Department of Energy
Richland Operations Office
P.O. Box 550
Richland, Washington 99352

10-AMCP-0136

APR 30 2010

Ms. J. A. Hedges, Program Manager
Nuclear Waste Program
State of Washington
Department of Ecology
3100 Port of Benton
Richland, Washington 99354

Mr. D. A. Faulk, Program Manager
Office of Environmental Cleanup
Hanford Project Office
U.S. Environmental Protection Agency
309 Bradley Boulevard, Suite 115
Richland, Washington 99352

Addressees:

CALENDAR YEAR 2009 HANFORD SITE MIXED WASTE LAND DISPOSAL RESTRICTIONS FULL REPORT, DOE/RL-2010-27, REVISION 0

The purpose of this letter is to transmit the Calendar Year 2009 Hanford Site Mixed Waste Land Disposal Restrictions Full Report, DOE/RL-2010-27, Revision 0, for review and written approval by the State of Washington Department of Ecology (Ecology). This is in accordance with the Hanford Federal Facility Agreement and Consent Order (Tri-Party Agreement) Interim Milestone M-026-01T, to submit an Annual Hanford Land Disposal Restrictions (LDR) Summary Report in accordance with agreement requirements to cover the period from January 1, of the previous year through December 31, of the reporting year.

Transmittal of this report to Ecology and the U.S. Environmental Protection Agency completes the U.S. Department of Energy Richland Operations Office and the U.S. Department of Energy, Office of River Protection requirement to submit the Calendar Year 2009 LDR Full Report by April 30, 2010.

The attached report is submitted as a primary document under the Tri-Party Agreement Action Plan, Section 9.0, "Documentation and Records." Ecology has 45 days following receipt of this letter to return any comments.

If you have any questions, please contact me, or your staff may contact, Larry Romine, of my staff, on (509) 376-4747.

Sincerely,

Matthew S. McCormick, Assistant Manager
for the Central Plateau

AMCP:MSC

Attachment

cc w/attach:
D. Bartus, EPA
G. Bohnee, NPT
L. Buck, Wanapum
S. Harris, CTUIR
R. Jim, YN
S. L. Leckband, HAB
K. Niles, ODOE
J. B. Price, Ecology
D. Rowland, YN
D. G. Singleton, Ecology (3)
E. R. Skinnarland, Ecology
H. T. Tilden, PNNL
Administrative Record (M-26)
Environmental Portal

cc w/o attach:
D. G. Black, CHPRC
K. R. Christensen, WCH
M. E. Cole, BABSR
R. H. Engelmann, CHPRC
L. L. Fritz, MSA
A. G. Miskho, CHPRC
R. E. Piippo, MSA
R. L. Robertson, WRPS
J. G. Vance, MSA
C. D. Wollam, MSA

DOE/RL-2010-27
Revision 0

Calendar Year 2009 Hanford Site Mixed Waste Land Disposal Restrictions Full Report

Prepared for the U.S. Department of Energy
Assistant Secretary for Environmental Management

U.S. DEPARTMENT OF ENERGY

Richland Operations Office

P.O. Box 550
Richland, Washington 99352

Approved for Public Release;
Further Dissemination Unlimited

DOE/RL-2010-27
Revision 0

Calendar Year 2009 Hanford Site Mixed Waste Land Disposal Restrictions Full Report

C. D. Wollam
Mission Support Alliance

Date Published
March 2010

Prepared for the U.S. Department of Energy
Assistant Secretary for Environmental Management

U.S. DEPARTMENT OF ENERGY
Richland Operations Office

P.O. Box 550
Richland, Washington 99352

Release Approval 03/29/2010 Date

Approved for Public Release;
Further Dissemination Unlimited

TRADEMARK DISCLAIMER

Reference herein to any specific commercial product, process, or service by trade name, trademark, manufacturer, or otherwise, does not necessarily constitute or imply its endorsement, recommendation, or favoring by the United States Government or any agency thereof or its contractors or subcontractors.

This report has been reproduced from the best available copy.

Printed in the United States of America

PRIMARY DOCUMENT STATEMENT

CALENDAR YEAR 2009 HANFORD SITE MIXED WASTE LAND DISPOSAL RESTRICTIONS FULL REPORT

Approval of the U.S. Department of Energy's annual land disposal restriction report as a *Hanford Federal Facility Agreement and Consent Order* primary document shall be by written approval of U.S. Department of Energy and Washington State Department of Ecology Interagency Management Integration Team representatives.

This document has been prepared, submitted, revised, and approved as a primary document in response to the requirements of the *Hanford Federal Facility Agreement and Consent Order* milestone series M-26-01 and related *Resource Conservation and Recovery Act of 1976* land disposal restrictions and *Hanford Federal Facility Agreement and Consent Order* requirements. As such, this document serves as a binding and enforceable document under the *Hanford Federal Facility Agreement and Consent Order*.

Approved and issued this _____ day of _____ 2010.

M. S. McCormick, Assistant Manager
for the Central Plateau
U.S. Department of Energy,
Richland Operations Office

J. Hedges, Program Manager
Nuclear Waste Program
State of Washington
Department of Ecology

Stacy Charboneau, Assistant Manager
for the Tank Farms Project
U.S. Department of Energy,
Office of River Protection

CONTENTS

1.0 INTRODUCTION 1-1
- 1.1 SOURCES AND ORGANIZATION OF WASTE STORAGE DATA 1-1
- 1.2 STORAGE REPORT DATA COLLECTION PROCESS 1-7
- 1.3 SCHEDULE AND MECHANICS OF LAND DISPOSAL RESTRICTIONS REPORT UPDATE 1-7
- 1.4 ASSUMPTIONS 1-8
- 1.5 SUMMARY OF PROPOSED CHANGES TO COMMITMENTS IN THE LAND DISPOSAL RESTRICTIONS REPORT 1-9

2.0 SUMMARY STORAGE DATA 2-1
- 2.1 SUMMARY INVENTORY OF WASTE TREATMENT GROUPS AND FORECAST GENERATION RATES 2-1
- 2.2 INVENTORY STORAGE METHOD AND LOCATION 2-1
- 2.3 POTENTIAL MIXED WASTE 2-1

3.0 COMPLIANCE ASSESSMENTS OF MIXED WASTE AND POTENTIAL MIXED WASTE STORAGE AREAS 3-1
- 3.1 INTRODUCTION 3-1
- 3.2 ASSESSMENT SCHEDULES 3-1

4.0 POTENTIAL STORAGE ISSUES 4-1
- 4.1 STORAGE CAPACITY 4-1
  - 4.1.1 Washington Closure Hanford, LLC (WCH) 4-1
  - 4.1.2 Washington River Protection Solutions, LLC (WRPS) 4-1
  - 4.1.3 CH2M HILL Plateau Remediation Company (CHPRC) 4-1
  - 4.1.4 Pacific Northwest National Laboratory 4-2
- 4.2 ISSUES AND THEIR RESOLUTION 4-2
- 4.3 PLANNED VARIANCES OR EXEMPTIONS FOR STORAGE 4-2
- 4.4 KEY STORAGE ASSUMPTIONS 4-2

5.0 WASTE RELEASES FROM STORAGE UNITS 5-1

6.0 HANFORD SITE MIXED WASTE MINIMIZATION PROGRAM DESCRIPTION 6-1

7.0 CHARACTERIZATION AND TREATMENT PLAN INTRODUCTION 7-1
- 7.1 SITE TREATMENT PLAN ACTIVITIES 7-1
- 7.2 RELATIONSHIP TO OTHER MAJOR U.S. DEPARTMENT OF ENERGY AND HANFORD SITE ACTIVITIES AND DOCUMENTS 7-1

8.0 WASTE STREAMS AND TREATABILITY GROUPS 8-1

9.0 MIXED LOW-LEVEL WASTE STREAMS 9-1
- 9.1 MIXED WASTE STREAMS FOR WHICH TREATMENT TECHNOLOGY EXISTS 9-2
  - 9.1.1 Commercial Stabilization 9-3

9.1.2 Commercial Macroencapsulation 9-4
9.1.3 Thermal Treatment of Organics 9-5
9.1.4 T Plant Complex 9-6
9.1.5 Environmental Restoration Disposal Facility Treatment 9-7
9.1.6 200 Area Effluent Treatment Facility and Liquid Effluent Retention Facility Liquid Wastes and Purgewater 9-8
9.1.7 325 Hazardous Waste Treatment Units 9-9
9.1.8 222-S Laboratory Complex 9-10
9.1.9 Commercial Amalgamation and/or RMERC 9-11
9.1.10 Waste That Currently Meets Disposal Requirements 9-12
9.2 MIXED WASTE STREAMS FOR WHICH TECHNOLOGY EXISTS BUT NEEDS ADAPTATION 9-12
9.2.1 M-091-01 Capability 9-12
9.2.2 Commercial Reactive Metal Deactivation 9-13
9.3 MIXED WASTE TREATABILITY GROUPS REQUIRING FURTHER CHARACTERIZATION, OR FOR WHICH TECHNOLOGY DOES NOT EXIST OR A TECHNOLOGY ASSESSMENT HAS NOT BEEN DONE 9-14
9.3.1 Treatability Groups for which Further Characterization is Needed 9-14
9.3.2 Treatability Groups for Which Treatment Technology Has Not Been Selected 9-15
9.4 RADIONUCLIDE SEPARATION PLANS 9-16
9.5 MIXED WASTE DISPOSAL 9-16
9.5.1 Low-Level Burial Ground Mixed Waste Trenches 9-17
9.5.2 Environmental Restoration Disposal Facility 9-17

10.0 TRANSURANIC MIXED WASTE STREAMS 10-1
10.1 TRANSURANIC MIXED WASTE STREAMS FOR WHICH PROCESSING TECHNOLOGY EXISTS 10-1
10.2 TRANSURANIC MIXED WASTE TREATABILITY GROUPS FOR WHICH CHARACTERIZATION AND PROCESSING TECHNOLOGIES NEED ADAPTATION 10-2
10.3 TRANSURANIC MIXED WASTE TREATABILITY GROUPS WITH PROCESSING TECHNOLOGY NOT SELECTED 10-3
10.3.1 PUREX Storage Tunnels 10-4
10.3.2 PUREX Plant 10-4
10.3.3 324 Building Radiochemical Engineering Cell Waste 10-4
10.4 DISPOSAL OF TRANSURANIC MIXED WASTE 10-4
10.5 RADIONUCLIDE SEPARATION PLANS 10-4

11.0 HIGH-LEVEL WASTE STREAMS 11-1
11.1 EXISTING TREATMENT PROCESSES 11-2
11.2 WASTE STREAMS FOR WHICH TREATMENT TECHNOLOGY IS NEEDED 11-2
11.3 RADIONUCLIDE SEPARATION 11-3
11.4 STORAGE OF HIGH-LEVEL WASTE 11-3
11.5 SHIPMENT OF HIGH-LEVEL WASTE TO A NATIONAL REPOSITORY 11-3
11.6 DISPOSAL OF THE MIXED LOW-ACTIVITY WASTE ON-SITE 11-3

12.0 TREATMENT OF POTENTIAL MIXED WASTE 12-1

13.0 SUMMARY OF CHARACTERIZATION INFORMATION 13-1

14.0 SUMMARY OF TREATMENT INFORMATION 14-1

15.0 TRI-PARTY AGREEMENT INFORMATION 15-1
15.1 DOCUMENTATION AND RECORDS 15-1
15.2 LAND DISPOSAL RESTRICTIONS RELATED TRI-PARTY AGREEMENT MILESTONES 15-1

16.0 REFERENCES 16-1

APPENDICES

A LAND DISPOSAL RESTRICTIONS REPORTING REQUIREMENTS ..... A-i

B WASTE STORAGE REPORT DATA SHEETS ..... B-i

C POTENTIAL MIXED WASTE ..... C-i

FIGURES

Figure 7-1. Outline of Activities to Complete Treatment Plan. 7-3
Figure 8-1. Correlation Between Mixed Low-Level Wastes and Treatment Facilities. 8-2
Figure 8-2. Correlation Between Transuranic Wastes and Treatment Facilities. 8-3
Figure 8-3. Correlation Between High-Level Wastes and Treatment Facilities. 8-3
Figure 9-1. Disposition Map for Mixed Low-Level Waste Current Treatment Processes. 9-1
Figure 9-2. Disposition Map for Treatability Groups Needing Facilities Adapted to Allow Waste Treatment. 9-2
Figure 10-1. Site Disposition Map for TRUM Treatability Groups. 10-1
Figure 11-1. High-Level Waste Disposition Map. 11-1

TABLES

Table 1-1. Treatability Groups 1-2
Table 1-2. Streams No Longer Applicable to Report 1-5
Table 2-1. Stored Volumes of Mixed Waste and Generation Projections 2-4
Table 2-2. Treatability Group Summary of Storage, Characterization, and Treatment Activities 2-10
Table 3-1. Summary of the U.S. Department of Energy, Richland Operation Office Assessment Results 3-1
Table 3-2. U.S. Department of Energy, Richland Operations Office Assessments for Calendar Years 2010 through 2011. 3-2

