skids 143 CuFt																															
4 X 4 X 8 Box W/O Skids 128 CuFt																															
4 X 4 X 8 Metal 128 CuFt																															
OTHER	7																														
*TOTAL (0 or 100%)	100																														

* Total for each year MUST equal 0 or 100%

Other - Indicate container type, external dimensions, and external volume (cuft, gal). 128 Box, V = 2.0 ft³

The containers listed above conform to the acceptance criteria in WHC-EP-0063-4 (Hanford Site Solid Waste Acceptance Criteria).
 "OTHER" containers may be accepted.

STEP 1 CONTAINER TYPE <u>55 gallon Drum</u>		Physical Waste Forms/LLW & TRU							TABLE 3 page 1 of 1		STEP 4 Are Waste Forms Segre- gated? Y/N
STEP 2 YEARS <u>1995</u> TO <u>2024</u> (INCLUDE HELD IF APPLICABLE)		A separate Table 3 must be completed for each container identified in Table 2									
WASTE FORMS		STEP 3 Indicate Volume % of each Waste Form present for each Waste Class									
		CH LLWI	CH LLWIII	CH LLW GTCIII	RH LLWI	RH LLWIII	RH LLW GTCIII	CH TRU	RH TRU		
SHIELDING											
STEEL											
LEAD											
CONCRETE											
SOLID PROCESS RESIDUES											
INORGANIC PARTICULATES		<u>18</u>	<u>16</u>							<u>N</u>	
INORGANIC ABSORBED LIQ/SLUDGE											
ORGANIC PARTICULATES											
ORGANIC ABSORBED LIQ/SLUDGE		<u>1</u>								<u>N</u>	
SOILS											
CONTAMINATED SOILS			<u>23</u>							<u>N</u>	
DEBRIS CONTAMINATED SOILS											
DEBRIS WASTE											
METAL		<u>5</u>	<u>4</u>							<u>N</u>	
INORGANIC NON-METAL		<u>16</u>	<u>17</u>							<u>N</u>	
COMBUSTIBLE		<u>60</u>	<u>40</u>							<u>N</u>	
HETEROGENEOUS											
SPECIAL WASTE											
LAB PACKS/CONTAINERIZED LIQUIDS											
UNKNOWN											
OTHER *											
TOTAL ¹ (0 OR 100%)		<u>100</u>	<u>100</u>								

¹ Total for Each Waste Class MUST Equal 0 or 100%

* OTHER WASTE DESCRIPTION : _____

STEP 1 CONTAINER TYPE <u>4x4x8 Box</u>	Physical Waste Forms/LLW & TRU							TABLE 3 page 1 of 1	STEP 4 Are Waste Forms Segregated? Y/N
STEP 2 YEARS <u>1995</u> TO <u>2024</u> (INCLUDE HELD IF APPLICABLE)	A separate Table 3 must be completed for each container identified in Table 2								
WASTE FORMS	STEP 3 Indicate Volume % of each Waste Form present for each Waste Class								
	CH LLWI	CH LLWIII	CH LLW GTCIII	RH LLWI	RH LLWIII	RH LLW GTCIII	CH TRU	RH TRU	
SHIELDING									
STEEL									
LEAD									
CONCRETE									
SOLID PROCESS RESIDUES									
INORGANIC PARTICULATES	3								N
INORGANIC ABSORBED LIQ/SLUDGE									
ORGANIC PARTICULATES									
ORGANIC ABSORBED LIQ/SLUDGE									
SOILS									
CONTAMINATED SOILS	1								N
DEBRIS CONTAMINATED SOILS									
DEBRIS WASTE									
METAL	45								N
INORGANIC NON-METAL	7								N
COMBUSTIBLE	44								N
HETEROGENEOUS									
SPECIAL WASTE									
LAB PACKS/CONTAINERIZED LIQUIDS									
UNKNOWN									
OTHER *									
TOTAL ¹ (0 OR 100%)	100								

¹ Total for Each Waste Class MUST Equal 0 or 100%

* OTHER WASTE DESCRIPTION : _____

STEP 2 CONTAINER TYPE

55 GAL. DRUM

A separate Table 4 must be completed for each waste class and container type identified in Table 2.

STEP 5 EPA/RCRA/WAC indicate percent present for each waste form

STEP 3 YEARS

1995 TO 2024

(INCLUDE HELD IF APPLICABLE)

STEP 4

INDICATE BELOW THE VOLUME % OF WASTE FORM IN CONTAINER IDENTIFIED IN STEP 2

EPA / RCRA						WAC			
A	B	C	D	E	F	G	H	J	
IGN. D001	CORR. D002	REAC. D003	* MET. (Metals)	MHG. (Mercury) D009 P065 P092 U151	* ORG.	WT WP WC	PCB W001	PCB W001	
* See Appendix A:									
MET - Tables A - 9 thru A - 11									
ORG - Tables A - 1 thru A - 8									

STEP 6

Are Waste Forms Segre-gated?

Y/N

WASTE FORMS

%	SHIELDING	< 50 ppm > 50 ppm							
	STEEL								
3	LEAD			100			100		
	CONCRETE								
SOLID PROCESS RESIDUES									
10	INORGANIC PARTICULATES								Y
	INORGANIC ABSORBED LIQUID/SLUDGES								
	SALT WASTE								
	ORGANIC PARTICULATES								
1	ORGANIC ABSORBED LIQ/SLUDG					50	100		N
SOILS									
	CONTAMINATED SOILS								
	DEBRIS CONTAMINATED SOILS								

NOTE: Waste Form % should be totaled on Table 4 Page 2 of 2 and MUST equal 100%

STEP 1 WASTE

WASTE CLASS CHLLMW-1

A separate Table 4 must be completed for each waste class and container type identified in Table 2.

STEP 2 CONTAINER

TYPE 55 GAL DRUM

STEP 5 EPA/RCPA/WAC indicate percent present for each waste form

STEP 3 YEARS 1994 TO 2024

(INCLUDE HELD IF APPLICABLE)

STEP 4

INDICATE BELOW THE VOLUME % OF
WASTE FORM IN CONTAINER
IDENTIFIED IN STEP 2

EPA / RCRA

WAC

STEP 6
Are
Waste
Forms
Segre-
gated?
Y/N

↓ WASTE FORMS

%	DEBRIS WASTES
100	100
90	90
80	80
70	70
60	60
50	50
40	40
30	30
20	20
10	10
0	0

< 50 ppm > 50 ppm

METAL

INORGANIC NON-METAL

COMBUSTIBLE

HETEROGENEOUS

SPECIAL WASTES

LABPACKS/CONTAINERIZED LIQ.

REACTIVE METALS

EXPLOSIVES/PROPELLENTS

INHERENTLY HAZARDOUS WASTE

ELEMENTAL MERCURY

ELEMENTAL LEAD

BERYLLIUM WASTE

BATTERIES

UNKNOWN

OTHER •

* OTHER WASTE DESCRIPTION:

WASTE CODE U006 (ACETYL CHLORIDE)
WAS SHIPPED ONCE DURING 1993.

STEP 2 CONTAINER TYPE

55 GAL. DRUM

A separate Table 4 must be completed for each waste class and container type identified in Table 2.

STEP 5 EPA/RCRA/WAC indicate percent present for each waste form

STEP 3 YEARS 1995 TO 2024

(INCLUDE HELD IF APPLICABLE)

STEP 4

INDICATE BELOW THE VOLUME % OF WASTE FORM IN CONTAINER IDENTIFIED IN STEP 2

EPA / RCRA						WAC			
A	B	C	D	E	F	G	H	J	
IGN. D001	CORR. D002	REAC. D003	* MET. (Metals)	MHG. (Mercury) D009 P065 P092 U151	* ORG.	WT WP WC	PCB W001	PCB W001	
See Appendix A:				MET - Tables A - 9 thru A - 11					
				ORG - Tables A - 1 thru A - 8					

STEP 6

Are Waste Forms Segre-gated?

Y/N

↓

WASTE FORMS

%	SHIELDING	< 50 ppm > 50 ppm								
	STEEL									
10	LEAD				100			100		
	CONCRETE									
SOLID PROCESS RESIDUES										
20	INORGANIC PARTICULATES									Y
	INORGANIC ABSORBED LIQUID/SLUDGES									
	SALT WASTE									
	ORGANIC PARTICULATES									
1	ORGANIC ABSORBED LIQ/SLUDG					50	100			N
SOILS										
	CONTAMINATED SOILS									
	DEBRIS CONTAMINATED SOILS									

▶ NOTE: Waste Form % should be totaled on Table 4 Page 2 of 2 and MUST equal 100%

Waste Forms & Hazardous Constituents Mixed/Hazardous Only **TABLE 4** page 2 of 2

STEP 1 WASTE CLASS CHLL MW-III

STEP 2 CONTAINER TYPE 55 GAL. DRUM

STEP 3 YEARS 1995 TO 2024
(INCLUDE HELD IF APPLICABLE)

STEP 4 INDICATE BELOW THE VOLUME % OF WASTE FORM IN CONTAINER IDENTIFIED IN STEP 2

A separate Table 4 must be completed for each waste class and container type identified in Table 2.

STEP 5 EPA/PCPA/WAC indicate percent present for each waste form

EPA / RCRA

WAC

STEP 6
Are
Waste
Forms
Segre-
gated?
Y/N

A	B	C	D	E	F	G	H	J
IGN. D001	CORR. D002	REAC. D003	* MET. (Metals)	MHG. (Mercury) D009 P065 P092 U151	* ORG.	WT WP WC	PCB W001	PCB W001
* See Appendix A: MET - Tables A - 9 thru A - 11 ORG - Tables A - 1 thru A - 8								

↓
WASTE FORMS

%	DEBRIS WASTES									
	METAL									
15	INORGANIC NON-METAL	2	1		84	1	59	38		N
22	COMBUSTIBLE	2	1		84	1	59	38		N
1	HETEROGENEOUS	2	1		84	1	59	38		N
	SPECIAL WASTES									
31	LABPACKS/CONTAINERIZED LIQ.	48	24	14			62	100		Y
	REACTIVE METALS									
	EXPLOSIVES/PROPELLENTS									
	INHERENTLY HAZARDOUS WASTE									
	ELEMENTAL MERCURY									
	ELEMENTAL LEAD									
	BERYLLIUM WASTE									
	BATTERIES									
	UNKNOWN									
	OTHER *									

100%

* OTHER WASTE DISCRIPTION: _____

B.24

WHC-SD-WM-PICD-005, REV 0

STEP 1 WASTE CLASS RHLLMW-III

Waste Forms & Hazardous Constituents Mixed/Hazardous Only

TABLE 4 page 1 of 2

STEP 2 CONTAINER TYPE 55 GAL. DRUM

A separate Table 4 must be completed for each waste class and container type identified in Table 2.