Table 5-1. Single-Shell Tank System 5-1
Table 9-1. Commercial Stabilization Process Summary 9-3
Table 9-2. Commercial Macroencapsulation Process Summary 9-5
Table 9-3. Commercial Thermal Treatment Process Summary. 9-6
Table 9-4. T Plant Complex Treatment Activities Summary 9-7
Table 9-5. Environmental Restoration Disposal Facility Treatment Activities Summary. 9-8
Table 9-6. 200 Area Effluent Treatment Facility Summary. 9-9
Table 9-7. 325 Hazardous Waste Treatment Units Summary. 9-10
Table 9-8. 222-S Laboratory Complex Summary 9-10
Table 9-9. Commercial Amalgamation Summary 9-11
Table 9-10. Summary of the M-091-01 Capability 9-13
Table 9-11. Commercial Reactive Metal Deactivation Summary. 9-13
Table 9-12. Information for the 221-T Tank System Waste for Which Treatment Technology Assessments Have Not Been Completed. 9-16
Table 10-1. Information Concerning Processes at the WRAP Facility and T Plant Complex. 10-2
Table 10-2. Information for the M-091-01 Capability. 10-3
Table 11-1. Information for High-Level Waste Vitrification. 11-2
Table 13-1. Summary of Characterization Information for Each Treatability Group 13-1
Table 14-1. Summary of Treatment Information for Each Treatability Group 14-2
Table 15-1. Tri-Party Agreement Milestones and Target Dates Through 2028 15-1

ACRONYMS

BAT	best available technology
BDAT	best demonstrated available technology
CERCLA	*Comprehensive Environmental Response, Compensation, and Liability Act of 1980*
CFR	Code of Federal Regulations
CH	contact handled
CHPRC	CH2M HILL Plateau Remediation Company
CWC	Central Waste Complex
CSB	Canister Storage Building
CY	calendar year
D&D	decontamination and decommissioning
DOE	U.S. Department of Energy
DOE-ORP	U.S. Department of Energy, Office of River Protection
DOE-RL	U.S. Department of Energy, Richland Operations Office
DST	double-shell tank
Ecology	Washington State Department of Ecology
EIS	environmental impact statement
EPA	U.S. Environmental Protection Agency
ERDF	Environmental Restoration Disposal Facility
ETF	200 Area Effluent Treatment Facility
FD	final determination
FFCA	*Federal Facilities Compliance Act of 1992*
FFTF	Fast Flux Test Facility
FY	fiscal year
HEPA	high-efficiency particulate air (filter)
HLW	high-level waste
HSTF	Hexone Storage and Treatment Facility
HSW EIS	*Hanford Site Solid (Radioactive and Hazardous) Waste Program Environmental Impact Statement*
HWTU	Hazardous Waste Treatment Unit
IDF	Integrated Disposal Facility
IMUST	inactive miscellaneous underground storage tank
INL	Idaho National Laboratory
LAW	low-activity waste
LDR	land disposal restrictions
LERF	Liquid Effluent Retention Facility
LLBG	Low-level Burial Grounds

LSDS	location-specific data sheet
MLLW	mixed low-level waste
N/A	not applicable
NEPA	*National Environmental Policy Act of 1969*
NPL	National Priority List
O/C	organic/carbonaceous
OU	operable unit
P2/WMin	Pollution Prevention/Waste Minimization
PCB	polychlorinated biphenyl
PFP	Plutonium Finishing Plant
pH	negative logarithm of the hydrogen-ion concentration
PMP	project management plan
PMM	Project Manager Meeting
PMW	potential mixed waste
PMWT	potential mixed waste table
PNNL	Pacific Northwest National Laboratory
PSTF	Purgewater Storage and Treatment Facility
PUREX	plutonium-uranium extraction (process)
RADTU	Radioactive Acid Digestion Test Unit
RCRA	*Resource Conservation and Recovery Act of 1976*
RCW	Revised Code of Washington
REC	radiochemical engineering cell
REDOX	reduction-oxidation (process)
RH	remote handled
RI/FS	remedial investigation/feasibility study
RLWS	Radioactive Liquid Waste System
RMERC	Specified LDR Technology in 40 CFR 268.42 for Retorting or Roasting Mercury
ROD	record of decision
RPP	River Protection Project
S&M	surveillance & maintenance
SALDS	State-Approved Land Disposal Site
SCW	special-case waste
SRS	Savannah River Site
SST	single-shell tank
STP	site treatment plan
SWIFT	Solid Waste Integrated Forecast Technical (Report)
TBD	to be determined
TC&WM EIS	*Tank Closure and Waste Management Environmental Impact Statement*
TGDS	Treatability Group Data Sheet
Tri-Party Agreement	*Hanford Federal Facility Agreement and Consent Order* (TPA)

TRU	transuranic (waste)
TRUM	transuranic mixed (waste)
TRUSAF	224-T Transuranic Waste Storage and Assay Facility
TSCA	*Toxic Substances Control Act of 1976*
TSD	treatment, storage, and/or disposal
UHC	underlying hazardous constituent
WAC	*Washington Administrative Code*
WCH	Washington Closure Hanford, LLC
WESF	Waste Encapsulation and Storage Facility
WHF	waste handling facility
WIDS	Waste Information Data System
WIPP	Waste Isolation Pilot Plant
WMA	Waste Management Area
WMU	Waste Management Unit
WRAP	Waste Receiving and Processing Facility
WRPS	Washington River Protection Solutions, LLC
WSCF	Waste Sampling and Characterization Facility
WSRd	waste specification record
WSS	waste specification system
WTP	Hanford Tank Waste Treatment and Immobilization Plant

METRIC CONVERSION CHART

Into metric units			Out of metric units		
If you know	Multiply by	To get	If you know	Multiply by	To get
Length			**Length**		
inches	25.40	millimeters	millimeters	0.03937	inches
inches	2.54	centimeters	centimeters	0.393701	inches
feet	0.3048	meters	meters	3.28084	feet
yards	0.9144	meters	meters	1.0936	yards
miles (statute)	1.60934	kilometers	kilometers	0.62137	miles (statute)
Area			**Area**		
square inches	6.4516	square centimeters	square centimeters	0.155	square inches
square feet	0.09290304	square meters	square meters	10.7639	square feet
square yards	0.8361274	square meters	square meters	1.19599	square yards
square miles	2.59	square kilometers	square kilometers	0.386102	square miles
acres	0.404687	hectares	hectares	2.47104	acres
Mass (weight)			**Mass (weight)**		
ounces (avoir)	28.34952	grams	grams	0.035274	ounces (avoir)
pounds	0.45359237	kilograms	kilograms	2.204623	pounds (avoir)
tons (short)	0.9071847	tons (metric)	tons (metric)	1.1023	tons (short)
Volume			**Volume**		
ounces (U.S., liquid)	29.57353	milliliters	milliliters	0.033814	ounces (U.S., liquid)
quarts (U.S., liquid)	0.9463529	liters	liters	1.0567	quarts (U.S., liquid)
gallons (U.S., liquid)	3.7854	liters	liters	0.26417	gallons (U.S., liquid)
cubic feet	0.02831685	cubic meters	cubic meters	35.3147	cubic feet
cubic yards	0.7645549	cubic meters	cubic meters	1.308	cubic yards
Temperature			**Temperature**		
Fahrenheit	subtract 32 then multiply by 5/9ths	Celsius	Celsius	multiply by 9/5ths, then add 32	Fahrenheit
Energy			**Energy**		
kilowatt hour	3,412	British thermal unit	British thermal unit	0.000293	kilowatt hour
kilowatt	0.94782	British thermal unit per second	British thermal unit per second	1.055	kilowatt
Force/Pressure			**Force/Pressure**		
pounds (force) per square inch	6.894757	kilopascals	kilopascals	0.14504	pounds per square inch

06/2001

Source: *Engineering Unit Conversions*, M. R. Lindeburg, PE, Third Ed., 1993, Professional Publications, Inc., Belmont, California.

Section 1.0

1.0 INTRODUCTION

This document has been prepared in accordance with *Hanford Federal Facility Agreement and Consent Order* (Tri-Party Agreement) (Ecology et al. 2007) Milestone M-26-01T. The document presents the status of Hanford Site land disposal restricted mixed waste, other mixed waste, and other waste that the U.S. Department of Energy (DOE), State of Washington, Department of Ecology (Ecology), and U.S. Environmental Protection Agency (EPA) have agreed to be within the scope of this report. The reporting period for this document is from January 1, 2009, to December 31, 2009.

Sections 2.0 through 6.0 present information concerning the storage and minimization of mixed waste and the potential sources for the generation of additional mixed waste. Sections 7.0 through 15.0 present information pertaining to the characterization and treatment of these wastes. Appendix A lists the land disposal restrictions (LDR) reporting requirements and explains where the requirements are addressed in this report. Appendix B contains the treatability group data sheets and location-specific data sheets for stored and forecasted mixed waste. Appendix C contains the Potential Mixed Waste Tables.

1.1 SOURCES AND ORGANIZATION OF WASTE STORAGE DATA

This report presents information on waste streams that are reported either as a matter of law or as a result of discussions among DOE, Ecology, and EPA. Waste streams reported as a matter of law include mixed waste in storage subject to the storage prohibition of Title 40 *Code of Federal Regulations* (CFR) Part 268.50. *Washington Administrative Code* (WAC) 173-303-140, "Dangerous Waste Regulations," incorporates the federal rule by reference. The EPA guidance (EPA 1990) indicates which mixed waste is subject to the storage prohibition. Other mixed waste streams are being reported under the Tri-Party Agreement Milestone M-26-01 as a result of discussions held among DOE, Ecology, and EPA. Examples of these other mixed waste streams include mixed waste that meets LDR treatment standards, and mixed waste being managed under the *Comprehensive Environmental Response, Compensation, and Liability Act* (CERCLA) *of 1980* on-site provisions being treated at the Environmental Restoration and Disposal Facility (ERDF).

Mixed waste is not subject to the storage prohibition until generated and managed in a 90-day accumulation area or a treatment, storage, and/or disposal (TSD) unit, or the waste is managed at a Hanford Site location managing mixed waste pursuant to the CERCLA off-site rule (40 CFR 300.440). Although mixed waste managed in a 90-day accumulation area is not considered stored, the EPA has indicated that the storage prohibition clock begins when mixed waste is managed in the 90-day accumulation area.

Mixed waste is reported here as projected waste when the waste meets either of the following criteria:

- The waste has not been generated and therefore is not subject to the storage prohibition.
- The waste is managed in either a satellite accumulation area, a 90-day accumulation area, or is CERCLA mixed waste destined for treatment at ERDF.

This storage report provides aggregate waste stream data based on a set of waste treatability groups. Many locations of mixed waste can exist within a treatability group and these locations are detailed on location-specific data sheets for the sources of waste. More information concerning treatability groups can be found in Sections 7.0 through 15.0. Per agreement with Ecology on February 6, 2003, mixed waste generated and sent directly to disposal does not need to be reported in the LDR report (Ecology et al. 2004). If any storage of the mixed waste occurs, the mixed waste must be reported.

Treatability group data sheets describe the characteristics that the location-specific waste sources share (Appendix B, Figure B-1). The data sheets also provide total waste volume data from the associated location-specific data sheets for both the currently stored inventory and the waste projected to be generated. The location-specific data sheets describe how, where, and volume of waste stored and present information concerning disposition of the waste.

Appendix B provides location-specific data sheets for each waste stream, sorted by treatability group. Each location-specific data sheet was completed by staff knowledgeable of the waste stream. Mixed waste currently in satellite accumulation areas or in 90-day accumulation areas is not considered current stored inventory, but is included as forecast waste generation. The content and format of waste stream data sheets and the process for collecting waste storage data are discussed in the following paragraphs.

Table 1-1 lists the names of the treatability groups used in this report and the major sources of waste in each group.

One treatability group was added in calendar year (CY) 2006, "400 Area WMU" and one has been added to this year's report, "LERF/ETF Solid Waste." Two treatability groups were combined in CY 2007. MLLW-04A (O/C Hazardous Debris) and MLLW-04B, (non-O/C Hazardous Debris) were combined into MLLW-04 (Hazardous Debris). No treatability groups have been deleted from this year's report. Detail on treatability groups is found in Table 1-1, Table 2-1, Table 2-2, as well as the treatability group data sheets in Appendix B.

Other materials, items, etc., currently on the Hanford Site that might be designated as mixed waste in the future, are described in Section 2.3, listed in Appendix C, and are referred to as potential mixed waste.

Table 1-1. Treatability Groups. (4 sheets)

Treatability Group Name	Major Waste Sources
221-T Containment Building	Waste resulting primarily from 221-T Building canyon activities.
221-T Tank System	Waste resulting from decontamination activities at the 221-T and 2706-T Buildings; some additional waste from other Hanford Site locations.
222-S Laboratory Complex	Waste resulting from operations at the 222-S Laboratory Complex and other Hanford Site activities.

Table 1-1. Treatability Groups. (4 sheets)

Treatability Group Name	Major Waste Sources
222-S T8 Tunnel	Waste piping removed from aqueous waste service formerly used to transfer waste from the laboratory to the waste tank system.
241-CX Tank System	Residual tank waste resulting from reduction-oxidation (REDOX), plutonium-uranium extraction (PUREX), and Semiworks processes.
324 Building REC Waste	High-activity radioactive waste containing toxic heavy metals generated during research and development activities since the mid-1960's and the processing of high-level vault waste.
325 HWTU	Laboratory waste generated by research and analytical activities conducted by the Pacific Northwest National Laboratory (PNNL). This waste stream was managed in satellite and 90-day accumulation areas and subsequently transferred to the 325 Hazardous Waste Treatment Unit (HWTU) for storage and/or treatment. Waste is or was generated by active, ongoing projects at PNNL.
400 WMU	Mixed waste generated from the deactivation of the Fast Flux Test Facility (FFTF).
B Plant Cell 4	Drums of Waste Encapsulation and Storage Facility (WESF) hot cell maintenance waste placed in storage from 1988 to 1997.
B Plant Containment Building	Process jumpers and equipment from B Plant Complex processes stored on the canyon deck and in process cells.
Cesium and Strontium Capsules	CsCl salt and SrF_2 salt reclaimed from double-shell tank (DST) and single-shell tank (SST) Systems mixed waste.
DST Waste	Widely varying waste from chemical separations processes (e.g., PUREX, Plutonium Finishing Plant [PFP], and cesium and strontium separations) and related support facilities operating from 1970 to date.
ERDF—Treatment	Spent resins and contaminated waste from CERCLA remediation requiring treatment before disposal at ERDF.
HSTF	Residual heel content remaining from REDOX process.
LERF/ETF Liquid Waste	Liquid waste sent from various Hanford Site processes to the Liquid Effluent Retention Facility (LERF) and 200 Area Effluent Treatment Facility (ETF) for treatment.
LERF/ETF Solid Waste	Dried powder waste and operational waste generated as a result of operating LERF/ETF.