STEP 5 EPA/RCRA/WAC indicate percent present for each waste form

STEP 3 YEARS 1995 TO 2024
(INCLUDE HELD IF APPLICABLE)

STEP 4 INDICATE BELOW THE VOLUME % OF WASTE FORM IN CONTAINER IDENTIFIED IN STEP 2

EPA / RCRA						WAC			
A	B	C	D	E	F	G	H	J	
IGN. D001	CORR. D002	REAC. D003	* MET. (Metals)	MHG. (Mercury) D009 P065 P092 U151	* ORG.	WT WP WC	PCB W001	PCB W001	
* See Appendix A:									
MET - Tables A - 9 thru A - 11									
ORG - Tables A - 1 thru A - 8									

STEP 6
Are
Waste
Forms
Segre-
gated?
Y/N

↓
WASTE FORMS

%	SHIELDING	< 50 ppm > 50 ppm								
	STEEL									
20	LEAD			100			100			
	CONCRETE									
SOLID PROCESS RESIDUES										
	INORGANIC PARTICULATES									
6	INORGANIC ABSORBED LIQUID/SLUDGES	2	1	84	1	59	100			N
	SALT WASTE									
	ORGANIC PARTICULATES									
6	ORGANIC ABSORBED LIQ/SLUDG	2	1	84	1	59	100			N
SOILS										
	CONTAMINATED SOILS									
	DEBRIS CONTAMINATED SOILS									

MHC-SD-WM-PICD-005, REV 0

NOTE: Waste Form % should be totaled on Table 4 Page 2 of 2 and MUST equal 100%

Waste Forms & Hazardous Constituents Mixed/Hazardous Only

TABLE 4 page 2 of 2

STEP 1 WASTE CLASS RH LLMW -III

A separate Table 4 must be completed for each waste class and container type identified in Table 2.

STEP 2 CONTAINER TYPE 55 GAL. DRUM

STEP 5 EPA/RCRA/WAC indicate percent present for each waste form

STEP 3 YEARS 1995 TO 2024
(INCLUDE HELD IF APPLICABLE)

STEP 4 INDICATE BELOW THE VOLUME % OF WASTE FORM IN CONTAINER IDENTIFIED IN STEP 2

EPA / RCRA						WAC		
A	B	C	D	E	F	G	H	J
IGN. D001	CORR. D002	REAC. D003	* MET. (Metals)	MHG. (Mercury) D009 P065 P092 U151	* ORG.	WT WP WC	PCB W001	PCB W001
* See Appendix A:								
MET - Tables A - 9 thru A - 11								
ORG - Tables A - 1 thru A - 8								

STEP 6
Are
Waste
Forms
Segre-
gated?
Y/N

WASTE FORMS

%	DEBRIS WASTES	< 50 ppm > 50 ppm								
	METAL									
27	INORGANIC NON-METAL	2	1		84	1	59	38		N
35	COMBUSTIBLE	2	1		84	1	59	38		N
6	HETEROGENEOUS	2	1		84	1	59	38		N
SPECIAL WASTES										
	LABPACKS/CONTAINERIZED LIQ.									
	REACTIVE METALS									
	EXPLOSIVES/PROPELLENTS									
INHERENTLY HAZARDOUS WASTE										
	ELEMENTAL MERCURY									
	ELEMENTAL LEAD									
	BERYLLIUM WASTE									
	BATTERIES									
UNKNOWN										
	OTHER *									

100%

* OTHER WASTE DISCRIPTION: _____

STEP 1 WASTE CLASS RH-TRUM

STEP 2 CONTAINER TYPE 55 GAL. DRUM

STEP 3 YEARS 1995 TO 2024
(INCLUDE HELD IF APPLICABLE)

STEP 4
INDICATE BELOW THE VOLUME % OF
WASTE FORM IN CONTAINER
IDENTIFIED IN STEP 2

A separate Table 4 must be completed for each waste class and container type identified in Table 2.

STEP 5 EPA/RCRA/WAC indicate percent present for each waste form.

EPA / RCRA						WAC			
A	B	C	D	E	F	G	H	J	
IGN. D001	CORR. D002	REAC. D003	* MET. (Metals)	MHG. (Mercury) D009 P065 P092 U151	* ORG.	WT WP WC	PCB W001	PCB W001	
* See Appendix A:									
MET - Tables A - 9 thru A - 11									
ORG - Tables A - 1 thru A - 8									

STEP 6
Are
Waste
Forms
Segre-
gated?
Y/N

%	SHIELDING	< 50 ppm > 50 ppm							
	STEEL								
	LEAD								
	CONCRETE								
	SOLID PROCESS RESIDUES								
	INORGANIC PARTICULATES								
	INORGANIC ABSORBED LIQUID/SLUDGES								
	SALT WASTE								
	ORGANIC PARTICULATES								
10	ORGANIC ABSORBED LIQ/SLUDG			100		100	100		N
	SOILS								
	CONTAMINATED SOILS								
	DEBRIS CONTAMINATED SOILS								

NOTE: Waste Form % should be totaled on Table 4 Page 2 of 2 and MUST equal 100%

STEP 1 WASTE CLASS RH - TRUM

STEP 2 CONTAINER TYPE 55 GAL. DRUM

STEP 3 YEARS 1995 TO 2024
(INCLUDE HELD IF APPLICABLE)

STEP 4
INDICATE BELOW THE VOLUME % OF
WASTE FORM IN CONTAINER
IDENTIFIED IN STEP 2

A separate Table 4 must be completed for each waste class and container type identified in Table 2.

STEP 5 EPA/RCRA/WAC indicate percent present for each waste form

EPA / RCRA						WAC		
A	B	C	D	E	F	G	H	J
IGN. D001	CONN. D002	REAC. D003	* MET. (Metals)	MHG. (Mercury) D009 P065 P092 U151	* ORG.	WT WP WC	PCB W001	PCB W001
* See Appendix A: MET - Tables A - 9 thru A - 11 ORG - Tables A - 1 thru A - 8								

STEP 6
Are
Waste
Forms
Segre-
gated?
Y/N

↓
WASTE FORMS

%	DEBRIS WASTES	< 50 ppm > 50 ppm							
	METAL								
10	INORGANIC NON-METAL			100		100	100		N
40	COMBUSTIBLE	100	100	100		100	100		N
40	HETEROGENEOUS	100	100	100		100	100		N
SPECIAL WASTES									
	LABPACKS/CONTAINERIZED LIQ.								
	REACTIVE METALS								
	EXPLOSIVES/PROPELLENTS								
INHERENTLY HAZARDOUS WASTE									
	ELEMENTAL MERCURY								
	ELEMENTAL LEAD								
	BERYLLIUM WASTE								
	BATTERIES								
UNKNOWN									
	OTHER *								
100%									

* OTHER WASTE DISCRIPTION: _____

B.28

MHC-SD-WM-PICD-005, REV 0

STEP 1 WASTE CLASS HAZARDOUS
 STEP 2 CONTAINER TYPE 55 GAL. DRUM

A separate Table 4 must be completed for each waste class and container type identified in Table 2.

STEP 5 EPA/RCRA/WAC indicate percent present for each waste form

STEP 3 YEARS 1995 TO 2024
 (INCLUDE HELD IF APPLICABLE)

STEP 4 INDICATE BELOW THE VOLUME % OF WASTE FORM IN CONTAINER IDENTIFIED IN STEP 2

EPA / RCRA						WAC			
A	B	C	D	E	F	G	H	J	
IGN. D001	CORR. D002	REAC. D003	* MET. (Metals)	MHG. (Mercury) D009 P065 P092 U151	* ORG. J	WT WP WC	PCB W001	PCB W001	
• See Appendix A: MET - Tables A - 9 thru A - 11 ORG - Tables A - 1 thru A - 8									

STEP 6
Are
Waste
Forms
Segre-
gated?
Y/N

↓
WASTE FORMS

%	SHIELDING										
	STEEL										
	LEAD										
	CONCRETE										
SOLID PROCESS RESIDUES											
26	INORGANIC PARTICULATES										Y
	INORGANIC ABSORBED LIQUID/SLUDGES										
	SALT WASTE										
	ORGANIC PARTICULATES										
	ORGANIC ABSORBED LIQ/SLUDG										
SOILS											
	CONTAMINATED SOILS										
	DEBRIS CONTAMINATED SOILS										

NOTE: Waste Form % should be totaled on Table 4 Page 2 of 2 and MUST equal 100%

Waste Forms & Hazardous Constituents Mixed/Hazardous Only **TABLE 4** page 2 of 2

STEP 1 WASTE CLASS HAZARDOUS

STEP 2 CONTAINER TYPE 55 GAL. DRUM

STEP 3 YEARS 1995 TO 2024
(INCLUDE HELD IF APPLICABLE)

STEP 4 INDICATE BELOW THE VOLUME % OF WASTE FORM IN CONTAINER IDENTIFIED IN STEP 2

STEP 5 EPA/RCRA/WAC indicate percent present for each waste form

EPA / RCRA						WAC			STEP 6 Are Waste Forms Segre- gated? Y/N
A	B	C	D	E	F	G	H	J	
IGN. D001	CORR. D002	REAC. D003	* MET. (Metals)	MHG. (Mercury) D009 P065 P092 U151	* ORG.	WT WP WC	PCB W001	PCB W001	
* See Appendix A: MET - Tables A - 9 thru A - 11 ORG - Tables A - 1 thru A - 8									

WASTE FORMS									
%	DEBRIS WASTES	< 50 ppm > 50 ppm							
4	METAL						100		N
	INORGANIC NON-METAL								
22	COMBUSTIBLE		5	33	10		81		N
	HETEROGENEOUS								
SPECIAL WASTES									
48	LABPACKS/CONTAINERIZED LIQ.	36	61	1	76	14	3	100	Y
	REACTIVE METALS								
	EXPLOSIVES/PROPELLENTS								
INHERENTLY HAZARDOUS WASTE									
	ELEMENTAL MERCURY								
	ELEMENTAL LEAD								
	BERYLLIUM WASTE								
	BATTERIES								
UNKNOWN									
	OTHER *								
100%									

* OTHER WASTE DISCRIPTION: _____

STEP 1 WASTE
CLASS HAZARDOUS

Waste Forms & Hazardous Constituents Mixed/Hazardous Only

TABLE 4 page 1 of 2

STEP 2 CONTAINER
TYPE 8 GAL. DRUM

A separate Table 4 must be completed for each waste class and container type identified in Table 2.

STEP 5 EPA/RCRA/WAC indicate percent present for each waste form

STEP 3 YEARS 1995 TO 2024
(INCLUDE HELD IF APPLICABLE)

STEP 4
INDICATE BELOW THE VOLUME % OF
WASTE FORM IN CONTAINER
IDENTIFIED IN STEP 2

EPA / RCRA						WAC			
A	B	C	D	E	F	G	H	J	
IGN. D001	CORR. D002	REAC. D003	* MET. (Metals)	MHG. (Mercury) D009 P065 P092 U151	* ORG.	WT WP WC	PCB W001	PCB W001	
* See Appendix A:									
MET - Tables A - 9 thru A - 11									
ORG - Tables A - 1 thru A - 8									

STEP 6
Are
Waste
Forms
Segre-
gated?
Y/N

↓
WASTE FORMS

%	SHIELDING	< 50 ppm > 50 ppm							
	STEEL								
	LEAD								
	CONCRETE								
	SOLID PROCESS RESIDUES								
20	INORGANIC PARTICULATES								Y
	INORGANIC ABSORBED LIQUID/SLUDGES								
	SALT WASTE								
	ORGANIC PARTICULATES								
	ORGANIC ABSORBED LIQ/SLUDG								
	SOILS								
	CONTAMINATED SOILS								
	DEBRIS CONTAMINATED SOILS								

WMC-SD-WM-PICD-005, REV 0

NOTE: Waste Form % should be totaled on Table 4 Page 2 of 2 and MUST equal 100%

Waste Forms & Hazardous Constituents Mixed/Hazardous Only

TABLE 4 page 2 of 2

STEP 1 WASTE CLASS HAZARDOUS

A separate Table 4 must be completed for each waste class and container type identified in Table 2.

STEP 2 CONTAINER TYPE 8 GAL. DRUM

STEP 5 EPA/RCRA/WAC indicate percent present for each waste form

STEP 3 YEARS 1995 TO 2024
(INCLUDE HELD IF APPLICABLE)

STEP 4 INDICATE BELOW THE VOLUME % OF WASTE FORM IN CONTAINER IDENTIFIED IN STEP 2

EPA / RCRA						WAC			STEP 6 Are Waste Forms Segre- gated? Y/N
A	B	C	D	E	F	G	H	J	
IGN. D001	CORR. D002	REAC. D003	* MET. (Metals)	MHG. (Mercury) D009 P065 P092 U151	* ORG.	WT WP WC	PCB W001	PCB W001	
* See Appendix A: MET - Tables A - 9 thru A - 11 ORG - Tables A - 1 thru A - 8									

WASTE FORMS

%	DEBRIS WASTES	< 50 ppm > 50 ppm								
	METAL									
	INORGANIC NON-METAL									
	COMBUSTIBLE									
	HETEROGENEOUS									
	SPECIAL WASTES									
80	LABPACKS/CONTAINERIZED LIQ.	36	61	1	76	14	3	100		Y
	REACTIVE METALS									
	EXPLOSIVES/PROPELLENTS									
	INHERENTLY HAZARDOUS WASTE									
	ELEMENTAL MERCURY									
	ELEMENTAL LEAD									
	BERYLLIUM WASTE									
	BATTERIES									
	UNKNOWN									
	OTHER *									

100%

* OTHER WASTE DESCRIPTION: WASTE CODE U080 (SOLID METHYLENECHLORIDE)
WAS SHIPPED ONCE DURING 1993.

STEP 1 WASTE CLASS HAZARDOUS

STEP 2 CONTAINER TYPE 30 gal. drum

A separate Table 4 must be completed for each waste class and container type identified in Table 2.

STEP 5 EPA/RCRA/WAC indicate percent present for each waste form

STEP 3 YEARS 1995 TO 2024
(INCLUDE HELD IF APPLICABLE)

STEP 4 INDICATE BELOW THE VOLUME % OF WASTE FORM IN CONTAINER IDENTIFIED IN STEP 2

EPA / RCRA						WAC			
A	B	C	D	E	F	G	H	J	
IGN. D001	CORR. D002	REAC. D003	* MET. (Metals)	MHG. (Mercury) D009 P065 P092 U151	* ORG.	WT WP WC	PCB W001	PCB W001	
* See Appendix A:				MET - Tables A - 9 thru A - 11					
				ORG - Tables A - 1 thru A - 8					

STEP 6
Are
Waste
Forms
Segre-
gated?
Y/N

↓
WASTE FORMS

%	SHIELDING										
	STEEL										
	LEAD										
	CONCRETE										
	SOLID PROCESS RESIDUES										
20	INORGANIC PARTICULATES										y
	INORGANIC ABSORBED LIQUID/SLUDGES										
	SALT WASTE										
	ORGANIC PARTICULATES										
	ORGANIC ABSORBED LIQ/SLUDG										
	SOILS										
	CONTAMINATED SOILS										
	DEBRIS CONTAMINATED SOILS										

MHC-SD-WM-PICD-005, REV 0

▶ NOTE: Waste Form % should be totaled on Table 4 Page 2 of 2 and MUST equal 100%

Waste Forms & Hazardous Constituents Mixed/Hazardous Only

TABLE 4 page 2 of 2

STEP 1 WASTE CLASS HAZARDOUS

A separate Table 4 must be completed for each waste class and container type identified in Table 2.

STEP 2 CONTAINER TYPE 30 GAL. DRUM

STEP 5 EPA/RCRA/WAC indicate percent present for each waste form

STEP 3 YEARS 1995 TO 2024
(INCLUDE HELD IF APPLICABLE)

STEP 4 INDICATE BELOW THE VOLUME % OF WASTE FORM IN CONTAINER IDENTIFIED IN STEP 2

EPA / RCRA						WAC		
A	B	C	D	E	F	G	H	J
IGN. D001	CORR. D002	REAC. D003	* MET. (Metals)	MHG. (Mercury) D009 P065 P092 U151	* ORG.	WT WP WC	PCB W001	PCB W001
See Appendix A: MET - Tables A - 9 thru A - 11 ORG - Tables A - 1 thru A - 8								

STEP 6
Are
Waste
Forms
Segre-
gated?
Y/N

WASTE FORMS

%	DEBRIS WASTES	< 50 ppm > 50 ppm							
	METAL								
	INORGANIC NON-METAL								
	COMBUSTIBLE								
	HETEROGENEOUS								
	SPECIAL WASTES								
80	LABPACKS/CONTAINERIZED LIQ.	36	61	1	76	14	3	100	Y
	REACTIVE METALS								
	EXPLOSIVES/PROPELLENTS								
	INHERENTLY HAZARDOUS WASTE								
	ELEMENTAL MERCURY								
	ELEMENTAL LEAD								
	BERYLLIUM WASTE								
	BATTERIES								
	UNKNOWN								
	OTHER *								

100%

* OTHER WASTE DISCRIPTION: _____

STEP 1 WASTE CLASS HAZARDOUS

Waste Forms & Hazardous Constituents Mixed/Hazardous Only

TABLE 4 page 1 of 2

STEP 2 CONTAINER TYPE 12 B Box

A separate Table 4 must be completed for each waste class and container type identified in Table 2.

STEP 5 EPA/RCRA/WAC indicate percent present for each waste form

STEP 3 YEARS 1995 TO 2024
(INCLUDE HELD IF APPLICABLE)

EPA / RCRA						WAC			
A	B	C	D	E	F	G	H	J	
IGN. D001	CORR. D002	REAC. D003	* MET. (Metals)	MHG. (Mercury) D009 P065 P092 U151	* ORG.	WT WP WC	PCB W001	PCB W001	
* See Appendix A: MET - Tables A - 9 thru A - 11 ORG - Tables A - 1 thru A - 8									

STEP 6
Are
Waste
Forms
Segre-
gated?
Y/N

STEP 4
INDICATE BELOW THE VOLUME % OF
WASTE FORM IN CONTAINER
IDENTIFIED IN STEP 2

WASTE FORMS

%	SHIELDING										
	STEEL										
	LEAD										
	CONCRETE										
	SOLID PROCESS RESIDUES										
20	INORGANIC PARTICULATES										Y
	INORGANIC ABSORBED LIQUID/SLUDGES										
	SALT WASTE										
	ORGANIC PARTICULATES										
	ORGANIC ABSORBED LIQ/SLUDG										
	SOILS										
	CONTAMINATED SOILS										
	DEBRIS CONTAMINATED SOILS										

MHC-SD-WM-PICD-005, REV 0

NOTE: Waste Form % should be totaled on Table 4 Page 2 of 2 and MUST equal 100%

Waste Forms & Hazardous Constituents Mixed/Hazardous Only

TABLE 4 page 2 of 2

STEP 1 WASTE CLASS _____

A separate Table 4 must be completed for each waste class and container type identified in Table 2.

STEP 2 CONTAINER TYPE _____

STEP 5 EPA/RCRA/WAC indicate percent present for each waste form

STEP 3 YEARS _____ TO _____
(INCLUDE HELD IF APPLICABLE)

STEP 4
INDICATE BELOW THE VOLUME % OF
WASTE FORM IN CONTAINER
IDENTIFIED IN STEP 2

EPA / RCRA						WAC			STEP 6 Are Waste Forms Segre- gated? Y/N
A	B	C	D	E	F	G	H	J	
IGN. D001	CORR. D002	REAC. D003	* MET. (Metals)	MHG. (Mercury) D009 P065 P092 U151	* ORG.	WT WP WC	PCB W001	PCB W001	
* See Appendix A: MET - Tables A - 9 thru A - 11 ORG - Tables A - 1 thru A - 8									

WASTE FORMS

%	WASTE FORMS	A	B	C	D	E	F	G	H	J	STEP 6
	DEBRIS WASTES										
	METAL										
	INORGANIC NON-METAL										
	COMBUSTIBLE										
	HETEROGENEOUS										
	SPECIAL WASTES										
80	LABPACKS/CONTAINERIZED LIQ.		50		50			100			Y
	REACTIVE METALS										
	EXPLOSIVES/PROPELLENTS										
	INHERENTLY HAZARDOUS WASTE										
	ELEMENTAL MERCURY										
	ELEMENTAL LEAD										
	BERYLLIUM WASTE										
	BATTERIES										
	UNKNOWN										
	OTHER *										

100%

* OTHER WASTE DISCRIPTION: _____

WASTE CLASS: CH-LLW-I

TABLE 5 page 1 of 2

CONTAINER TYPE: 55 gal Drum

Radiation Type

YEARS 1995 TO 2024 (INCLUDE HELD IF APPLICABLE)

A SEPARATE TABLE 5 MUST BE COMPLETED FOR EACH APPLICABLE WASTE CLASS AND CONTAINER TYPE

RADIATION TYPE: Please indicate the Concentration and Total Activity for each Waste Form