Table 1-1. Treatability Groups. (4 sheets)

Treatability Group Name	Major Waste Sources
MLLW-01 - LDR Compliant Waste	Inorganic salt waste, excavated soil, and contaminated equipment that currently meets disposal criteria and regulatory requirements for disposal; however, some of this waste may still require radiological stabilization.
MLLW-02 - Inorganic Non-Debris	Inorganic particulates, absorbed liquids and sludge, paint waste, salt waste, and aqueous laboratory packs from various locations.
MLLW-03 - Organic Non-Debris	General organic solids and laboratory packs from various locations.
MLLW-04 - Hazardous Debris	Paper, plastic, rubber, wood, rags and to a lesser extent metals, concrete, asbestos debris from various locations.
MLLW-05 - Radioactive Lead Solids	Elemental lead and lead shielding from various locations.
MLLW-06 - Mercury Wastes	Various forms of mercury (elemental and amalgamated) from various locations.
MLLW-07 - RH and Large Container	Remote Handled (RH) and oversized contact handled (CH) mixed low-level waste (MLLW) generated from various locations.
MLLW-08 - Unique Waste	Waste stream consists of unique waste that requires special processing not typically employed for the other MLLW waste streams.
MLLW-09 - Radioactive Batteries	Spent, radioactively contaminated, batteries from various locations.
MLLW-10 - Reactive Metals	Reactive metal waste from various locations.
PUREX Plant	Chromium-contaminated debris from E-Cell floor currently stored in F-Cell of the PUREX Containment Building.
PUREX Storage Tunnels[1]	Equipment and waste containing mercury, lead, silver, cadmium, chromium, barium, and mineral oil from PUREX and other processes.
Purgewater	Purgewater generated from pump-and-treat operations, well drilling, groundwater sampling, and well maintenance from across the Hanford Site.
SST Waste	Widely varying waste from chemical separations processes and related support facilities operating between 1944 and 1980.
TRUM-CH Small Container	CH transuranic mixed (TRUM) waste includes a variety of waste from various locations packed into smaller containers using standard processing techniques.
TRUM-CH Large Container	CH TRUM waste in large boxes from various sources.

Table 1-1. Treatability Groups. (4 sheets)

Treatability Group Name	Major Waste Sources
TRUM-RH	RH TRUM waste originates from various locations and has a contact dose rate of >200mrem/hr.

[1]This treatability group includes both TRUM and non-mixed transuranic (TRU) waste. TRUM and non-mixed TRU exist in the same storage unit and can be difficult to distinguish when the waste has been in storage for quite some time.

Table 1-2 is a comprehensive list of waste streams that were included in any previous LDR report, but are not included in this report, along with the reason the waste stream is no longer reported.

Table 1-2. Streams No Longer Applicable to Report. (3 sheets)

Treatability Group Name	Waste Source	Reason
183-H Solar Evaporation Basins Waste	Containerized solids retrieved from 183-H Solar Evaporations Basins, generated from 300 Area fuel fabrication waste from 1973 to 1985.	Unit is in post-closure care. Process waste inventory is now disposed of at ERDF.
PNNL-305B	Waste generated from PNNL laboratory and facility operations.	PNNL mixed waste storage/treatment has been consolidated into the 325 HWTUs. 305-B was clean closed in 2007.
4843 Sodium Storage Facility Waste	Waste sodium from FFTF operations.	Significant amounts of alkali metal waste are no longer generated. This inventory is stored at CWC and reported as part of that inventory.
Hexone Waste	Hexone that had been planned for use in the 202-S solvent extraction process.	Hexone has been incinerated off-site at Diversified Scientific Services, Inc., Kingston, Tennessee. (Small amounts of waste continue to be generated from surveillance and maintenance of the emptied tanks that were used to store the hexone. The remaining heels in the two tanks are reported in the Hexone Storage and Treatability Facility [HSTF] treatability group.)

Table 1-2. Streams No Longer Applicable to Report. (3 sheets)

Treatability Group Name	Waste Source	Reason
PUREX Facility Ammonia Scrubber Waste	Waste generated from sorption of gaseous ammonia from fuel processing operations at the PUREX Plant.	Waste no longer generated. Inventory in DST System.
PUREX Facility Process Condensate	Condensed vapors from PUREX Plant operations.	Waste no longer generated. Inventory in DST System.
PUREX Plant Aging Waste	First extraction-column fission products from the PUREX Plant.	Waste no longer generated. Inventory in DST System.
T-Dragoff	T Plant Complex	Waste was dispositioned and disposed.
222-S RH MLLW	222-S Laboratory Complex	Treatability group was combined with the MLLW-07 treatability group.
241-Z	PFP	Treatability group was combined with the DST Waste treatability group. The waste is no longer generated and the 241-Z Tank System has been closed.
HO-64-4275	Various Hanford Site locations.	Treatability group was combined with the DST Waste treatability group.
K Basin Sludge	100 Area K Basins	Treatability group was combined with the TRUM-polychlorinated biphenyl (PCB) treatability group. The waste was subsequently removed from the report because the waste did not designate as mixed waste.
T Plant EC-1 Condenser	242-A Evaporator	Shipped off-site for recycling in CY 2002
ERDF – Direct Disposal	Hanford Site remediation waste	No storage of mixed waste occurred for this treatability group.
618-4 Depleted Uranium/Oil Drums	618-4 Burial Ground	Waste has been treated off-site.

Table 1-2. Streams No Longer Applicable to Report. (3 sheets)

Treatability Group Name	Waste Source	Reason
TRUM-PCBs	Various Hanford Site locations.	Waste in this treatability group has been rolled into the other three TRUM treatability groups based on the M-91 settlement agreement.

1.2 STORAGE REPORT DATA COLLECTION PROCESS

A central database was used for managing data contained in Appendix B. Data were collected for all stored and projected mixed waste and input into the database. Volumes reported as stored inventory at specific locations automatically were summed and presented as the storage information for the associated treatability group inventory. An analogous automatic summation was performed for projected waste generation rates. Appendix B contains the treatability group data sheets, along with the following information:

- A description of the data fields in the data sheets
- Figure B-1 to explain the relationship among the types of data sheets
- Table B-1 as an index to locate individual data sheets.

1.3 SCHEDULE AND MECHANICS OF LAND DISPOSAL RESTRICTIONS REPORT UPDATE

Each annual update is issued as a complete replacement with a new document number that supersedes the previous year's LDR Report. Proposed TPA milestones or proposed changes to TPA milestones are identified and processed using existing processes contained in the TPA Action Plan, Section 12.0, and not as part of the annual LDR report review and approval process. Commitments other than TPA milestones however, can be proposed in the LDR Report when required. Modification of commitments in the report are made by: using an LDR Report change form for within-year changes; by agreement through TPA lead regulatory agency project manager meetings; by agreement through LDR TPA project manager meetings; or by DOE in the annual update agreed on by Ecology during the primary document review and comment process. Changes to commitments proposed by DOE as part of the primary document process are summarized in Section 1.5.

Changes made to the LDR Report after DOE submits the document to Ecology can be incorporated by either updating the document and publishing the updated report, documenting changes through use of errata sheets, or could be incorporated in the next annual LDR report. The decision to choose a particular pathway is made jointly by DOE and Ecology project managers responsible for the work scope in question. Modification to TPA milestones listed in the LDR report is incorporated in the next annual LDR report and are not issued as errata sheets. As described in Attachment 3 of the March 14, 2002, *Resolution of Dispute Pertaining to Hanford Federal Facility Agreement and Consent Order Calendar Year 2000 Hanford Site Mixed Waste Land Disposal Restrictions Report*, workshops were held during 2002 to improve

the LDR Report process. These results have been incorporated into the LDR Report. Additional workshops were held in subsequent years resulting in Tri-Party Agreement change request M-26-06-01 which established the content and format of LDR Summary Reports following a pilot activity in CY 2005. The Summary Reports are to be issued every year for four years, with the fifth year being a Full Report. This report is the first Full Report since change request M-26-06-01 and meets Milestone M-26-01T.

The annual report revisions consist of the following:

- Updated mixed waste storage inventories and projected generation rates to reflect current plans and schedules.
- Revised waste stream characterization information to reflect current knowledge.
- Updated compliance status of the TSD units to reflect completion of pending storage assessments and permitting activities.
- Report on completed LDR storage assessments and summarized resulting findings and observations.
- Re-evaluation of the adequacy of the capacity of current TSD units for storing LDR mixed waste.
- Addition of new milestones and revision of existing milestones as applicable.
- Report on changes in the management and TSD of mixed waste required by changes in federal policy or regulations as applied to the DOE complex.
- Funding/budget guidance impacts on operating plans and schedules.
- Addition of mixed waste streams and projected mixed waste that will be generated in the five-year span for the LDR report; and adding potential mixed waste as waste is identified.
- Removing mixed waste and potential mixed waste from the LDR report that has been disposed or otherwise dispositioned (e.g., recycled); Refer to Table 1-2 and Appendix C, Table C-3.

1.4 ASSUMPTIONS

This section lists key assumptions used to prepare this report.

- For tank waste (DST Waste and SST Waste treatability groups), the pretreatment methods to be developed include acceptable technology to separate the tank waste into low-activity waste (LAW) and high-level waste (HLW) streams so the bulk of chemical waste is in the LAW stream and the bulk of radionuclides are in the HLW stream.
- Pretreated tank waste will be transferred to LAW and HLW vitrification facilities.

- For tank waste, it is assumed that the glass waste forms either comply with LDR requirements or a treatability variance will be in place for both the LAW and HLW fractions and a delisting petition will be in place for the vitrified HLW fraction.

- SST Waste from the SST System continues to be transferred to the DST System and mixed with DST Waste as part of the stabilization and retrieval programs for the SST System. Supernatant from the DST System will be used to mobilize the SST waste.

- Process condensate from the 242-A Evaporator and hazardous wastewater from other sources, including liquid effluents from tank waste pretreatment and vitrification, will continue to be treated at ETF.

- The work scope contained in the LDR report is based on expected funding and is contingent on Congressional budget actions. If funding is reduced or reprioritized, the ability to conduct and complete work scope is affected. To address these changes, changes to Tri-Party Agreement milestones are made using Section 12.0 of the Tri-Party Agreement Action Plan, and not part of the review and approval of the annual LDR report update.

1.5 SUMMARY OF PROPOSED CHANGES TO COMMITMENTS IN THE LAND DISPOSAL RESTRICTIONS REPORT

LDR report commitments can be changed through the processes described in Section 1.3. This section contains any commitment changes that are proposed by DOE in the annual update and agreed on by Ecology during the primary document review and comment process.

A change in commitments is being proposed for the four remaining storage assessments identified in Appendix C. The assessment reports/data gap plans are proposed for a one year extension. The only other change regarding commitments proposed in this report are those consistent with the two M-091 Tri-Party Agreement Change requests that were signed off during CY 2009. No other proposed changes to commitments in the basic format or content of the LDR Report during the past year are included.

The decision to issue a full LDR report every five years with summary reports each year during the intervening years (TPA Change Request M-26-06-01) has proven to be an efficient and cost effective change. The change will remain in effect unless revised per the process above.

This page intentionally left blank.

Section 2.0

2.0 SUMMARY STORAGE DATA

The forecast generation rates represent the current best estimates of projected waste generation for each LDR treatment group, or the quantity of mixed waste added to the TSD units. These estimates are developed by the generating projects/facilities or programs based on an evaluation of operating schedules, past operational history, and projections of future waste-generating activities. The generation projections could be higher or lower than the actual generation values because of changes in process technologies and practices, waste treatment, production schedules, waste minimization activities, or uncertainties associated with the project estimates.

2.1 SUMMARY INVENTORY OF WASTE TREATMENT GROUPS AND FORECAST GENERATION RATES

The volume of mixed waste currently in storage and the volume projected to be generated and subsequently stored at Hanford during the next five calendar years are presented in Table 2-1. Mixed waste managed only in Hanford Site generator locations (satellite accumulation areas and 90-day accumulation areas), and then sent directly off-site for treatment are not reported. These data are summarized from the location-specific data sheets and also are reported in the treatability group data sheets in Appendix B. Table 2-2 presents an overall summary of the storage, characterization, treatment, and disposal activities for the treatability groups. Table 2-2 is a collection of information from the following three tables: Table 2-1; Table 13-1; and Table 14-1. Data on waste volumes in these tables are taken from Appendix B and rounded to two significant figures. Stored waste volumes are reported either by the actual waste volume or by the waste container volume. The treatability group breakout of retrievably stored waste is described in the project management plan required by Tri-Party Agreement Milestone M-91-03. Retrievably Stored Waste, both MLLW and TRUM, not yet retrieved is included in the above tables.