WASTE FORMS	Fission Product BETA-GAMMA		Uranium/ Neptunium		Pu/Am		Volatile Radionuclide (¹⁴ C, ³ H, I, Rn, Kr, Xe)		Selenium		Technetium 99	
	CONC. CI/m ³	TOTAL ACT (CURIES)	CONC. CI/m ³	TOTAL ACT (CURIES)	CONC. CI/m ³	TOTAL ACT (CURIES)	CONC. CI/m ³	TOTAL ACT (CURIES)	CONC. CI/m ³	TOTAL ACT (CURIES)	CONC. CI/m ³	TOTAL ACT (CURIES)
SHIELDING												
STEEL												
LEAD												
CONCRETE												
SOLID PROCESS RESIDUES												
INORGANIC PARTICULATES	2.47E-4	6.48E-5	4.76E-8	1.24E-8	5.53E-7	1.44E-7	2.73E-8	5.80E-9			1.00E-7	2.61E-8
INORGANIC ABSORBED LIQUID/SLUDGES												
SALT WASTE												
ORGANIC PARTICULATES												
ORGANIC ABSORBED LIQ/SLUDGE	1.37E-5	3.60E-6	2.65E-9	6.90E-10	3.07E-8	8.01E-9	1.24E-9	3.22E-10			5.57E-9	1.45E-9
SOILS												
CONTAMINATED SOILS												
DEBRIS CONTAMINATED SOILS												

MHC-SD-WM-PICD-005, REV 0

WASTE CLASS: CH-LLW-I

TABLE 5 page 2 of 2

CONTAINER TYPE: 5 gal Drum

Radiation Type

YEAR 1995 TO 2024 (INCLUDE HELD IF APPLICABLE)

A SEPARATE TABLE 5 MUST BE COMPLETED FOR EACH APPLICABLE WASTE CLASS AND CONTAINER TYPE

RADIATION TYPE: Please indicate the Concentration and Total Activity for each Waste Form

WASTE FORMS	Fission Product BETA-GAMMA		Uranium/ Neptunium		Pu/Am		Volatile Radionuclide (¹⁴ C, ³ H, I, Rn, Kr, Xe)		Selenium		Technetium 99	
	CONC. Ci/m ³	TOTAL ACT. (CURIES)	CONC. Ci/m ³	TOTAL ACT. (CURIES)	CONC. Ci/m ³	TOTAL ACT. (CURIES)	CONC. Ci/m ³	TOTAL ACT. (CURIES)	CONC. Ci/m ³	TOTAL ACT. (CURIES)	CONC. Ci/m ³	TOTAL ACT. (CURIES)
DEBRIS WASTES												
METAL	6.91E-5	1.80E-5	1.32E-8	3.45E-9	1.54E-7	4.01E-8	6.18E-9	1.60E-9			2.78E-8	7.25E-9
INORGANIC NON-METAL	2.21E-4	5.70E-5	4.22E-8	1.10E-8	4.91E-7	1.28E-7	1.98E-8	5.15E-9			8.91E-8	2.32E-8
COMBUSTIBLE	8.29E-4	2.10E-4	1.99E-7	4.14E-8	1.85E-6	4.81E-7	7.41E-8	1.93E-8			3.34E-7	8.70E-8
HETEROGENEOUS												
SPECIAL WASTES												
LABPACKS/CONTAINERIZED LIQ.												
REACTIVE METALS												
EXPLOSIVES/PROPELLENTS												
INHERENTLY HAZARDOUS WASTE												
ELEMENTAL MERCURY												
ELEMENTAL LEAD												
BERYLLIUM WASTE												
BATTERIES												
UNKNOWN												
OTHER												

OTHER WASTE DESCRIPTION: Curies from '94 baseline divided by container volume

WASTE CLASS: CH-LLW-I

TABLE 5 page 1 of 2

CONTAINER TYPE: 4x4x8 Box

Radiation Type

YEARS 1995 TO 2024 (INCLUDE HELD IF APPLICABLE)A SEPARATE TABLE 5 MUST BE COMPLETED FOR EACH APPLICABLE WASTE CLASS AND CONTAINER TYPE
RADIATION TYPE: Please indicate the Concentration and Total Activity for each Waste Form

WASTE FORMS	Fission Product BETA-GAMMA		Uranium/ Neptunium		Pu/Am		Volatile Radionuclide (¹⁴ C, ³ H, I, Rn, Kr, Xe)		Selenium		Technetium 99	
	CONC. Ci/m ³	TOTAL ACT (CURIES)	CONC. Ci/m ³	TOTAL ACT (CURIES)	CONC. Ci/m ³	TOTAL ACT (CURIES)	CONC. Ci/m ³	TOTAL ACT (CURIES)	CONC. Ci/m ³	TOTAL ACT (CURIES)	CONC. Ci/m ³	TOTAL ACT (CURIES)
SHIELDING												
STEEL												
LEAD												
CONCRETE												
SOLID PROCESS RESIDUES												
INORGANIC PARTICULATES	1.54E-5	6.24E-5	2.17E-9	8.79E-9	3.90E-8	1.58E-7	2.70E-8	1.12E-7				
INORGANIC ABSORBED LIQUID/SLUDGES												
SALT WASTE												
ORGANIC PARTICULATES												
ORGANIC ABSORBED LIQ/SLUDGE												
SOILS												
CONTAMINATED SOILS	5.14E-6	2.08E-5	7.24E-10	2.93E-9	1.30E-8	5.27E-8	9.21E-9	3.73E-8				
DEBRIS CONTAMINATED SOILS												

WMC-SD-WM-PICD-005, REV 0

WASTE CLASS: CH-LLW-I

TABLE 5 page 2 of 2

CONTAINER TYPE: 4x4x8 Box

Radiation Type

YEAR 1995 TO 2024 (INCLUDE HELD IF APPLICABLE)A SEPARATE TABLE 5 MUST BE COMPLETED FOR EACH APPLICABLE WASTE CLASS AND CONTAINER TYPE
RADIATION TYPE: Please indicate the Concentration and Total Activity for each Waste Form

WASTE FORMS	Fission Product BETA-GAMMA		Uranium/ Neptunium		Pu/Am		Volatile Radionuclide (¹⁴ C, ³ H, I, Rn, Kr, Xe)		Selenium		Technetium 99	
	CONC. Ci/m ³	TOTAL ACT. (CURIES)	CONC. Ci/m ³	TOTAL ACT. (CURIES)	CONC. Ci/m ³	TOTAL ACT. (CURIES)	CONC. Ci/m ³	TOTAL ACT. (CURIES)	CONC. Ci/m ³	TOTAL ACT. (CURIES)	CONC. Ci/m ³	TOTAL ACT. (CURIES)
DEBRIS WASTES												
METAL	2.31E-4	9.36E-4	3.26E-8	1.32E-7	5.86E-7	2.37E-6	4.15E-7	1.68E-6				
INORGANIC NON-METAL	3.60E-5	1.46E-4	5.07E-9	2.05E-8	9.11E-8	3.69E-7	6.45E-8	2.61E-7				
COMBUSTIBLE	2.26E-4	9.15E-4	3.18E-8	1.29E-7	5.73E-7	2.32E-6	4.05E-7	1.64E-6				
HETEROGENEOUS												
SPECIAL WASTES												
LABPACKS/CONTAINERIZED LIQ.												
REACTIVE METALS												
EXPLOSIVES/PROPELLENTS												
INHERENTLY HAZARDOUS WASTE												
ELEMENTAL MERCURY												
ELEMENTAL LEAD												
BERYLLIUM WASTE												
BATTERIES												
UNKNOWN												
OTHER												

OTHER WASTE DESCRIPTION: Curies from '94 baseline divided by container volume

MHC-SD-WM-PICD-005, REV 0

WASTE CLASS: CH-LLW-TII

TABLE 5 page 1 of 2

CONTAINER TYPE: 55 gallon Drum

Radiation Type

YEARS 1995 TO 2024 (INCLUDE HELD IF APPLICABLE)

A SEPARATE TABLE 5 MUST BE COMPLETED FOR EACH APPLICABLE WASTE CLASS AND CONTAINER TYPE

RADIATION TYPE: Please indicate the Concentration and Total Activity for each Waste Form

WASTE FORMS	Fission Product BETA-GAMMA		Uranium/ Neptunium		Pu/Am		Volatile Radionuclide (¹⁴ C, ³ H, I, Rn, Kr, Xe)		Selenium		Technetium 99	
	CONC. CI/m ³	TOTAL ACT (CURIES)	CONC. CI/m ³	TOTAL ACT (CURIES)	CONC. CI/m ³	TOTAL ACT (CURIES)	CONC. CI/m ³	TOTAL ACT (CURIES)	CONC. CI/m ³	TOTAL ACT (CURIES)	CONC. CI/m ³	TOTAL ACT (CURIES)
SHIELDING												
STEEL												
LEAD												
CONCRETE												
SOLID PROCESS RESIDUES												
INORGANIC PARTICULATES	2.23E-3	5.81E-4	3.40E-7	8.85E-8	5.96E-6	1.42E-6	3.16E-6	8.74E-7			7.68E-7	2.00E-7
INORGANIC ABSORBED LIQUID/SLUDGES												
SALT WASTE												
ORGANIC PARTICULATES												
ORGANIC ABSORBED LIQ/SLUDGE												
SOILS												
CONTAMINATED SOILS	3.20E-3	8.35E-4	4.88E-7	1.77E-7	7.85E-6	2.04E-6	4.55E-6	1.18E-6			1.16E-6	2.88E-7
DEBRIS CONTAMINATED SOILS												

MHC-SB-WM-PICD-005, REV 0

WASTE CLASS: CH-LLW-III

TABLE 5 page 2 of 2

CONTAINER TYPE: 55 gallon Drum

Radiation Type

YEAR 1995 TO 2024 (INCLUDE HELD IF APPLICABLE)

A SEPARATE TABLE 5 MUST BE COMPLETED FOR EACH APPLICABLE WASTE CLASS AND CONTAINER TYPE

RADIATION TYPE: Please indicate the Concentration and Total Activity for each Waste Form

WASTE FORMS	Fission Product BETA-GAMMA		Uranium/ Neptunium		Pu/Am		Volatile Radionuclide (¹⁴ C, ³ H, I, Rn, Kr, Xe)		Selenium		Technetium 99	
	CONC. Ci/m ³	TOTAL ACT. (CURIES)	CONC. Ci/m ³	TOTAL ACT. (CURIES)	CONC. Ci/m ³	TOTAL ACT. (CURIES)	CONC. Ci/m ³	TOTAL ACT. (CURIES)	CONC. Ci/m ³	TOTAL ACT. (CURIES)	CONC. Ci/m ³	TOTAL ACT. (CURIES)
DEBRIS WASTES												
METAL	5.57E-4	1.45E-4	8.49E-8	2.21E-8	1.36E-6	3.56E-7	7.91E-7	2.06E-7			1.92E-7	5.00E-8
INORGANIC NON-METAL	2.37E-3	6.17E-4	3.61E-7	9.40E-8	5.80E-6	1.51E-6	3.36E-6	8.76E-7			8.16E-7	2.13E-7
COMBUSTIBLE	5.57E-3	1.45E-3	8.49E-7	2.21E-7	1.36E-5	3.56E-6	7.91E-6	2.06E-6			1.92E-6	5.00E-7
HETEROGENEOUS												
SPECIAL WASTES												
LABPACKS/CONTAINERIZED LIQ.												
REACTIVE METALS												
EXPLOSIVES/PROPELLENTS												
INHERENTLY HAZARDOUS WASTE												
ELEMENTAL MERCURY												
ELEMENTAL LEAD												
BERYLLIUM WASTE												
BATTERIES												
UNKNOWN												
OTHER												

OTHER WASTE DESCRIPTION: Curies from '94 baseline divided by container volume

B.42

WHC-SD-WM-PICD-005, REV 0

WASTE CLASS: CH-LLMW - I

TABLE 5 page 1 of 2

CONTAINER TYPE: 55 gallon Drum

Radiation Type

YEARS 1995 TO 2024 (INCLUDE HELD IF APPLICABLE)

A SEPARATE TABLE 5 MUST BE COMPLETED FOR EACH APPLICABLE WASTE CLASS AND CONTAINER TYPE

RADIATION TYPE: Please indicate the Concentration and Total Activity for each Waste Form

WASTE FORMS	Fission Product BETA-GAMMA		Uranium/ Neptunium		Pu/Am		Volatile Radionuclide (¹⁴ C, ³ H, I, Rn, Kr, Xe)		Selenium		Technetium 99	
	CONC. TOTAL ACT		CONC. TOTAL ACT		CONC. TOTAL ACT		CONC. TOTAL ACT		CONC. TOTAL ACT		CONC. TOTAL ACT	
	CI/m ³	(CURIES)	CI/m ³	(CURIES)	CI/m ³	(CURIES)	CI/m ³	(CURIES)	CI/m ³	(CURIES)	CI/m ³	(CURIES)
SHIELDING												
STEEL												
LEAD	2.83E-5	7.34E-6	4.78E-9	1.25E-9	4.70E-8	1.72E-8	2.15E-7	5.61E-8			3.26E-8	8.49E-9
CONCRETE												
SOLID PROCESS RESIDUES												
INORGANIC PARTICULATES	1.89E-4	4.92E-5	3.19E-8	8.36E-9	3.13E-7	8.10E-8	1.44E-6	3.74E-7			2.17E-7	5.66E-8
INORGANIC ABSORBED LIQUID/SLUDGES												
SALT WASTE												
ORGANIC PARTICULATES												
ORGANIC ABSORBED LIQ/SLUDGE	9.44E-6	2.46E-6	1.59E-9	4.15E-10	1.57E-8	4.08E-9	7.18E-8	1.87E-8			1.09E-8	2.83E-9
SOILS												
CONTAMINATED SOILS												
DEBRIS CONTAMINATED SOILS												

WMC-SD-WM-PICD-005, REV 0

WASTE CLASS: CH-LLMW-I
 CONTAINER TYPE: 55 gallon Drum
 YEAR 1995 TO 2024 (INCLUDE HELD IF APPLICABLE)

Radiation Type

TABLE 5 page 2 of 2

A SEPARATE TABLE 5 MUST BE COMPLETED FOR EACH APPLICABLE WASTE CLASS AND CONTAINER TYPE
 RADIATION TYPE: Please indicate the Concentration and Total Activity for each Waste Form

WASTE FORMS	Fission Product BETA-GAMMA		Uranium/ Neptunium		Pu/Am		Volatile Radionuclide (¹⁴ C, ³ H,I, Rn,Kr,Xe)		Selenium		Technetium 99	
	CONC. Ci/m ³	TOTAL ACT. (CURIES)	CONC. Ci/m ³	TOTAL ACT. (CURIES)	CONC. Ci/m ³	TOTAL ACT. (CURIES)	CONC. Ci/m ³	TOTAL ACT. (CURIES)	CONC. Ci/m ³	TOTAL ACT. (CURIES)	CONC. Ci/m ³	TOTAL ACT. (CURIES)
DEBRIS WASTES												
METAL												
INORGANIC NON-METAL	1.42E-4	3.69E-5	2.39E-8	6.23E-9	2.35E-7	6.12E-8	1.08E-6	2.81E-7			1.63E-7	4.25E-8
COMBUSTIBLE	2.08E-4	5.41E-5	3.50E-8	9.13E-9	3.45E-7	8.98E-8	1.58E-6	4.11E-7			2.39E-7	6.23E-8
HETEROGENEOUS	9.44E-6	2.46E-6	1.59E-9	4.15E-10	1.57E-8	4.08E-9	7.18E-8	1.87E-8			1.09E-8	2.83E-9
SPECIAL WASTES												
LABPACKS/CONTAINERIZED LIQ.	3.59E-4	9.35E-5	6.05E-8	1.58E-8	5.95E-7	1.55E-7	2.73E-6	7.11E-7			4.13E-7	1.08E-7
REACTIVE METALS												
EXPLOSIVES/PROPELLENTS												
INHERENTLY HAZARDOUS WASTE												
ELEMENTAL MERCURY												
ELEMENTAL LEAD												
BERYLLIUM WASTE												
BATTERIES												
UNKNOWN												
OTHER												

OTHER WASTE DESCRIPTION: Curies from '94 baseline divided by container volume

WASTE CLASS: CH-LLMW-TLL

TABLE 5 page 1 of 2

CONTAINER TYPE: 55 gallon Drum

Radiation Type

YEARS 1995 TO 2024 (INCLUDE HELD IF APPLICABLE)

A SEPARATE TABLE 5 MUST BE COMPLETED FOR EACH APPLICABLE WASTE CLASS AND CONTAINER TYPE

RADIATION TYPE: Please indicate the Concentration and Total Activity for each Waste Form

WASTE FORMS	Fission Product BETA-GAMMA		Uranium/ Neptunium		Pu/Am		Volatile Radionuclide (¹⁴ C, ³ H, I, Rn, Kr, Xe)		Selenium		Technetium 99	
	CONC. CI/m ³	TOTAL ACT (CURIES)	CONC. CI/m ³	TOTAL ACT (CURIES)	CONC. CI/m ³	TOTAL ACT (CURIES)	CONC. CI/m ³	TOTAL ACT (CURIES)	CONC. CI/m ³	TOTAL ACT (CURIES)	CONC. CI/m ³	TOTAL ACT (CURIES)
SHIELDING												
STEEL												
LEAD	2.45E-3	6.38E-4	1.61E-7	4.20E-8	1.37E-6	3.61E-7	2.86E-5	7.45E-6			3.22E-7	8.40E-8
CONCRETE												
SOLID PROCESS RESIDUES												
INORGANIC PARTICULATES	4.90E-3	1.28E-3	3.22E-7	8.40E-8	2.77E-6	7.22E-7	5.72E-5	1.49E-5			6.45E-7	1.68E-7
INORGANIC ABSORBED LIQUID/SLUDGES												
SALT WASTE												
ORGANIC PARTICULATES												
ORGANIC ABSORBED LIQ/SLUDGE	2.45E-4	6.38E-5	1.61E-8	4.20E-9	1.37E-7	3.61E-8	2.86E-6	7.45E-7			3.22E-8	8.40E-9
SOILS												
CONTAMINATED SOILS												
DEBRIS CONTAMINATED SOILS												

WHC-SD-WM-PICD-005, REV 0

WASTE CLASS: CH-LLMG-III

TABLE 5 page 2 of 2

CONTAINER TYPE: 55 gallon Drum

Radiation Type

YEAR 1995 TO 2024 (INCLUDE HELD IF APPLICABLE)

A SEPARATE TABLE 5 MUST BE COMPLETED FOR EACH APPLICABLE WASTE CLASS AND CONTAINER TYPE

RADIATION TYPE: Please indicate the Concentration and Total Activity for each Waste Form

WASTE FORMS	Fission Product BETA-GAMMA		Uranium/ Neptunium		Pu/Am		Volatile Radionuclide (¹⁴ C, ³ H, I, Rn, Kr, Xe)		Selenium		Technetium 99	
	CONC. Ci/m ³	TOTAL ACT (CURIES)	CONC. Ci/m ³	TOTAL ACT (CURIES)	CONC. Ci/m ³	TOTAL ACT (CURIES)	CONC. Ci/m ³	TOTAL ACT (CURIES)	CONC. Ci/m ³	TOTAL ACT (CURIES)	CONC. Ci/m ³	TOTAL ACT (CURIES)
DEBRIS WASTES												
METAL												
INORGANIC NON-METAL	3.67E-3	9.57E-4	2.42E-7	6.30E-8	7.08E-6	5.42E-7	4.29E-5	1.12E-5			4.84E-7	1.26E-7
COMBUSTIBLE	5.39E-3	1.40E-3	3.95E-7	9.74E-8	3.05E-6	7.99E-7	6.29E-5	1.64E-5			7.09E-7	1.85E-7
HETEROGENEOUS	2.95E-4	6.38E-5	1.61E-8	4.20E-9	1.39E-7	3.61E-8	2.86E-6	7.45E-7			3.22E-8	8.40E-9
SPECIAL WASTES												
LABPACKS/CONTAINERIZED LIQ.	7.59E-3	1.98E-3	5.00E-7	1.30E-7	4.30E-6	1.12E-6	8.87E-5	2.31E-5			1.00E-6	2.60E-7
REACTIVE METALS												
EXPLOSIVES/PROPELLENTS												
INHERENTLY HAZARDOUS WASTE												
ELEMENTAL MERCURY												
ELEMENTAL LEAD												
BERYLLIUM WASTE												
BATTERIES												
UNKNOWN												
OTHER												

OTHER WASTE DESCRIPTION: Curies from '94 baseline divided by container volume

B.46

MHC-SD-WM-PICD-005, REV 0

WASTE CLASS: RH-LLMW-III

TABLE 5 page 1 of 2

CONTAINER TYPE: 55 gallon Drum

Radiation Type

YEARS 1995 TO 2024 (INCLUDE HELD IF APPLICABLE)