The Hanford Tank Waste Treatment and Immobilization Plant (WTP) is a new TSD unit being constructed to treat DST Waste and SST Waste. The WTP Project Management schedule projects that mixed waste will not be generated at the WTP until after the five-year forecasting window for this report.

2.2 INVENTORY STORAGE METHOD AND LOCATION

Storage methods are identified in Section 2.1 of the location-specific data sheets. Options include: container (pad), container (covered), container (retrievably buried), tank, DST, SST, or other (explain). The category "Other (explain)" includes all waste not stored in containers, DSTs or SSTs (e.g., PUREX Storage Tunnels). The location-specific data sheet storage location does not include waste in accumulation areas.

2.3 POTENTIAL MIXED WASTE

The potential mixed waste table (PMWT) (Appendix C) includes materials that have not been generated as mixed waste and waste that has not been actively managed as mixed waste. The materials included are those that reasonably could be expected to be generated as mixed waste at some future time. The materials included in the PMWT (equipment, piping, etc.) are those that currently are not being used and do not have a clear path for reuse or recycling. The waste that

has not been actively managed as mixed waste is, in many cases, at *Resource Conservation and Recovery Act* (RCRA) *Act of 1976* or CERCLA past-practice units under the Tri-Party Agreement. Past-practice waste is waste that was abandoned before the first effective LDR date in Washington State, August 19, 1987. Classification of waste management units (WMUs) as past-practice units is described in Section 3.0 of the Tri-Party Agreement Action Plan. When cleanup actions occur in the operable unit for these past-practice units, mixed waste could, or is expected to be generated. The PMWT also includes a similar category of materials currently in standby for a potential future use. The table was developed for the following reasons:

- To acknowledge that materials might become mixed waste at a future date.
- To begin identifying data gaps (e.g., whether the material would be designated as mixed waste) and facilitate discussions to establish a path forward toward disposition for those materials eventually identified as mixed waste.

As a result of discussions with Ecology and EPA, the following categories of materials have not been included in the PMWT:

- Generated mixed waste. This mixed waste is included in treatability group and location-specific data sheets in Appendix B of this LDR report.
- Contaminated soil sites, cribs, ponds, ditches, trenches, etc., considered engineered disposal units. (However, the materials would be included in an LDR report location-specific data sheet [Appendix B] when management or disposition activities associated with those units are expected to result in the generation of mixed waste requiring treatment in the next five years.)
- The building structures themselves, including contaminated walls, floors, floor sweepings, dust, etc. Building equipment, such as ventilation system components and building utilities that would be considered part of the structure, also is not included.
- Equipment and chemicals being used.

The PMWT includes information on the assessments performed or scheduled to meet the DOE assessment requirement of the LDR storage report. Section 3.0 provides more information concerning assessments.

The PMWT also includes known and proposed schedule information. This information can include the following, as applicable:

- Proposed dates for assessments
- Operable units that encompass the facility or unit
- Existing documentation and milestones or schedules that indicate plans that will address the PMW

- Date to complete data gap plan
- Start date for major Tri-Party Agreement negotiations such as facility transition or deactivation.

Table 2-1. Stored Volumes of Mixed Waste and Generation Projections. (6 sheets)

Treatability Group Name	Description[1]	Current Inventory (m^3)[2]	Generation Projection 2010 (m^3)[2]	Generation Projection 2011 (m^3)[2]	Generation Projection 2012 (m^3)[2]	Generation Projection 2013 (m^3)[2]	Generation Projection 2014 (m^3)[2]
221-T Containment Building	Equipment (e.g., jumpers, tanks, centrifuges, etc.), other debris (e.g., pieces of concrete, etc.), and nondebris (e.g., sandblasting grit) generated during canyon deck and/or process cell cleanout, or from treatment and/or decontamination activities.	58	0	0	0	0	0
221-T Tank System	Liquid mixed waste with settled solids/sludge (waste also contains PCBs at *Toxic Substances Control Act* [TSCA] *of 1976* regulated concentrations).	0.36	0	0	0	0	0
222-S Laboratory Complex	This waste stream consists of many different inorganic and organic solids and liquids that are RCRA regulated or have been contaminated with inorganic and organic regulated dangerous waste constituents, including PCBs. This waste stream also includes hazardous debris.	0.96	59	59	59	59	59
222-S T8 Tunnel	This waste stream is comprised of debris that has come into contact with waste from the 219-S Waste Handling Facility (WHF) tank system waste. The debris is designated as RH MLLW as a result of this contact.	0.20	0	0	0	0	0
241-CX Tank System[3]	Residual tank waste resulting from REDOX, PUREX, and Semiworks processes.	6.4	0	0	0	0	0
324 Bldg. REC Waste	Radioactive waste containing regulated quantities of toxic heavy metals. Mixed waste residue may be generated from the future radiochemical engineering cells (RECs) decontamination and deactivation activities and disposed as CERCLA waste in accordance with M-094-00.	5.0	0	0	0	0	0
325 HWTU	This waste stream consists of many different inorganic and organic solids and liquids that are contaminated with inorganic and organic regulated dangerous waste constituents, including PCBs. This waste stream also includes hazardous debris. Waste Specification Records (WSRds) in this waste stream include PNNL-930-05 and PNNL-931-04.	3.4	9	9	9	9	9
400 Area WMU	Mixed waste generated from Hanford activities, primarily from the deactivation of FFTF.	1.5	0	0	0	0	0
B Plant Cell 4	Waste resulted from WESF hot cell maintenance waste (i.e., manipulator boots, light bulbs, high-efficiency particulate air (HEPA) filters, misc. debris). B Plant, including Cell 4, was placed in long term surveillance and maintenance in 1998. No additional waste will be stored in this location as B Plant is under long-term Surveillance & Maintenance (S&M).	1.4	0	0	0	0	0

Table 2-1. Stored Volumes of Mixed Waste and Generation Projections. (6 sheets)

Treatability Group Name	Description[1]	Current Inventory (m^3)[2]	Generation Projection 2010 (m^3)[2]	Generation Projection 2011 (m^3)[2]	Generation Projection 2012 (m^3)[2]	Generation Projection 2013 (m^3)[2]	Generation Projection 2014 (m^3)[2]
B Plant Containment Building	Stream consists of failed equipment (e.g., process jumpers, pumps, etc.) used in the 221-B canyon. Contaminated debris/equipment derived from the processing of "F" listed wastes for the recovery of strontium and cesium. Also contains elemental lead used for counterbalances and shielding. This waste was placed in long S&M in accordance with Section 8.0 of the Tri-Party Agreement in 1999. No additional waste will be stored at this location. The B Plant is under long-term S&M.	290,000 kg	0	0	0	0	0
Cesium and Strontium Capsules	Cesium and strontium were reclaimed from Tank Farm waste as a product, separated and purified at B Plant, and converted to dry salt for storage at WESF. The cesium and strontium capsules were declared waste in 1997 and a Part A permit application was subsequently submitted to Ecology. The subject waste consists of 1,335 cesium capsules and 601 strontium capsules. The capsules are stored in pool cells at WESF.	2.0	0	0	0	0	0
DST Waste	Basic aqueous solution that may contain suspended material and/or settled solids (sludge and saltcake). Waste streams are treated with sodium hydroxide and sodium nitrite to minimize tank corrosion and to address compatibility issues. Waste has been stored in the DST System from 1971 to the present.	98,000	38	38	38	38	38
ERDF—Treatment	This waste stream reflects mixed waste that requires treatment before disposal at ERDF. The waste is stored at the operable unit/facility, and is transferred to ERDF where the waste is treated and disposed.	0	4,500	5,000	43,000	180	0
HSTF	Residual heel content remaining from REDOX Process.	2.1	0	0	0	0	0
LERF/ETF Liquid Waste	CERCLA and RCRA aqueous wastewaters are sent to the LERF/ETF for treatment and disposal.	64,000	16,000	15,000	15,000	15,000	3,500
LERF/ETF Solid Waste	CERCLA and RCRA wastewaters are sent to the LERF/ETF for treatment and disposal. Both dried powder and operational solid waste are generated and stored at 2025E prior to shipment to on-site disposal facility or to an off-site facility if treatment is required.	45	240	240	240	240	240

Table 2-1. Stored Volumes of Mixed Waste and Generation Projections. (6 sheets)

Treatability Group Name	Description[1]	Current Inventory (m^3)[2]	Generation Projection 2010 (m^3)[2]	Generation Projection 2011 (m^3)[2]	Generation Projection 2012 (m^3)[2]	Generation Projection 2013 (m^3)[2]	Generation Projection 2014 (m^3)[2]
MLLW-01 – LDR Compliant Waste	This waste consist of MLLW meeting the disposal requirements for Hanford's Mixed Waste Disposal Units (ref: LLBG 218W5, T31 & T34). The waste either meets RCRA, and applicable State, LDRs as-generated or the waste has been treated to meet the LDRs. Additionally, the waste meets unit specific disposal requirements (e.g., 90% full, minimum of 50 psi unconfined compressive strength, etc). The applicable WSRds include 930 and 931. This waste can consist of: soils, immobilized waste, stabilized/solidified waste, thermal treatment residues, etc.	0.40	0.70	0.70	0.70	0.30	0.30
MLLW-02 - Inorganic Non-Debris	This treatability group is for non-debris waste that contains hazardous constituents that either require non-thermal treatment (specified technology) or non-thermal treatment is the best demonstrated available technology (BDAT) for meeting the applicable LDR treatment standards (concentration-based standards). The applicable WSRds for this treatability group are: 420, 421, 422, 425, 426, 428, 506, 507, 521, 523, 524, 525, 900, 901, 902, and 904. This waste consists of many different inorganic solids (e.g., particulates, absorbed liquids, sludges, resins, soils) and labpacks that are contaminated with regulated metals and other inorganics. This waste treatability group does not include hazardous debris other than incidental debris material commingled with the non-debris.	2.3	0	0	0	0	0
MLLW-03 - Organic Non-Debris	This treatability group is for non-debris waste that contains hazardous constituents that either requires thermal treatment (specified technology) or thermal treatment is BDAT for meeting the applicable LDR treatment standards (concentration-based standards). Stabilization of the thermal treatment residue also might be required. The primary applicable WSRds for this treatability group are: 400, 401, 402, 403, 404, 405, 406, 407, 408, 409, 427, 429, 430, 431, 432, 500, 501, 502, 503, 504, 505, 520, 522, 700, 701, 720, 721, 920, 921, 922, and 923. This waste stream consists of many different inorganic and organic solids (e.g., particulates, absorbed liquids, sludge, resins, soils) and labpacks that are contaminated with organic regulated dangerous waste constituents. This waste stream may also include dangerous waste containing PCBs that required thermal destruction. This waste stream does not include hazardous debris other than incidental debris material commingled with the non-debris.	0.83	0.07	0.07	0.07	0.07	0

Table 2-1. Stored Volumes of Mixed Waste and Generation Projections. (6 sheets)

Treatability Group Name	Description[1]	Current Inventory (m^3)[2]	Generation Projection 2010 (m^3)[2]	Generation Projection 2011 (m^3)[2]	Generation Projection 2012 (m^3)[2]	Generation Projection 2013 (m^3)[2]	Generation Projection 2014 (m^3)[2]
MLLW-04 - Hazardous Debris	This treatability group is for waste that meets the definition of hazardous debris as defined in 40 CFR 268.2. The physical characteristics include paper, plastic, wood, rubber, rags, and lesser quantities of metallic and inorganic waste components. The primary WSRds that comprise this treatability group are: DBR, 627, and 647. This waste may include organic/carbonaceous waste constituents in excess of 10 percent as defined in WAC 173-303-040 (e.g., plastic, paper, wood, rubber, etc).	48	1.7	1.7	1.7	1.7	1.7
MLLW-05 – Radioactive Lead Solids	This treatability group is for waste that meets the definition of radioactive lead solids subcategory as described in 40 CFR 268.40. The physical makeup consists of many different forms of radioactive lead solids including bricks, sheets, shot-filled blankets, lead-lined debris items where the lead comprises more than 50 percent of the waste matrix. The primary WSRds that comprise this treatability group are EPB and 800. The waste is generated by many on-site generating organizations.	0.21	0	0	0	0	0
MLLW-06 – Mercury Wastes	This treatability group is for waste that contains various forms of mercury requiring special waste treatments. The form can consist of elemental liquid mercury, partially amalgamated mercury, mercury spill cleanups, high-mercury subcategory waste, and some debris waste items packaged in with the mercury waste. The primary WSRds that comprise this treatability group are EHG, HHG, and 810. The waste is generated by many on-site generating organizations.	0	0	0	0	0	0
MLLW-07 - RH and Large Container	This treatability group consists of the following waste types: (1) Large containers of MLLW (large containers for MLLW are defined as greater than 10 m^3 in size, (2) RH MLLW packages (RH-MLLW is defined as waste packages that have an external surface dose rate of greater than 200 mR/hr on contact), and (3) RH-MLLW that is shielded down to contact handling levels for safe handling and storage (shielding can be internal, external, and/or integral to the waste container). The primary WSRds that comprise this treatability group are DBL, HRW, 450, 550, and 650. The waste is generated by many on-site generating organizations.	120	0	0	0	0	0

Table 2-1. Stored Volumes of Mixed Waste and Generation Projections. (6 sheets)

Treatability Group Name	Description[1]	Current Inventory (m^3)[2]	Generation Projection 2010 (m^3)[2]	Generation Projection 2011 (m^3)[2]	Generation Projection 2012 (m^3)[2]	Generation Projection 2013 (m^3)[2]	Generation Projection 2014 (m^3)[2]
MLLW-08 - Unique Waste	This treatability group is for waste that has very special waste processing for which no permitted treatment capability exists in the United States or the capability exists but the capacity is very limited/restricted. Currently, this treatability group contains one drum designated with the P015 listed waste code (beryllium powder), and MLLW that requires thermal treatment due to containing TSCA PCBs (e.g., transformer fluids/oils, sludge with PCB, aqueous waste with PCBs, etc). The primary WSRds that comprise this treatability group are BER, TSC, 300, 400, 505, and 84A. The waste is generated by many on-site generating organizations.	18	0	0	0	0	0
MLLW-09 -Radioactive Batteries	This treatability group is for waste that is, or contains, radioactively contaminated batteries that have a specific treatment requirements specified in 40 CFR 268.40 (i.e., D006 cadmium batteries, D008 lead-acid batteries, D009 mercury batteries, and D011 silver batteries). The primary WSRds that comprise this treatability group are BAT, 802 and 830). The waste is generated by many on-site generating organizations.	0.21	0	0	0	0	0
MLLW-10 - Reactive Metals	This treatability group is for waste that is water reactive (waste codes D003) including sodium metal, cyanides/sulfides, NAK, lithium, etc. The primary WSRds that comprise this treatability group are ENA, 820 and 822. The waste is generated by many on-site generating organizations.	24	0	0	0	0	0
PUREX Plant	Concrete rubble contaminated with trace chromium as a corrosion product. No additional waste will be stored at this location as the PUREX Plant is under long-term S&M.	1.0	0	0	0	0	0
PUREX Storage Tunnels	Varies from very large equipment vessels with lead counterweights to very fine mixed waste powder in canisters. Waste receipt into the TSD unit began in 1960. The TSD unit waste inventory list is contained in the Hanford Facility RCRA Permit, Attachment 28, Chapter 3.0, Waste Analysis Plan. Waste is expected to contain a combination of TRU and TRUM.	2,800	0	0	0	0	0
Purgewater	Groundwater contaminated with various constituents.	3,700	1,000	0	0	0	0
SST Waste	Basic aqueous slurry with layers of saltcake and/or sludge. Sludge is defined as solids (i.e., hydrous metal oxides) precipitated from the neutralization of acid waste. Saltcake is defined as the various salts formed from the evaporation of water.	110,000[4]	0	0	0	0	0

Table 2-1. Stored Volumes of Mixed Waste and Generation Projections. (6 sheets)

Treatability Group Name	Description[1]	Current Inventory (m^3)[2]	Generation Projection 2010 (m^3)[2]	Generation Projection 2011 (m^3)[2]	Generation Projection 2012 (m^3)[2]	Generation Projection 2013 (m^3)[2]	Generation Projection 2014 (m^3)[2]
TRUM- CH Small Container	The waste came from various facilities on and off the Hanford Site. The waste contains plastic/polyurethane, rubber, iron-based metal, soil, paper, cardboard, lead, rags, cement, stainless steel, wood, styrofoam, glass, absorbent/kitty litter, filters, lead shielding, carbon steel, fiberglass, brick/firebrick, plastic liner, shielding, concrete, animal waste, paints, ceramics, sludges, asbestos, aluminum, diatomaceous earth, resins, copper metal, lead, water, floor sweepings, batteries, leather, liquid, teflon, cork, cotton, light bulbs, urethane, and wax. Waste packages in this treatability group include containers that are 55 gallon drums or smaller containers even if overpacked in 85 gallon drums, and newly generated "Waste Isolation Pilot Plant" (WIPP) standard waste boxes. Drums in 10 drum overpacks are also counted as small containers based on the drum as the container, not the ten drum overpack. Note that some TRUM-CH small containers will be found to be TRUM-RH and need to be re-allocated to the TRUM-RH treatability group.	5,300	202	250	170	32	2.2
TRUM-CH Large Container	TRUM waste is from various generating activities around the Hanford Site. The waste contains metals including steel shielding, plastic/polyurethane, wood, paper/cardboard, glass, filters, soil, miscellaneous/unknown/other, rags, lead and lead shielding, plexiglas, styrofoam, asbestos, rubber, glass, sorbents/kitty litter, cement, and concrete. Package size includes any contact handled (CH) TRUM waste that is not in a small container (as described in "TRUM-CH Small Container").	7,500	0	0	0	0	0
TRUM-RH	The waste consists of inner container, iron-based metals, lead, soil, lead shielding, and steel shielding. Waste is from the clean-out of hot cells from research/development laboratories and demolition activities. The relative waste quantity is small, because the waste matrix contains a large percentage of lead and steel shielding materials. TRUM is considered RH if the waste container has a contact dose rate >200 mrem/hr. In addition, in order to provide an estimate of what might be RH, TRUM will be reported as RH if the package is known to contain lead, concrete, or steel shielding.	410	3.0	4.4	1.0	1.0	1.0

[1]WSRd indicates waste treatment and/or disposal pathway.
[2]Volume numbers have been rounded to two significant figures.
[3]The stored volume reported contains uncertainty as to the actual volume (DOE 2005).
[4]As a whole, the SST wastes are managed as RH HLW. However, the tank systems contain potential TRU mixed waste, pending a waste determination.

Table 2-2. Treatability Group Summary of Storage, Characterization, and Treatment Activities. (3 sheets)

Treatability Group Name	Current Inventory (m^3)[1]	Projected Generation Volume 2010 through 2014 (m^3)[1]	Planned Characterization Schedule	Treatment Process	Projected Volume to be Treated 2010 through 2014 (m^3)[1]
221-T Containment Building	58	0	Completed	Not yet determined	0
221-T Tank System	0.36	0	Will be done in conjunction with T Plant Complex Canyon disposition.	Not yet determined	0
222-S Laboratory Complex	0.96	45	Ongoing	222-S Laboratory Complex, Commercial - Stabilization, Commercial -Thermal	46
222-S T8 Tunnel	0.2	0	Will be done in conjunction with 222-S Laboratory building disposition.	Not yet determined	0
241-CX Tank System[2]	6.4	0	Characterization will be performed on waste in tank 72 on a schedule determined with 200-IS-1.	Not yet determined	0
324 Building REC Waste	5.0	0	Completed	Not yet determined	0
325 HWTU	3.4	45	Ongoing	HWTU, Commercial - Stabilization, Commercial - Thermal	48
400 Area WMU	1.5	0	Completed	Deactivation and conversion to sodium hydroxide, however adaptation is required.	0
B Plant Cell 4	1.4	0	To be determined via Tri-Party Agreement Action Plan, Section 8.0.	Not yet determined	0
B Plant Containment Building	290,000 kg	0	To be determined via Tri-Party Agreement Action Plan, Section 8.0.	Not yet determined	0

Table 2-2. Treatability Group Summary of Storage, Characterization, and Treatment Activities. (3 sheets)

Treatability Group Name	Current Inventory (m^3)[1]	Projected Generation Volume 2010 through 2014 (m^3)[1]	Planned Characterization Schedule	Treatment Process	Projected Volume to be Treated 2010 through 2014 (m^3)[1]
Cesium and Strontium Capsules	2.0	0	Completed	Not yet determined	0
DST Waste	98,000	190	Ongoing	WTP vitrification	0
ERDF—Treatment	0	53,000	Ongoing	ERDF treatment	53,000
HSTF	2.1	0	Completed	Not yet determined	0
LERF/ETF Liquid Waste	64,000	66,000	Ongoing	ETF	130,000
LERF/ETF Solid Waste	45	1200	Not required	No treatment required	No treatment required
MLLW-01 – LDR Compliant Waste	0.4	2.7	Completed	No treatment required	No treatment required
MLLW-02 - Inorganic Non-Debris	2.3	0	M-091-42[3]	Stabilization	2.3
MLLW-03 - Organic Non-Debris	0.83	0.28	M-091-42[3]	Thermal	1.1
MLLW-04 - Hazardous Debris	48	8.4	M-091-42[3]	Macroencapsulation	52
MLLW-05 – Radioactive Lead Solids	0.21	0	M-091-42[3]	Macroencapsulation	0.21
MLLW-06 – Mercury Wastes	0	0	M-091-42[3]	Amalgamation	0
MLLW-07 - RH and Large Container	120	0	M-091-43[3]	M-091-43	120
MLLW-08 - Unique Waste	18	0	M-091-42[3]	To be determined	18
MLLW-09 – Radioactive Batteries	0.21	0	M-091-42[3]	Macroencapsulation	0.21
MLLW-10 - Reactive Metals	24	0	M-091-42[3]	Deactivation with selected stablization	24
PUREX Plant	1.0	0	To be determined via Tri-Party Agreement Action Plan, Section 8.0.	Not yet determined	0

Table 2-2. Treatability Group Summary of Storage, Characterization, and Treatment Activities. (3 sheets)

Treatability Group Name	Current Inventory (m^3)[1]	Projected Generation Volume 2010 through 2014 (m^3)[1]	Planned Characterization Schedule	Treatment Process	Projected Volume to be Treated 2010 through 2014 (m^3)[1]
PUREX Storage Tunnel	2,800	0	To be determined in conjunction with the PUREX Plant per Tri-Party Agreement Action Plan, Section 8.0.	Not yet determined	0
Purgewater	3,700	1,000	According to schedule in closure plan.	Solar evaporation at Purgewater Storage and Treatment Facility (PSTF) and ETF treatment	4,700
SST Waste	110,000	0	Ongoing	WTP vitrification	0
TRUM-CH Small Container	5,300	650	M-091-42[3]	Waste Receiving and Processing Facility (WRAP) and/or T Plant Complex	TBD[3]
TRUM-CH Large Container	7,500	0	M-091-44[3]	M-091-01	TBD[3]
TRUM-RH	410	10	M-091-44[3]	M-091-01	TBD[3]

[1] Volume numbers in this table have been rounded to two significant figures. Due to rounding the summation of Table 2-1, numbers do not always add up to the numbers in this Table.
[2] The stored volume reported contains uncertainty as to the actual volume (DOE 2005)
[3] Characterization and Treatment will be performed in accordance with applicable M-091 milestones. See the M-091 milestones to determine what portion of the total volume requires treatment under those milestones.

Section 3.0

3.0 COMPLIANCE ASSESSMENTS OF MIXED WASTE AND POTENTIAL MIXED WASTE STORAGE AREAS

The DOE conducts/oversees assessments of mixed waste storage areas and other areas that could, in the future, be the source of generation of other mixed waste. DOE assessments include reviewing other independent assessments and inspections and contractor self-assessments. In addition, daily, weekly, monthly, quarterly, and annual contractor assessments and inspections are conducted at Hanford Site mixed waste storage areas in accordance with company policies, DOE requirements, permit conditions, and other LDR storage obligations. LDR storage assessments provide an additional level of review to address circumstances associated with mixed waste and potential mixed waste.

3.1 INTRODUCTION

Of the activities associated with assessments in CY 2009, no indicators requiring global actions for LDR reporting were identified.

3.2 ASSESSMENT SCHEDULES

In CY 2009, the U.S. Department of Energy, Richland Operations Office (DOE-RL) contractors finalized documentation for four assessments started in previous years (241-CX, 200 Area North and Railcar staging areas, 241-Z-361, 231-Z). The observations from these assessments are summarized in Table 3-1.

Table 3-1. Summary of the U.S. Department of Energy, Richland Operation Office Assessment Results. (2 sheets)

Assessment Location	LDR PMM[1]	Assessment Start Dates	Findings and Observations
241-CX	October 27, 2009	March 2005	The assessment report was finalized and entered in the Administrative Record at the October LDR Report Project Managers Meeting. There were no findings or observations.
200 Area North and Railcar staging areas	April 23, 2009	December 2005	The assessment report was finalized and entered in the Administrative Record at the April LDR Report Project Managers Meeting. There were no findings and two observations.[2,3]
241-Z-361	April 23, 2009	March 2006	The assessment report was finalized and entered in the Administrative Record at the April LDR Report Project Managers Meeting. There were no findings or observations.

Table 3-1. Summary of the U.S. Department of Energy, Richland Operation Office Assessment Results. (2 sheets)

Assessment Location	LDR PMM[1]	Assessment Start Dates	Findings and Observations
231-Z	April 23, 2009	March 2006	The assessment report was finalized and entered in the Administrative Record at the April LDR Report Project Managers Meeting. There was one observation.[4]

[1]Assessments are documented in the TPA Administrative Record as attachments to the Project Manager Meeting (PMM) Minutes. The date is the PMM at which Ecology accepted the completed assessment.
[2]Observation: Revise the PMW table to strengthen the fact that there is an uncertainty of PMW that may or may not be present in the storage room on the east side of 212-P Building and possibly the rest of the building.
[3]Observation: Update the PMW table for 212-R Building to clarify that there may be additional legacy equipment of unknown characterization beyond the box currently identified.
[4]Observation: Remove the reference to chemicals.

Table 3-2 lists the locations where DOE-RL plans to complete previously initiated assessments in CYs 2010 through 2011. DOE-RL does not have any new assessments scheduled.

Table 3-2. U.S. Department of Energy, Richland Operations Office Assessments for Calendar Years 2010 through 2011.

Facility/Location	Start Date	
Inactive miscellaneous underground storage tanks (IMUSTs) not associated with a building	June CY 2006	As of December 31, 2009 the draft assessment report was not finalized.
224-B	December CY 2006	As of December 31, 2009 the draft assessment report was not finalized.
242-B/BL	March CY 2007	As of December 31, 2009 the draft assessment report was not finalized.
270-W	June CY 2007	As of December 31, 2009 the draft assessment report was not finalized.

In CY 2009, the U.S. Department of Energy, Office of River Protection (DOE-ORP) conducted assessments; however no LDR assessments have been identified. LDR assessments will be completed in the future when the need arises.