A SEPARATE TABLE 5 MUST BE COMPLETED FOR EACH APPLICABLE WASTE CLASS AND CONTAINER TYPE

RADIATION TYPE: Please indicate the Concentration and Total Activity for each Waste Form

WASTE FORMS	Fission Product BETA-GAMMA		Uranium/ Neptunium		Pu/Am		Volatile Radionuclide (¹⁴ C, ³ H,I, Rn,Kr,Xe)		Selenium		Technetium 99	
	CONC. CI/m ³	TOTAL ACT (CURIES)	CONC. CI/m ³	TOTAL ACT (CURIES)	CONC. CI/m ³	TOTAL ACT (CURIES)	CONC. CI/m ³	TOTAL ACT (CURIES)	CONC. CI/m ³	TOTAL ACT (CURIES)	CONC. CI/m ³	TOTAL ACT (CURIES)
SHIELDING												
STEEL												
LEAD	8.52E-2	2.22E-2	1.94E-5	5.06E-6	8.60E-5	2.74E-5	5.20E-9	1.35E-9			2.05E-5	5.34E-6
CONCRETE												
SOLID PROCESS RESIDUES												
INORGANIC PARTICULATES												
INORGANIC ABSORBED LIQUID/SLUDGES	2.56E-2	6.66E-3	5.83E-6	1.52E-6	2.58E-5	6.72E-6	1.56E-9	4.06E-10			6.15E-6	1.60E-6
SALT WASTE												
ORGANIC PARTICULATES												
ORGANIC ABSORBED LIQ/SLUDGE	2.56E-2	6.66E-3	5.83E-6	1.52E-6	2.58E-5	6.72E-6	1.56E-9	4.06E-10			6.15E-6	1.60E-6
SOILS												
CONTAMINATED SOILS												
DEBRIS CONTAMINATED SOILS												

WHC-SD-WM-PICD-005, REV 0

WASTE CLASS: RH-LLMW-III

TABLE 5 page 2 of 2

CONTAINER TYPE: 55 gallon Drum

Radiation Type

YEAR 1995 TO 2024 (INCLUDE HELD IF APPLICABLE)A SEPARATE TABLE 5 MUST BE COMPLETED FOR EACH APPLICABLE WASTE CLASS AND CONTAINER TYPE
RADIATION TYPE: Please indicate the Concentration and Total Activity for each Waste Form

WASTE FORMS	Fission Product BETA-GAMMA		Uranium/ Neptunium		Pu/Am		Volatile Radionuclide (¹⁴ C, ³ H, I, Rn, Kr, Xe)		Selenium		Technetium 99	
	CONC. Ci/m ³	TOTAL ACT (CURIES)	CONC. Ci/m ³	TOTAL ACT (CURIES)	CONC. Ci/m ³	TOTAL ACT (CURIES)	CONC. Ci/m ³	TOTAL ACT (CURIES)	CONC. Ci/m ³	TOTAL ACT (CURIES)	CONC. Ci/m ³	TOTAL ACT (CURIES)
DEBRIS WASTES												
METAL												
INORGANIC NON-METAL	1.15E-1	3.00E-2	2.62E-5	6.83E-6	1.16E-4	3.02E-5	7.02E-9	1.83E-9			2.77E-5	7.21E-6
COMBUSTIBLE	1.49E-1	3.89E-2	3.40E-5	8.96E-6	1.50E-4	3.92E-5	9.10E-9	2.37E-9			3.59E-5	9.35E-6
HETEROGENEOUS	2.56E-2	6.66E-3	5.83E-6	1.52E-6	2.58E-5	6.72E-6	1.56E-9	4.06E-10			6.15E-6	1.60E-6
SPECIAL WASTES												
LABPACKS/CONTAINERIZED LIQ.												
REACTIVE METALS												
EXPLOSIVES/PROPELLENTS												
INHERENTLY HAZARDOUS WASTE												
ELEMENTAL MERCURY												
ELEMENTAL LEAD												
BERYLLIUM WASTE												
BATTERIES												
UNKNOWN												
OTHER												

OTHER WASTE DESCRIPTION: Curies from '94 baseline divided by container volume

WHC-SD-WM-PICD-005, REV 0

WASTE CLASS: RH-TRUM

TABLE 5 page 1 of 2

CONTAINER TYPE: 55 gallon Drum

Radiation Type

YEARS 1995 TO 2024 (INCLUDE HELD IF APPLICABLE)A SEPARATE TABLE 5 MUST BE COMPLETED FOR EACH APPLICABLE WASTE CLASS AND CONTAINER TYPE
RADIATION TYPE: Please indicate the Concentration and Total Activity for each Waste Form

WASTE FORMS	Fission Product BETA-GAMMA		Uranium/ Neptunium		Pu/Am		Volatile Radionuclide (¹⁴ C, ³ H, I, Rn, Kr, Xe)		Selenium		Technetium 99	
	CONC. CI/m ³	TOTAL ACT (CURIES)	CONC. CI/m ³	TOTAL ACT (CURIES)	CONC. CI/m ³	TOTAL ACT (CURIES)	CONC. CI/m ³	TOTAL ACT (CURIES)	CONC. CI/m ³	TOTAL ACT (CURIES)	CONC. CI/m ³	TOTAL ACT (CURIES)
SHIELDING												
STEEL												
LEAD												
CONCRETE												
SOLID PROCESS RESIDUES												
INORGANIC PARTICULATES												
INORGANIC ABSORBED LIQUID/SLUDGES												
SALT WASTE												
ORGANIC PARTICULATES												
ORGANIC ABSORBED LIQ/SLUDGE	7.70E-3	7.03E-4			3.21E-2	3.37E-3						
SOILS												
CONTAMINATED SOILS												
DEBRIS CONTAMINATED SOILS												

WMC-SD-WM-PICD-005, REV 0

WASTE CLASS: RH-TRUM

TABLE 5 page 2 of 2

CONTAINER TYPE: 55 gallon drum

Radiation Type

YEAR 1995 TO 2024 (INCLUDE HELD IF APPLICABLE)

A SEPARATE TABLE 5 MUST BE COMPLETED FOR EACH APPLICABLE WASTE CLASS AND CONTAINER TYPE

RADIATION TYPE: Please indicate the Concentration and Total Activity for each Waste Form

WASTE FORMS	Fission Product BETA-GAMMA		Uranium/ Neptunium		Pu/Am		Volatile Radionuclide (¹⁴ C, ³ H, I, Rn, Kr, Xe)		Selenium		Technetium 99	
	CONC. Cl/m ³	TOTAL ACT. (CURIES)	CONC. Cl/m ³	TOTAL ACT. (CURIES)	CONC. Cl/m ³	TOTAL ACT. (CURIES)	CONC. Cl/m ³	TOTAL ACT. (CURIES)	CONC. Cl/m ³	TOTAL ACT. (CURIES)	CONC. Cl/m ³	TOTAL ACT. (CURIES)
DEBRIS WASTES												
METAL												
INORGANIC NON-METAL	2.70E-3	7.03E-4			3.21E-2	8.37E-3						
COMBUSTIBLE	1.08E-2	2.81E-3			1.29E-1	3.35E-2						
HETEROGENEOUS	1.08E-2	2.81E-3			1.29E-1	3.35E-2						
SPECIAL WASTES												
LABPACKS/CONTAINERIZED LIQ.												
REACTIVE METALS												
EXPLOSIVES/PROPELLENTS												
INHERENTLY HAZARDOUS WASTE												
ELEMENTAL MERCURY												
ELEMENTAL LEAD												
BERYLLIUM WASTE												
BATTERIES												
UNKNOWN												
OTHER												

OTHER WASTE DESCRIPTION: Curies from '94 baseline divided by container volume

1994 SOLID WASTE FORECAST QUESTIONNAIRE

- A. Please answer all questions. This information will help determine Hanford's treatment, storage, and disposal requirements.

Question 4 (for all waste classes) and Question 5 (for mixed and hazardous waste only) provide a basis for determining how your waste will be grouped. Be sure to answer these questions or your forms will be returned.

- B. Ensure that the contact name, Level 3 Manager, and budget personnel are identified in the sign-off area of the questionnaire. Names must be typed (or printed) as well as written.

1. Please circle the waste classes that will be generated.

<u>CH_LLW_I</u>	<u>CH_LLW_III</u>	CH_LLW_GTCIII
RH_LLW_I	RH_LLW_III	RH_LLW_GTC_III
<u>CH_LLMW_I</u>	<u>CH_LLMW_III</u>	CH_LLMW_GTCIII
RH_LLMW_I	<u>RH_LLMW_III</u>	RH_LLMW_GTCIII
CH_TRU	CH_TRUM	<u>HAZ</u>
RH_TRU	<u>RH_TRUM</u>	

2. Generally describe these wastes and how they will be generated.

The major source of LLW from 222-S is made up of rubber gloves, paper, plastic bottles, and misc. laboratory equipment such as pipet tips and glass sample vials. Some of this waste is generated from construction activities occurring in the laboratory that includes wood, concrete, etc.

The major source of LLMW and TRUM is due to laboratory analysis of double and single shell tanks samples.

Hazardous waste is generated at the 222-SA standards laboratory where chemical standards are prepared for laboratory use.

3. Have your waste volumes changed from your previous forecast? (Yes) No

Explain: In general, volumes have decreased. Due to tank farms shut down and the change in plans for the new WSCF facility to handle its own waste, FY'94 waste volumes were much less than originally forecasted. However, a large increase is expected for FY'95 due to increased sampling efforts of single & double shell tanks.

1994 SOLID WASTE FORECAST QUESTIONNAIRE

- 4.) Will waste be separated into like waste forms prior to shipping? (If you generate contaminated soils, inorganic particulates and metal debris, will you ship these waste in separate containers or will the waste be combined and placed into one container?)

Please explain for each waste class:

Waste is only segregated into waste class. Waste is not segregated into separate physical waste forms. Waste separation is completed for compatible/non-compatible solids, and liquids.

5. If you generate hazardous or mixed waste please answer the following question.

Will you place several hazardous constituents in one container or will you segregate the constituents prior to shipping? (If you generate toxic metals and ignitables will you ship these constituents in separate containers or will they be combined and placed into one container?)

If the hazardous constituents are segregated, make sure each waste class by waste form (reference Table 4) has been explained using the method in Attachment B. Please provide further explanation if needed.

Several Hazardous constituents are placed in one container. When possible, some segregation is performed as time allows. This can be done for small waste streams where additional waste is expected in the near future. However, in a laboratory setting, the majority of waste is shipped non-segregated due to practicality. Very few waste streams are small enough and consistent enough to warrant segregation.