Section 4.0

4.0 POTENTIAL STORAGE ISSUES

This section discusses issues pertaining to storage of mixed waste.

4.1 STORAGE CAPACITY

Storage capacity is addressed in Section 2.4 of the location-specific data sheets (Appendix B) and is summarized in the following sections.

4.1.1 Washington Closure Hanford, LLC (WCH)

WCH does not have any issues pertaining to storage capacity within the five-year forecast period and beyond.

4.1.2 Washington River Protection Solutions, LLC (WRPS)

Annually, in accordance with Tri-Party Agreement Milestone M-62-40, an evaluation is performed to determine available tank capacity and capacity needs for future years. This evaluation looks at waste receipts to the DST System for the past 12 months and makes projections based on trends that appear. A computer simulation of site operations (incoming waste projections and outgoing waste) is performed, which results in projections of tank fill schedules, tank transfers, evaporator operations, tank retrieval, and aging waste tank use. During this evaluation, the parties to the Tri-Party Agreement (Ecology, EPA, and DOE) determine whether new tanks need to be built. Current estimates indicate that the storage capacity of the DST System could be reached by 2018, depending on the sequence and rate of retrieval for waste currently stored in SSTs and on evaporator operations. In addition to the DST and the SST waste treatability groups, WRPS also manages the 222-S Laboratory Complex containing container storage areas and a long-term storage location. Based on projections to date, no additional storage capacity is anticipated for 222-S Laboratory Complex-derived wastes.

The DST system is designed to receive and safely store liquid wastes from the SST system and, to a lesser extent, wastes from other Hanford site facilities. The wastes received typically come from other storage locations and, as such, are not documented as newly generated waste in the context of this document. Similarly, wastes returned to the DST system from the 242-A Evaporator are not considered newly generated. Process condensate from the 242-A Evaporator is directed to LERF/ETF, and is documented on the 242-A Evaporator location specific data sheet under the LERF/ETF treatability group.

4.1.3 CH2M HILL Plateau Remediation Company (CHPRC)

CHPRC manages the long-term storage locations of mixed waste in the 200 Areas, except for the DST System, SST System, 242-A Evaporator, and the 222-S Laboratory Complex managed by WRPS, and the ERDF managed by WCH. CHPRC long-term storage areas include mixed waste at the T Plant Complex, B Plant Complex, the PUREX Storage Tunnels, the PUREX Plant, the CWC, the 600 Area PSTF, the 241-CX Tank System, and HSTF. The waste stored in the B Plant Complex and the PUREX Plant is with lead regulatory agency approval of the specific long-term S&M plans in accordance with Section 8.0 of the Tri-Party Agreement Action Plan. The S&M plans do not allow for storage of any additional waste in these TSD units. Other TSD

unit storage exists for units managed by the CHPRC, but these TSD units typically process and treat waste without the intent of long term storage.

CHPRC maintains a system for forecasting the amount of radioactive waste, including mixed waste, to be generated well into the future for management at CWC. This system is known as the Solid Waste Integrated Forecast Technical (SWIFT) Report. Input to this system is maintained in a database updated periodically by all waste generating units. Significant changes to the input must be reported. These changes are evaluated for impact on the storage facilities as required.

Based on the projections to date, information on active CHPRC-managed TSD units in this report indicates that no requirements for additional storage capacity exist within the five-year forecast period and beyond.

4.1.4 Pacific Northwest National Laboratory

PNNL uses the SWIFT reporting system to project storage requirements. Based on the projections to date, no requirements for additional storage capacity for PNNL-managed TSD units exist within the five-year forecast period and beyond.

4.2 ISSUES AND THEIR RESOLUTION

No storage issues were identified for CY 2009 reporting. Storage capacity issues identified and resolved in the future will be reported in the year following their resolution.

4.3 PLANNED VARIANCES OR EXEMPTIONS FOR STORAGE

Requests for variances and other exemptions related to storage are addressed in Section 2.10 of the location-specific data sheets (Appendix B). One site-specific LDR Variance Request was granted by Ecology in 2009 per WAC 173-303-140(2)(a) (Ecology 2009). This variance allows the DOE to encapsulate radioactive barium waste rather than conduct treatment to the LDR D005 barium standard prior to disposal in the Hanford Site Low-Level Burial Grounds (LLBG). Additional site-specific LDR variance requests are anticipated in the future. Variance requests are currently planned for waste in the MLLW-07, MLLW-08, and the HSTF Treatability Groups.

4.4 KEY STORAGE ASSUMPTIONS

Key assumptions related to storage, inventory, and generation information are addressed in Section 2.12 of the location-specific data sheets (Appendix B).

Section 5.0

5.0 WASTE RELEASES FROM STORAGE UNITS

Known releases from mixed waste storage units into the environment are subject to reporting in this report, whether or not the release was cleaned up. The only waste releases from storage to the environment have occurred from the SST System. Table 5-1 lists the names and locations of the SST farms and the number of tanks in each farm. No releases have been documented during this reporting period (CY 2009).

Table 5-1. Single-Shell Tank System.[1]

200 East Area		200 West Area	
Farm	**Number of Tanks**	**Farm**	**Number of Tanks**
A	6	S	12
AX	4	SX	15
B	16	T	16
BX	12	TX	18
BY	12	TY	6
C	16	U	16

[1] The capacity of the tanks ranges from 210 m^3 to 3,800 m^3.

These tanks contain waste that was placed into the system between 1944 and 1980. The waste was generated as a byproduct of processing spent nuclear fuel to recover plutonium, uranium, and neptunium, and consists of radioactive and chemically hazardous waste. Except for cooling water, nothing has been added to the SSTs since 1980. SST System Waste Management Areas (SST WMA) are being reassessed to develop better inventory estimates for chemicals and radionuclides lost to the vadose zone. At this time, the S/SX WMA, B/BY/BX WMA, and the T/TY/TX WMA, have been reassessed. The new assessments have shown that some of the released volumes may be less than reported in HNF-EP-0182, *Waste Tank Summary Report for the Month Ending December 31, 2004*, Revision 201.

This page intentionally left blank.

Section 6.0

6.0 HANFORD SITE MIXED WASTE MINIMIZATION PROGRAM DESCRIPTION

The *Hanford Site Pollution Prevention and Waste Minimization Program Plan* (DOE/RL-2004-57) provides guidance for Hanford Site contractors to prevent pollution from entering the environment; to conserve resources and energy; and to reduce the quantity and toxicity of hazardous, radioactive, mixed, and sanitary waste from all Hanford Site operations and cleanup activities. The program plan reflects the national and local waste minimization and pollution prevention goals and policies. The plan represents an ongoing effort to ensure Pollution Prevention/Waste Minimization (P2/WMin) is part of the Hanford Site operating philosophy and is included in contractor environmental management systems. In accordance with these policies, a hierarchical approach to environmental management has been adopted and is applied to all waste generating activities. Waste minimization through source reduction is the first priority in the Program Plan, followed by environmentally safe recycling. Treatment, which includes some segregation, to reduce the quantity, toxicity, and mobility of waste is considered only when source reduction or recycling/reuse is not possible or practical. The final option is environmentally safe disposal.

The program plan provides guidance to contractor generator groups for developing and maintaining documentation of P2/WMin program activities intended to demonstrate generator compliance with DOE requirements as well as applicable regulations.

The program plan includes the following required elements:

- Incorporation of P2/WMin into environmental management systems
- Establishing P2/WMin goals
- Performance measures
- P2/WMin methods
- Incorporation of P2/WMin into the work process
- Waste minimization assessments and evaluations
- Sustainable design
- Pollution prevention awareness programs
- Purchase of environmentally preferable products and services
- Pollution prevention outreach and public involvement
- Pollution prevention tracking systems
- Pollution prevention reporting.

The Hanford Site contractors implement these techniques individually in accordance with their internal waste minimization program. For further information for each waste, refer to location-specific data sheets (Appendix B).

This page intentionally left blank.

Section 7.0

7.0 CHARACTERIZATION AND TREATMENT PLAN INTRODUCTION

Sections 7.0 through 15.0 of the LDR report discuss characterization, treatment and disposal actions, and plans for managing mixed waste on the Hanford Site. Waste characterization and treatment activities on the Hanford Site continue to increase as waste management facilities are completed and funded to process and/or treat the waste. This chapter briefly describes the development process for the treatment plan contained in this report and identifies other documents that can be consulted for additional information concerning the Hanford Site and expected waste treatment activities. This report has been organized to be similar to the site treatment plans prepared by other DOE sites governed by the *Federal Facility Compliance Act* (FFCA) *of 1992* requirements.

7.1 SITE TREATMENT PLAN ACTIVITIES

The overall information needs and relationships for the report are shown in Figure 7-1. Initial activities include identifying waste streams and available and needed characterization data associated with the streams, and defining the regulatory treatment requirements. The treatment requirements define the treatment categories and technologies needed for each waste type. The physical, chemical, and radiological characteristics of the waste determine the treatability group in which the waste is included. Hanford Site TSD units and available commercial processes for treating the mixed waste also are identified along with their capabilities. Knowing the processes for the treatment capabilities and the treatment requirements for each treatability group, the treatability group can be assigned to either existing treatment capacity or to future processes. For the existing processes, Hanford Site schedules can be determined based on anticipated budgets and overall on-site needs. These schedules confirm the need for operations funding. For the future processes, the waste that requires further characterization determines the types of technology needs and, subsequently, the requirements and capabilities. The future processes will be scheduled and operated as budgets allow.

7.2 RELATIONSHIP TO OTHER MAJOR U.S. DEPARTMENT OF ENERGY AND HANFORD SITE ACTIVITIES AND DOCUMENTS

The characterization and treatment plan contained in this report is influenced by numerous Hanford Site activities. Some of the activities are identified in the following documents. Additional details can be obtained from the referenced documents concerning additional information on waste stream characterization and evaluation of alternatives, and identify the likely effects of managing the mixed waste on the Hanford Site. These documents include the following:

- *Hanford Federal Facility Agreement and Consent Order* (Ecology et al. 2007). This report is submitted pursuant to Tri-Party Agreement Milestone M-026-01T. The Tri-Party Agreement also contains many treatment and characterization milestones.

- *Disposal of Hanford Defense High-Level Transuranic and Tank Wastes Environmental Impact Statement* (DOE/EIS-0113). This 1987 EIS discussed mixed waste treatment and disposal options for the Hanford Site.

- *Final Environmental Impact Statement for the Tank Waste Remediation System* (DOE/EIS-0189). This environmental impact statement (EIS) and its associated record of decision (ROD) provide details on the alternative treatments for HLW.

- *Final Waste Management Programmatic Environmental Impact Statement for Managing Treatment, Storage, and Disposal of Radioactive and Hazardous Wastes* (DOE/EIS-0200-F). This EIS and its associated RODs provide the overall evaluation of treatment and disposal alternatives for all the DOE sites.

- *Hanford Site Solid (Radioactive and Hazardous) Waste Program Environmental Impact Statement* has been prepared (DOE/EIS-0286). The final EIS was issued in CY 2004 followed by the associated ROD (69 FR 39449, June 30, 2004). This document provides environmental and technical information concerning waste management activities at the Hanford Site including mixed waste treatment.

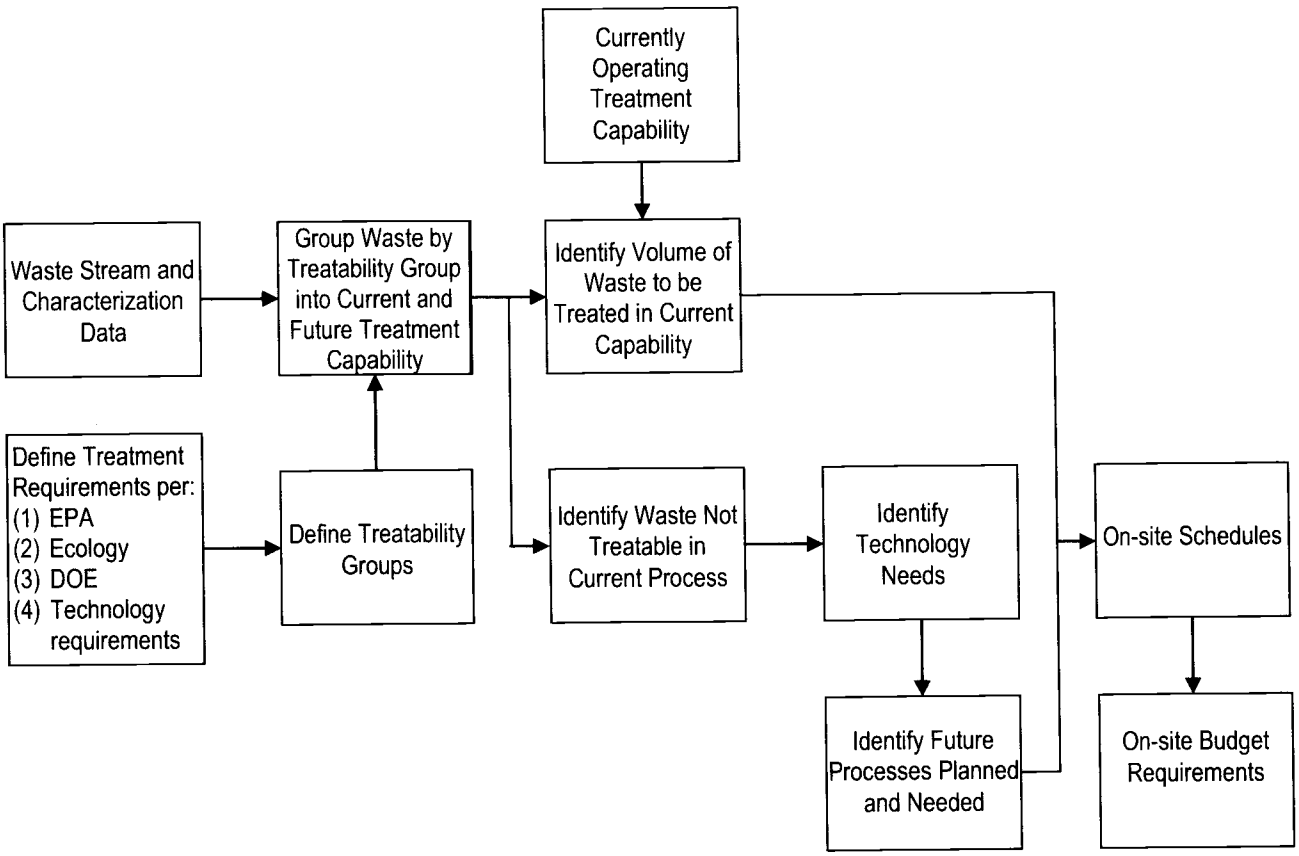
- *Washington v. Bodman* (Civil No. 2:03-cv-05018-AAM, January 6, 2006). The HSW EIS was challenged, resulting in a settlement agreement limiting some of the activities identified in the HSW EIS. The settlement agreement directed that pending finalization of the *Tank Closure and Waste Management Environmental Impact Statement* (TC&WM EIS), the HSW EIS will remain in effect to support ongoing waste management activities at Hanford (including off-site waste transportation such as TRU and TRUM shipments to WIPP), in combination with other applicable Hanford Site NEPA and CERCLA documents, permits and approvals; provided, that pending finalization of the TC&WM EIS, DOE will not rely on the groundwater analysis in the HSW EIS for decision-making. When completed, the TC&WM EIS will supersede the HSW EIS.