6. Describe your quarterly expected shipping schedule for each applicable waste class during FY-1995 (e.g., 40% of waste shipped during the first quarter, 20% in the second quarter, etc.).

Approximately 25% per quarter for all waste classes.

1994 SOLID WASTE FORECAST QUESTIONNAIRE

7. Discuss the assumptions that were used to prepare this forecast. (Identify known dates for facility closure, decontamination and decommissioning [D&D], or any new programs that drive the forecast data provided in this request.)

The information used for this forecast was obtained using data from FY94 shipments. These shipments were reviewed and information on nuclide, waste code, and physical form was obtained for each waste class and container type. It is assumed that these distributions will remain constant throughout the forecast. The forecast was prepared using this data as a baseline. Laboratory sample loading forecasts were obtained that show a drastic increase in tank core sample analyses required in 95, 96, and 97. The additional core samples will receive a combination of safety screening analyses as well as complete characterization analyses. It is assumed that this additional work will increase waste volumes in every waste class. The loss of compression capabilities and the expected closure of the chemical storage room is expected to increase volumes of LLW and HAZ waste.

8. What assumptions were used in estimating the minimum and maximum waste volumes identified in Table 1? (Minimum waste percentage is based upon the majority of the waste being sent to a commercial disposal site. Maximum waste percentage is based upon additional projects being initiated that will generate waste not accounted for in the best estimate volume.)

Minimum: The minimum was chosen to account for any unexpected decrease in tank core sample loadings and the subsequent decrease in the number of analyses required

Maximum: Same as for minimum above.

9. Indicate confidence level for the following waste characterization data: (The physical waste forms are based upon historical characterization information.)

Physical Waste Forms (Table 3): High Low Medium

Explain: Based on FY'94 baseline data

Hazardous Constituents (Table 4): High Low Medium

Explain: Based on FY'94 baseline data

Radiation Type (Table 5): High Low Medium

Explain: Based on FY'94 baseline data

1994 SOLID WASTE FORECAST QUESTIONNAIRE

10. What percentage of the waste forecasted is existing waste? 1%
 Of your existing waste, how confident are you in the current shipping schedule? HIGH LOW MEDIUM

Explain: Routine waste shipped on routine schedule

What percentage of waste forecasted is future generated waste? 99%
 Of your future generated waste, how confident are you in the volumes and shipping schedule? HIGH LOW MEDIUM

Explain: Routine waste shipped on routine schedule

- 10a. Please indicate whether your forecasts include only operational waste, or if transitional waste, environmental restoration (ER) and/or D&D activities have also been included. If transitional waste, ER and D&D have been included, indicate when each of these activities will take place.

only operational waste.

- 10b. If you have not included transitional waste, ER, or D&D waste, will this waste potentially be managed at Hanford? Please provide an estimate of the expected volumes and years that the waste would be shipped.

N/A

11. Please supply contact personnel information for data verification.
 Names must be typed (or printed) as well as written:

LLW: R.R. Nielson [Signature] Phone: 3-2458

LLMW: R.R. Nielson [Signature] Phone: 3-2458

TRU: _____ Phone: _____

TRUM: R.R. Nielson [Signature] Phone: 3-2458

HAZ: R.R. Nielson [Signature] Phone: 3-2458
 (Waste Contact)

Approved by: W.D. Leggett Date: _____
 (Level 3 Manager Signature)

Approved by: J.M. Kier Date: _____
 (Budget Concurrence)

WHC-SD-WM-PICD-005, REV 0

APPENDIX C - 1994 WSCF Solid Waste Volume Forecast (TBP)

APPENDIX D - 1993 Chemical Engineering Laboratory Solid Waste Volume Forecast

**Westinghouse
Hanford Company**

**Internal
Memo**

From: Chemical Engineering Laboratory 12130-93-046
Phone: 3-4454 S4-25
Date: June 2, 1993
Subject: FISCAL YEAR 1994 - 2023 SOLID WASTE VOLUME FORECAST

To: R. J. Roberts N3-13
cc: C. L. Burruss H4-19
J. P. Sloughter T6-07 (w/o attachments)
File 9.3.1
MJS file/LB

Reference: Internal Memo, R. J. Roberts to
J. P. Sloughter, "Fiscal Year 1993 Hazardous
and Radioactive Solid Waste Volume Forecast
Request," dated May 7, 1993.

Attached is the subject forecast for the Chemical
Engineering Laboratory, (12130), per the reference request.

Mike Schliebe
Mike Schliebe
Manager

alh

attachment (1)

II. COVER SHEET

1993 SOLID WASTE FORECAST REQUEST FORM

Generator (Project/Facility) WHC 2703E Chem. Eng. Lab. OPS

<u>Waste Class</u>	<u>Contact</u>	<u>Phone</u>
<u>LLW</u>	<u>N/A</u>	<u></u>
<u>LLMW</u>	<u>N/A</u>	<u></u>
<u>HAZ</u>	<u>M.J.(Mike) Schliebe</u>	<u>3-4454h</u>
<u>TRU</u>	<u>N/A</u>	<u></u>
<u>TRUM</u>	<u>N/A</u>	<u></u>
<u>LEVEL III APPROVAL</u>	<u>J.P.(Jim) Sloughter</u>	<u>3-1013</u>

(Fill out above and keep this cover sheet with forecast)

Per Telephone on
6-7-93 with Mike Schliebe
REVISIONS WERE MADE TO
TABLE 3 PAGES 49 & 50
(A,B,C). Mike will FAX A
copy of TABLE 1. .

2.

Oscar

RECEIVED
JUN 04 1993
E.P. MERTENS

III. COORDINATOR

Department: Chemical Engineering Lab OPS

1993 Coordinator: M. J.(Mike) Schliebe 3-4454

Project/Facility Number	1993 Contact	1993 Level III Approval
2703E	M. J. Schliebe	J. P. Sloughter

TRU, TRUM and HAZ Projected Solid Waste External Volumes (In ft³)

TABLE 1 Page 1 of 1

Report Shielded RH Waste as RH Waste Not CH Waste

Waste Class

	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
CH TRU																														
RH TRU																														
CH TRUM																														
RH TRUM																														
HAZ	79																													

D.5

WMC-SD-WM-PICD-005, REV 0

HAZ

Container Type and Count³

TABLE 2 Page 1 of 1

Identify Number and Type of Containers per Year

	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
55 Gal Drum	10																													
30 Gal Drum	1																													
4 X 4 X 8 Box																														
Other - 1	2																													

Other - 1 Describe, state dimensions (L x W x H) or (Gallons) 8 GAL DRUM

³ The Waste Acceptance Criteria for each treatment facility has not been determined. As the criteria are developed, size and weight limits for acceptable waste containers will be defined. Any containers listed in the "OTHER" category in Table 2 may be reviewed at a later time for acceptance.

HAZ

Waste Forms & Hazardous Constituents

TABLE 3 Page 1 of 2
YEARS: 93 TO 023

STEP 1: CONTAINER TYPE A separate Table 3 and 3A must be completed for each container type you've identified in Table 2
 Circle one: → 55 Gal Drums 30 Gal Drums 4 X 4 X 8 Box Other - 1

STEP 2: WASTE FORMS Indicate below the volume % of waste form in container circled in Step 1		STEP 3: EPA WASTE CODES Indicate % present for each Waste Form											Total 0 or 100%	STEP 4: Are Waste Forms Segregated? Y/N	
	%	IGN (D001)	CORR (D002)	REAC (D003)	TC MET (D004 - D011)	TC PEST (D012 - D017)	TC ORG (D018 - D043)	SPENT SOLV (F001 - F005)	PLTG WST (F006 - F009)	ACUTELY HAZ (P001 - UXXX)	PCB's < 50	PCB's > 50			
Inorganic															
50	20	Particulate	100	20										100	N
		Absorbed liq/sludge													
		Other													
Organic															
		Particulate													
		Absorbed liq/sludge													
		Other													
Debris - Inorganic															
		Lead Metals													
		Other Metals													
		Construction Metals													
		Other													
Debris - Organic															
		Non-Compactible													
		Compactible													
Debris - Heterogeneous															
		Filters													
		Combustible													
		Non-Combustible													
		Other													

NOTE: Waste Form % should be Totaled on Table 3 Page 2 of 2 and MUST equal 100%

HAZ

Waste Forms & Hazardous Constituents

TABLE 3 Page 2 of 2
YEARS: 93 TO 2023

STEP 1: CONTAINER TYPE A separate Table 3 and 3A must be completed for each container type you've identified in Table 2
 Circle one: → 55 Gal Drums 30 Gal Drums 4 X 4 X 8 Box Other - 1

STEP 2: WASTE FORMS Indicate below the volume % of waste form in container circled in Step 1 ↓ c		STEP 3: EPA WASTE CODES Indicate % present for each Waste Form											Total 0 or 100%	STEP 4: Are Waste Forms Segregated? Y/N
%	Special	IGN (D001)	CORR (D002)	REAC (D003)	TC MET (D004 - D011)	TC PEST (D012 - D017)	TC ORG (D018 - D043)	SPENT SOLV (F001 - F005)	PLTG WST (F006 - F009)	ACUTELY HAZ (P001 - UXXX)	PCB's < 50	PCB's > 50		
	ELEMENTAL LEAD													
	ELEMENTAL MERCURY													
	LABPACKS/ CONTAIN LIQ													
	REACTIVE METALS													
	COMPRESSED GASES													
	BATTERIES													
	SOILS													
50	20 OTHER	80	20										100	N
	Shielding													
	Stainless Steel													
	Concrete													
	Lead													
	Other													
100%														

OTHER COMMENTS: MIS INORGANIC LAB WASTE

HAZ

Waste Forms & Hazardous Constituents

TABLE 3 Page 1 of 2

YEARS: 93 TO 023

STEP 1: CONTAINER TYPE A separate Table 3 and 3A must be completed for each container type you've identified in Table 2.

Circle one: 55 Gal Drums 30 Gal Drums 4 X 4 X 8 Box Other - 1

STEP 2: WASTE FORMS

Indicate below the volume % of waste form in container circled in Step 1

STEP 3: EPA WASTE CODES Indicate % present for each Waste Form

IGN (D001)	CORR (D002)	REAC (D003)	TC MET (D004 - D011)	TC PEST (D012 - D017)	TC ORG (D018 - D043)	SPENT SOLV (F001 - F005)	PLTG WST (F006 - F009)	ACUTELY HAZ (P001 - UXXX)	PCB's < 50	PCB's > 50
---------------	----------------	----------------	----------------------------	-----------------------------	----------------------------	-----------------------------------	------------------------------	------------------------------------	---------------	---------------

Total
0 or 100%

STEP 4:

Are Waste
Forms
Segregated?
Y/N

% Inorganic

Particulate	100												N
Absorbed liq/sludge													
Other													

% Organic

20 Particulate	80	20										100	N
Absorbed liq/sludge													
Other													

Debris - Inorganic

Lead Metals													
Other Metals													
Construction Metals													
Other													

Debris - Organic

Non-Compactible													
Compactible													

Debris - Heterogeneous

Filters													
Combustible													
Non-Combustible													
Other													

NOTE: Waste Form % should be Totaled on Table 3 Page 2 of 2 and MUST equal 100%

HAZ

Waste Forms & Hazardous Constituents

TABLE 3 Page 2 of 2
YEARS: 93 TO 023STEP 1: CONTAINER TYPE A separate Table 3 and 3A must be completed for each container type you've identified in Table 2
Circle one: 55 Gal Drums 30 Gal Drums 4 X 4 X 8 Box Other - 1STEP 2: WASTE FORMS
Indicate below the volume %
of waste form in container
circled in Step 1

STEP 3: EPA WASTE CODES Indicate % present for each Waste Form

IGN	CORR	REAC	TC MET	TC PEST	TC ORG	SPENT	PLTG WST	ACUTELY	HAZ	PCB's	PCB's	Total	STEP 4:
(D001)	(D002)	(D003)	(D004 - D011)	(D012 - D017)	(D018 - D043)	(F001 - F005)	(F006 - F009)	(P001 - UXXX)		< 50	> 50	0 or 100%	Are Waste Forms Segregated? Y/N

% Special

ELEMENTAL
LEADELEMENTAL
MERCURYLABPACKS/
CONTAIN LIQREACTIVE
METALSCOMPRESSED
GASES

BATTERIES

SOILS

OTHER

Shielding

Stainless Steel

Concrete

Lead

Other

100%

OTHER COMMENTS:

MIS INORGANIC/ORGANIC LAB WASTE

MHC-SD-MM-PICD-005, REV 0

HAZ

Waste Forms & Hazardous Constituents

TABLE 3 Page 1 of 2

YEARS: 93 TO 023

STEP 1: CONTAINER TYPE A separate Table 3 and 3A must be completed for each container type you've identified in Table 2

Circle one: → 55 Gal Drums 30 Gal Drums 4 X 4 X 8 Box Other - 1

STEP 2: WASTE FORMS

Indicate below the volume % of waste form in container circled in Step 1

STEP 3: EPA WASTE CODES Indicate % present for each Waste Form

IGN (D001)	CORR (D002)	REAC (D003)	TC MET (D004 - D011)	TC PEST (D012 - D017)	TC ORG (D018 - D043)	SPENT SOLV (F001 - F005)	PLTG WST (F006 - F009)	ACUTELY HAZ (P001 - UXXX)	PCB's < 50	PCB's > 50
---------------	----------------	----------------	----------------------------	-----------------------------	----------------------------	-----------------------------------	------------------------------	------------------------------------	---------------	---------------

Total
0 or 100%**STEP 4:**

Are Waste
Forms
Segregated?
Y/N

% Inorganic

Particulate													
Absorbed liq/sludge													
Other													

Organic

Particulate													
Absorbed liq/sludge													
Other	100										100		N

Debris - Inorganic

Lead Metals													
Other Metals													
Construction Metals													
Other													

Debris - Organic

Non-Compactible													
Compactible													

Debris - Heterogeneous

Filters													
Combustible													
Non-Combustible													
Other													

NOTE: Waste Form % should be Totaled on Table 3 Page 2 of 2 and MUST equal 100%

HAZ

Waste Forms & Hazardous Constituents

TABLE 3 Page 2 of 2

YEARS: 93 TO 023

STEP 1: CONTAINER TYPE A separate Table 3 and 3A must be completed for each container type you've identified in Table 2
 Circle one: → 55 Gal Drums 30 Gal Drums 4 X 4 X 8 Box Other - 1

STEP 2: WASTE FORMS

Indicate below the volume % of waste form in container circled in Step 1

STEP 3: EPA WASTE CODES Indicate % present for each Waste Form

IGN CORR REAC TC MET TC PEST TC ORG SPENT ACUTELY
 (D001) (D002) (D003) (D004 - (D012 - (D018 - SOLV PLTG WST HAZ
 D011) D017) D043) (F001 - (F006 - (P001 -
 F005) F009) UXXX) PCB's PCB's
 < 50 > 50

Total
 0 or 100%

STEP 4:
 Are Waste
 Forms
 Segregated?
 Y/N

%	Special													
	ELEMENTAL LEAD													
	ELEMENTAL MERCURY													
50	LABPACKS/ CONTAIN LIQ	100											100	N
	REACTIVE METALS													
	COMPRESSED GASES													
	BATTERIES													
	SOILS													
	OTHER													
	Shielding													
	Stainless Steel													
	Concrete													
	Lead													
	Other													

100%

OTHER COMMENTS :

LLMW and HAZ QUESTIONNAIRE

1.) Generally describe what the wastes are and how they are generated.

- (1A) WASTE IS GENERALLY OF THE NITRITE, NITRATE, HYDROXIDE VARIETY AND ARE GENERATED AS A RESULT OF LABORATORY OPERATIONS MID-TO-HIGH PH
- (1B) WASTE IS ORGANIC GENERATED BY LABORATORY OPERATIONS, USUALLY < 30 GALS PER YEAR.
- (1C) WASTE IS GENERALLY PURE CHEMICALS NOT USED IN TESTING PROCEDURES AND IN VERY SMALL AMOUNTS (IE: < 8 GAL LABPACKS)

2.) Describe your quarterly expected shipping schedule for low level mixed or non-radioactive hazardous waste during FY-1993 (e.g., 40% of waste shipped during the first quarter, 20% in the second quarter, etc.)

20-30% PER QUARTER

3.) Do you currently have any low level mixed or non-radioactive hazardous waste held at your facility that was not included in Table 1 because the shipping schedule was not known? Yes No

If Yes, please fill out the table provided below.

WASTE CLASS	CONTAINER TYPE	VOLUME (ft ³)
CH LLMW I		
CH LLMW III		
CH LLMW GTCIII		
RH LLMW I		
RH LLMW III		
RH LLMW GTCIII		
HAZARDOUS		

- 4.) In general, do you expect to segregate unique waste forms prior to shipment or will several different waste forms arrive in the same container(s)? Explain.

TYPICALLY WASTE FORMS WILL REMAIN IN THE SAME GENERAL HAZARD CLASS, (OXIDIZER, CORROSIVE)

- 5.) Discuss the assumptions that were used to prepare this forecast. Identify known dates for facility closure, decontamination and decommissioning, or any new programs that drive the forecast data provided in this request.

THIS FORECAST IS BASED ON KNOWN HISTORY, ANY CHANGE WILL BE ON NATURE OF EXPERIMENTS PERFORMED, ALTHOUGH NO CHANGES TO CURRENT WASTESTREAMS ARE EXPECTED.

- 6.) Indicate your confidence level in the accuracy of the data provided in this forecast. High Medium Low

- 7.) Please supply contact personnel information for LLMW & non-radioactive hazardous waste data verification. Names must be typed or printed as well as written:

LLMW/HAZ: MJ SCHLIEBE

(Contact)

Phone: 3-4454

Approved by: JP SLOUGHTER

(Level 3 Signature)

Date: 3-10-93

Approved by: CL BOAZE

(Budget Concurrence)

Date: 5-26-93

Post-It brand
Fax Transmittal Memo 7672

To Oscar Valero

Company

Location

Fax # 2-1253

Telephone #

No. of Pages

Today's Date 6/7/93

Time

From

Company

Location

Fax #

Dept. Charge

Telephone #

3-115-1

Original (Disposition)

☐ Destroy

☐ Return

☐ Call for pickup

94-000-101 (9-89)

FAXed 6/7 2-1253

DON'T SAY IT --- Write It!

DATE 6/7/93

TO Oscar Valero

FROM Mike Schliebe

Attached is Table 1 for the FY94-2023 Hazardous Waste Forecast. Please add it to internal memo 12130-93-046 (Fiscal Year 1994-2023 Solid Waste Volume Forecast from the Chemical Engineering Laboratory).

Also, this dsi confirms telecon changes made on 6/7/93 to: 1) Table 3 (% organic = 50%, % other = 50%, "other" = misc inorganic lab waste, 2) Table 3 (for 30 gallon containers), (% particulate = 50%, % other = 50% where "other" = misc inorganic/organic lab waste, and 3) Table 3 (for "other" containers), (% "other" = 50 and % Labpacks/containers = 50 where "other" = misc. organic/inorganic lab waste

TO MAKE LIFE LAST, PUT SAFETY FIRST

[1] From: Michael J Schliebe at ~WHC215 7/14/93 2:13PM (370 bytes: 4 ln)
To: Arnold O (Arnie) Vance at ~WHC288
cc: Michael J Schliebe
Subject: WSD Forecast

----- Message Contents -----

Arnie - Per our conversation today, the 2703E Chem Engr Lab has
no input for the WSD forecast.

Mike Schliebe

1998	1191
1999	2151
2000	2151
2001	2151
2002	2151
2003	2151
2004	2151
2005	2151
2006	2151
2007	2151
2008	2151
2009	2151
2010	2151

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The sample numbers are primarily taken from a memo from C.L.Bergeson to D.R.Duncan of 6/2/1994, for sampling from retrievably stored waste. Numbers from newly generated waste are taken from the submission for WHC-SD-WM-TI-608, Rev. 0. The memo is attached for reference.

4) Full Scale TRU Retrieval

Samples would be soil taken during retrieval operations in the trenches, to establish presence or absence of contamination spread. The samples are classed as Category 2 but would probably be nonradioactive if they originated outside a radiologically controlled area. Sample sizes would be a maximum of one liter. Samples are taken approximately 10/week, assuming 25 weeks of in-trench excavation per year.

Sample numbers are from a personal communication from Dale M. Johnson, June 1994.

<u>1998-2008</u>	<u>2009</u>	<u>2010</u>
250 annually	750	750
(95% Cat. 2, 5% Cat. 3)	90% Cat. 2, 5% Cat. 3, 5% Cat. 4)	90% Cat. 2, 5% Cat. 3, 5% Cat. 4)

5) WRAP Module 2A

Samples are primarily solids. Sample size is expected to be primarily 250 ml.

Sample numbers are estimated from a personal communication from Michelle A LeClair, January 12, 1994.

<u>2000</u>	<u>2001-2010</u>
600 (Cat. 2)	1200 (Cat. 2)
100 (Cat. 1)	200 (Cat. 1)