- *Draft Tank Closure and Waste Management Environmental Impact Statement for the Hanford Site, Richland, Washington* (DOE/EIS-0391, TC&WM EIS, October 2009). This draft EIS includes analyses of disposal of Hanford's waste and other DOE site's low-level waste and mixed low-level waste.

- *Solid Waste Integrated Forecast Technical (SWIFT) Report (HNF-EP-0918)*. This report provides the waste generation volume forecast.

- *Final Hanford Comprehensive Land-Use Plan Environmental Impact Statement* (DOE/EIS-0222-F). This EIS and its associated RODs identify areas on the Hanford Site used for managing and disposing of mixed waste. DOE issued an Amended Record of Decision (73 FR 55824; September 19, 2008) clarifying land use policies and procedures, maintaining current land use designations for waste management activities.

Figure 7-1. Outline of Activities to Complete Treatment Plan.



This page intentionally left blank.

Section 8.0

8.0 WASTE STREAMS AND TREATABILITY GROUPS

Each waste treatability group is or will be assigned to a specific treatment process. These assignments are based on the treatment and/or characterization requirements of the treatability group and the treatment process capability. For a discussion on the organization of treatability groups, refer to Appendix B. Figures 8-1, 8-2, and 8-3 summarize the layout of the treatability groups and identify where each group is expected to be treated. The upper levels of the chart show the waste type (e.g., MLLW) and whether or not the treatment capacity exists. The information is presented first for existing processes, then for planned processes, and finally for treatability groups for which further characterization is required to determine the treatment process or for which a treatment technology has not been selected.

The figures also indicate the characterization needs for the waste. Waste to be treated under existing processes typically is characterized sufficiently to designate the waste and to ensure that the waste is categorized correctly and safely stored. Any further characterization of this waste that must be done is planned as part of the treatment preparation. Waste to be treated under planned processes and processes not yet defined is characterized sufficiently to know the designation and is safely stored. Treatment is not planned for waste requiring processes not yet defined; however, additional characterization might occur as part of the design and development of the proposed treatment units.

The schedule and means for reporting waste characterization data are outlined in Section 9.6 of the Tri-Party Agreement Action Plan. This section states that DOE will make available to Ecology and the EPA all relevant electronic data and databases.

Figure 8-1. Correlation Between Mixed Low-Level Wastes and Treatment Facilities.

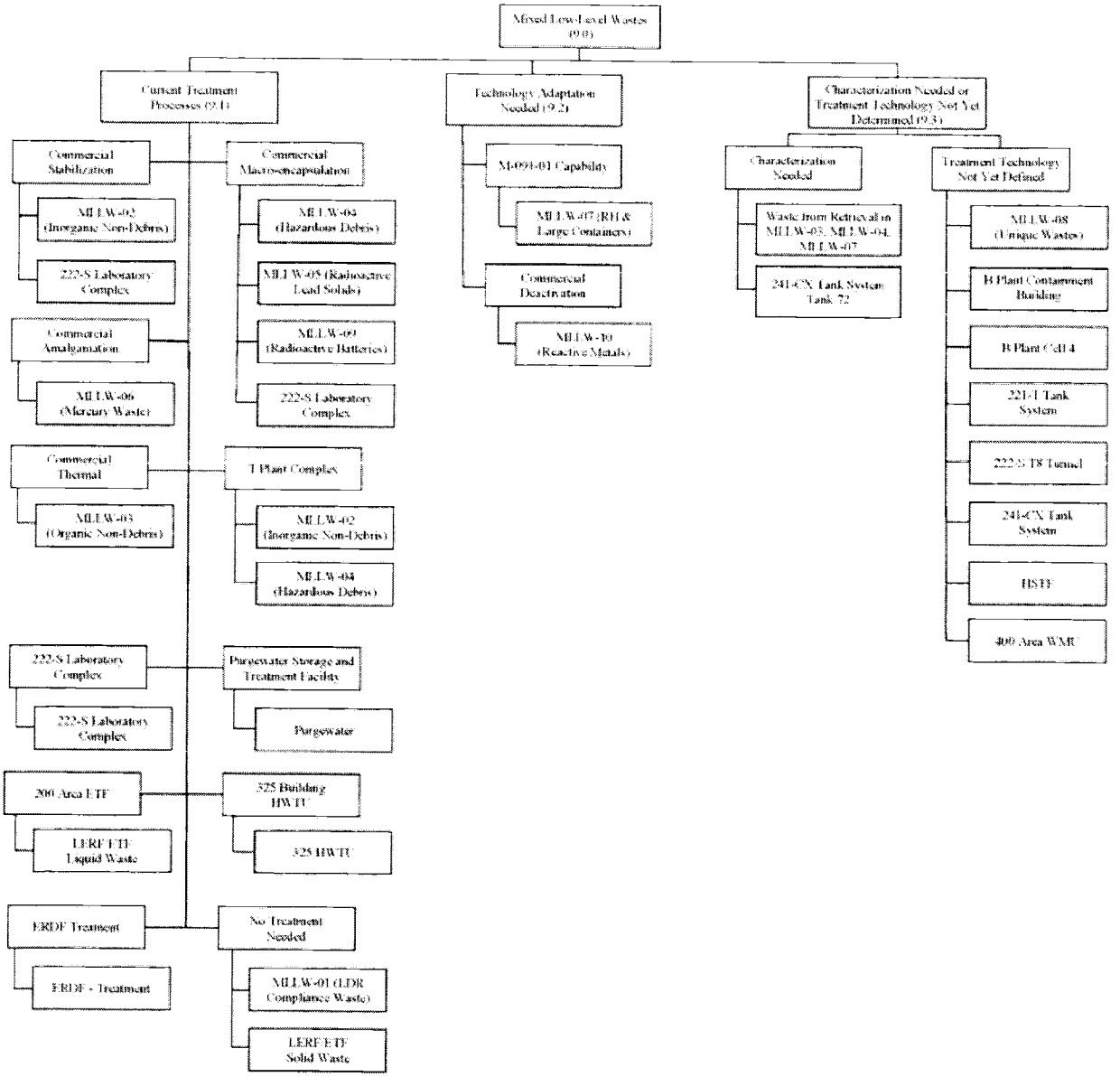


Figure 8-2. Correlation Between Transuranic Wastes and Treatment Facilities.

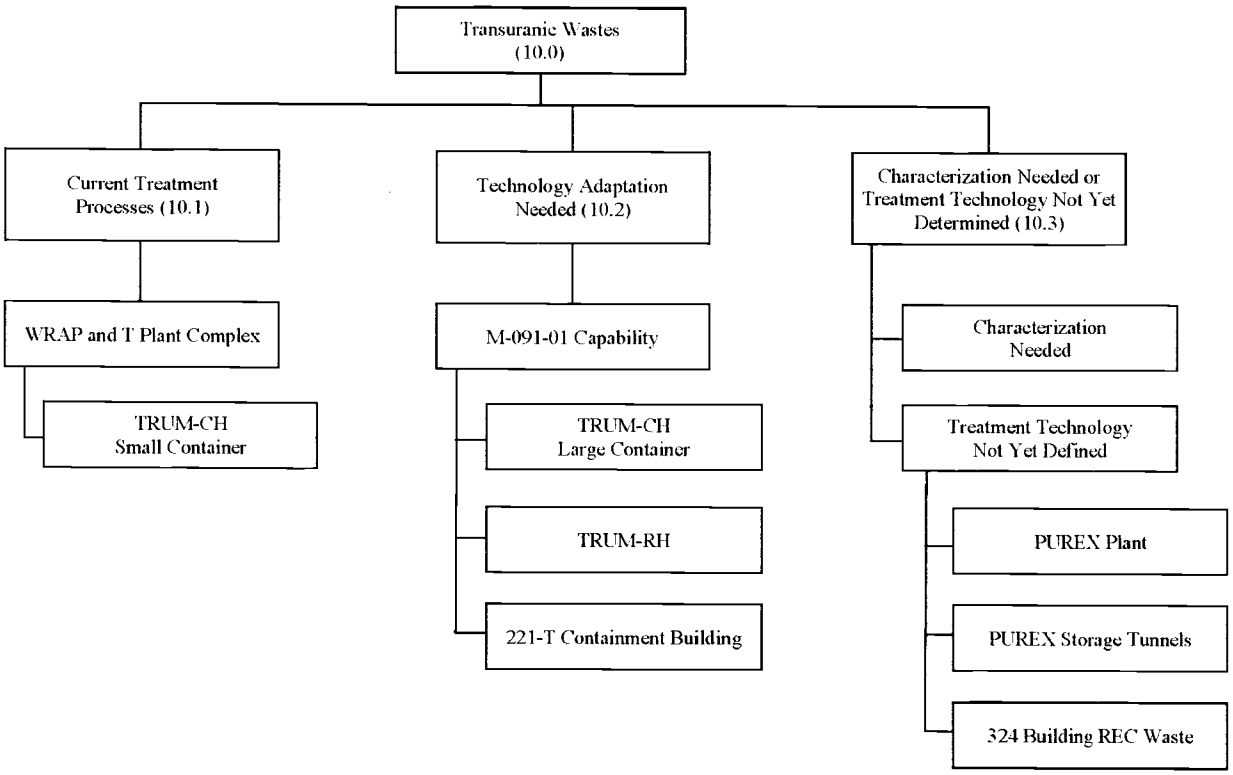
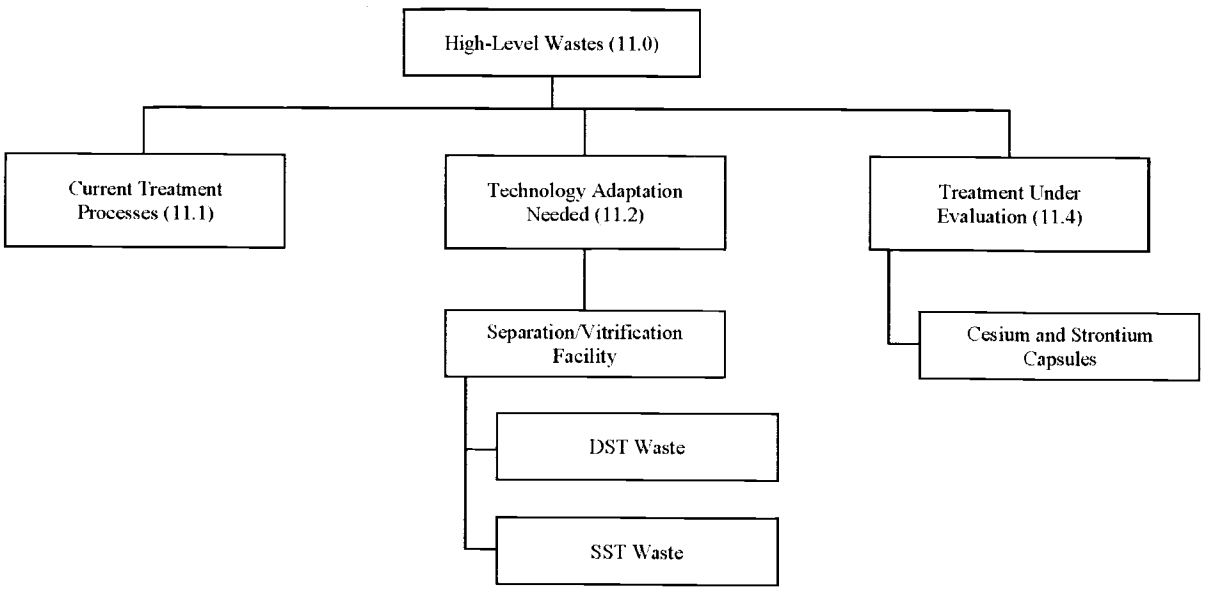


Figure 8-3. Correlation Between High-Level Wastes and Treatment Facilities.



This page intentionally left blank.

Section 9.0

9.0 MIXED LOW-LEVEL WASTE STREAMS

Disposition maps shown in Figures 9-1 and 9-2 present an overview of the planned treatment and disposal of MLLW streams. Figure 9-1 shows the major waste treatability groups and the associated treatment processes (Section 9.1) with existing capabilities. Figure 9-2 shows a flowsheet for the treatability groups contained in the adaptation-needed category (Section 9.2). Because the treatment plan for the remaining MLLW treatability groups is not well developed, a flowsheet for these groups is not included. As noted in Figure 9-1, some treatability groups (MLLW-02, -04) could be treated under more than one process. These treatability groups also are shown in multiple locations in Figure 8-1.

Figure 9-1. Disposition Map for Mixed Low-Level Waste Current Treatment Processes.

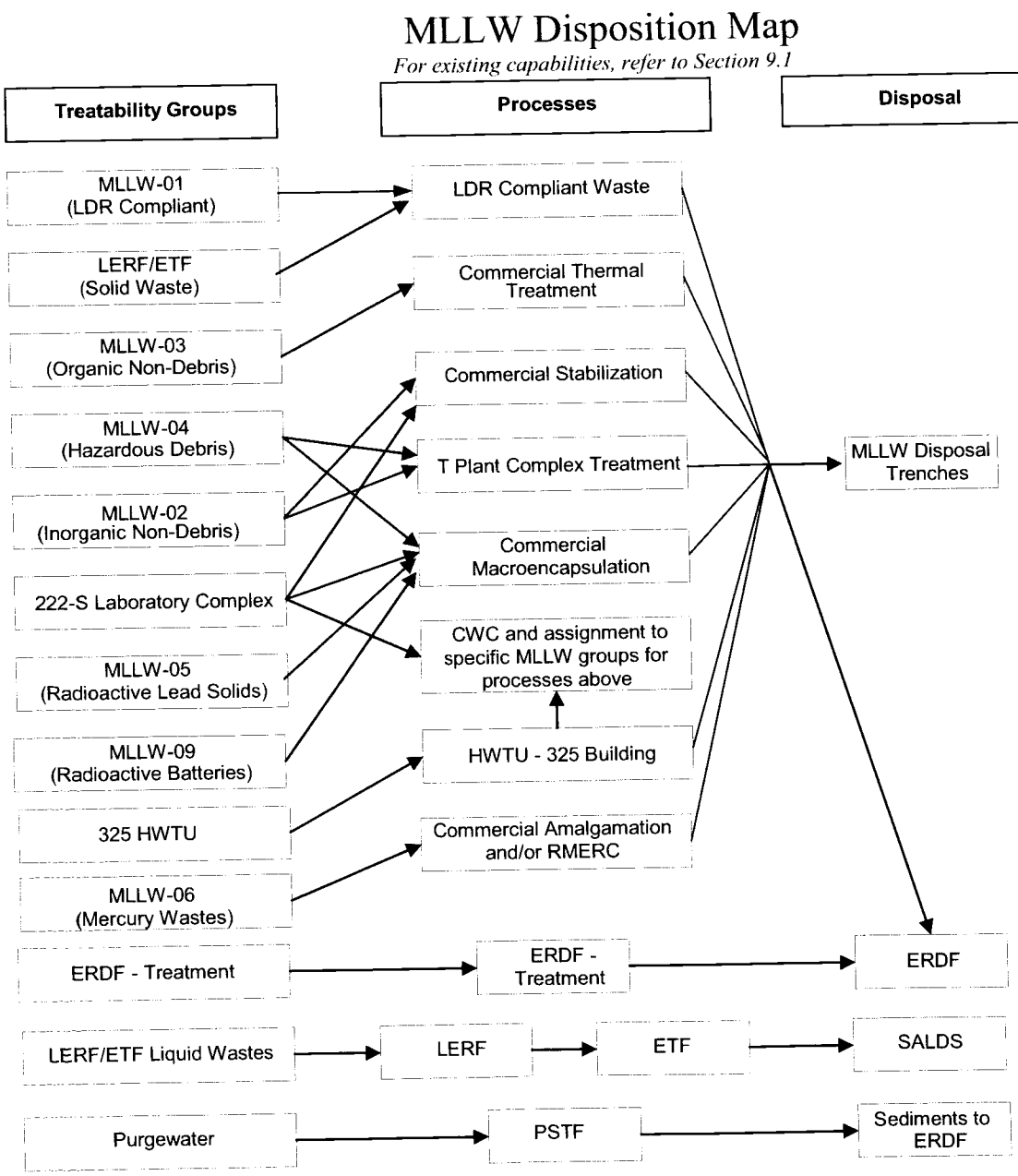
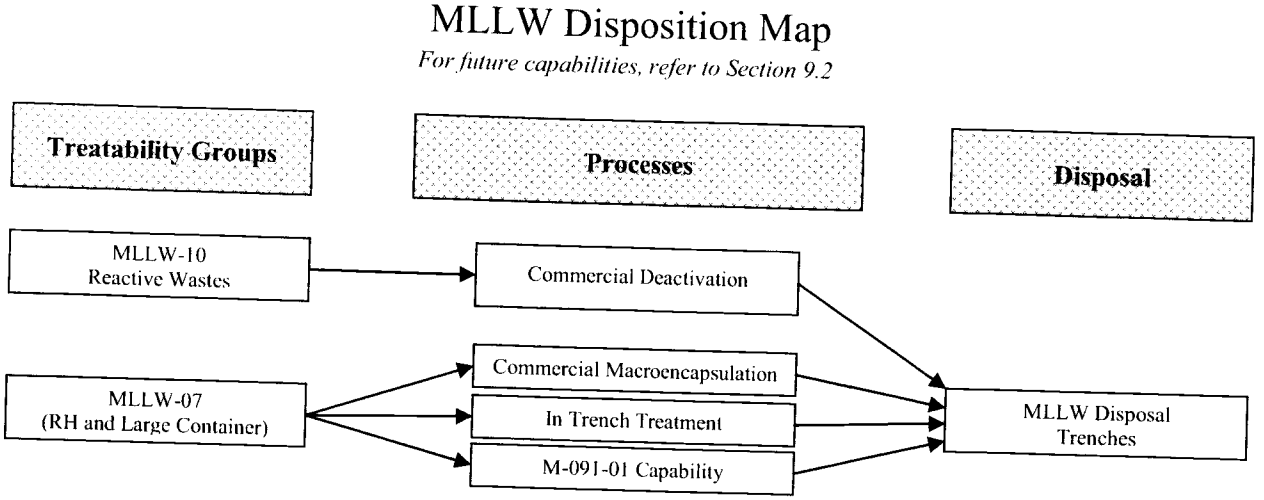


Figure 9-2. Disposition Map for Treatability Groups Needing Facilities Adapted to Allow Waste Treatment.



9.1 MIXED WASTE STREAMS FOR WHICH TREATMENT TECHNOLOGY EXISTS

This section generally describes each treatment process and provides information concerning the processes identified in Figure 9-1. This section also provides information on which waste treatability groups will be treated by each process, including the volume of waste treated during the past year and the anticipated volume of waste to be treated in CYs 2010 through 2014.

Tables in this section describe treatment processes related to M-091 milestones. Waste streams addressed in the M-091 milestones include: MLLW-02, MLLW-03, MLLW-04, MLLW-05, MLLW-06, MLLW-07, MLLW-08, MLLW-09, and MLLW-10.

The planning baseline indicates that sufficient capacity exists or will exist, to treat this volume of MLLW using the identified treatment process and alternatives: commercial stabilization, commercial thermal treatment, T Plant Complex, Broad Spectrum contracts, etc. However, the exact distribution of treatment among these treatment processes has not been finalized. This allows the Hanford Site to optimize the use of funds (minimize unit costs), to react to changing conditions and capabilities of the treatment processes, and to use emerging national treatment contracts.

Through the use of multiple commercial treatment contracts, DOE waste generators have the opportunity to participate in this nationwide privatization initiative for treating and disposing of legacy and newly generated MLLW. Contracts have been awarded to Perma-Fix Northwest, Materials and Energy Corporation located in Tennessee, Perma-Fix DSSI located in Tennessee, and EnergySolutions Clive Site located in Utah. These contracts give the Hanford Site multiple options with unique capabilities for treating a wide range of MLLW streams.

9.1.1 Commercial Stabilization

MLLW that does not have a significant organic content and is not debris waste is expected to be stabilized. The stabilization process will be conducted in RCRA permitted commercial facilities. Waste currently in storage has been characterized sufficiently for proper designation and storage on the Hanford Site. Before waste treatment, the TSD record information will be reviewed and corrected as necessary by qualified Waste Management Representatives based on available historical records and acceptable knowledge.

Stabilization is a treatment technology for non-debris waste that contains heavy metals or other specific hazardous components. Most non-debris waste will be solid, but stabilization could be used to neutralize and solidify some liquid wastes. Stabilization immobilizes the hazardous component(s) by fixation into low-solubility materials, and by encapsulation to reduce the potential for future releases. Usually, stabilization is accomplished by mixing the waste with Portland cement or pozzolanic materials at a preselected ratio, but stabilization also can include mixing with reducing agents or polymer materials. This treatment prepares the waste to meet land disposal requirements. Existing commercial treatment contracts neither include all of the waste types nor all of the forecasted volumes. Therefore, additional contracts are expected to be placed with commercial treatment contractors. Table 9-1 contains information on the commercial stabilization process, using Perma-Fix Northwest as a representative example for regulatory status information.

Table 9-1. Commercial Stabilization Process Summary. (2 sheets)

Type of Information	Information
Treatability group that the process is expected to treat	MLLW-02, Inorganic Non-Debris, 222-S Laboratory Complex
Tri-Party Agreement milestones related to this treatability group	M-091-42
Projected volume of MLLW to be treated between CY 2010 and the end of CY 2014	Treatment will be performed in accordance with M-091 milestones.
Treatment capacity	Sufficient capacity exists to treat this volume of MLLW using the identified treatment processes and alternatives (commercial stabilization, T Plant Complex.)
Perma-Fix regulatory status information:	
- Date of RCRA permit	1999
- Date treatment contract established	1995
- Date facility construction started	1999
- Date system testing started	1999
- Date operations begin	1999
- Current regulatory status	Permitted, some operations temporarily suspended.
Budget status for continued operations	Funding has been requested in the Fiscal Year (FY) 2010 budget and currently is planned to

Table 9-1. Commercial Stabilization Process Summary. (2 sheets)

Type of Information	Information
	be requested through FY 2014.
Planned completion of treatment using this process	The baseline plan anticipates that the majority of this treatability group will be processed using commercial facilities. Stored inventories are expected to decrease with anticipated processing rates. Because waste generation is expected to continue through the life of Hanford Site cleanup operations, continued treatment will be needed into the foreseeable future.
Alternative facilities that could be used in place of this facility or to supplement capacity for this facility	The T Plant Complex has stabilization capability and could be used to supplement commercial capacity.

9.1.2 Commercial Macroencapsulation

Macroencapsulation consists of applying a surface coating of polymeric organics or using a jacket of inert inorganic materials (e.g., cement) to substantially reduce surface exposure to potential leaching media. During CY 2009, waste was treated under commercial contracts near the Hanford Site. Existing contracts do not include all of the waste streams. Therefore, it is expected that some waste will be treated on the Hanford Site, or that additional commercial contracts will be competitively awarded as required. For macroencapsulation of hazardous debris under treatability group MLLW-04, pretreatment processes can include sorting, cutting, shearing, compaction, and supercompaction. For MLLW-05, Radioactive Lead Solids, decontaminated lead can be recycled or reused. Lead waste can also be encapsulated by a cement jacket in accordance with the definition of MACRO in 40 CFR 268.42. For MLLW-09, Radioactive Batteries, the EPA promulgated a new treatment standard authorizing treatment in accordance with the debris macroencapsulation standards per 40 CFR 268.45. Ecology has also adopted this treatment standard. Table 9-2 contains information concerning the commercial macroencapsulation process.

Macroencapsulation currently is being used to treat hazardous debris containing organic/carbonaceous (O/C) constituents that would otherwise require thermal treatment in accordance with the state-only LDR for O/C. The Hanford Site is allowed to treat, and will continue to treat, the MLLW-04 Hazardous debris using macroencapsulation in accordance with a site-wide 1,609 kilometers (1,000-mile) inapplicability certification for the Washington State O/C LDR per WAC 173-303-140(4)(d)(iii).

Other immobilization treatment technologies could be used to treat some of the Hanford Site MLLW debris.

Table 9-2. Commercial Macroencapsulation Process Summary.

Type of Information	Information
Treatability groups that the process is expected to treat	MLLW-04 Hazardous Debris; MLLW-05, Radioactive Lead Solids; and MLLW-09, Radioactive Batteries, 222-S Laboratory Complex
Tri-Party Agreement milestones related to these treatability groups	M-091-42
Projected volume of MLLW to be treated between CY 2010 and the end of CY 2014	Treatment will be performed in accordance with M-091 milestones.
Treatment capacity	Sufficient capacity exists to treat this volume of MLLW using the identified treatment processes and alternatives (commercial stabilization, commercial thermal treatment, T Plant Complex, Broad Spectrum contracts, etc.).
Perma-Fix regulatory status information:	
- Date of RCRA permit	1999
- Date treatment contract established	1995
- Date facility construction started	1999
- Date system testing started	1999
- Date operations begin	1999
- Current regulatory status	Permitted
Budget status for continued operations	Funding has been requested in the FY 2010 budget and currently is planned to be requested through FY 2014.
Planned completion of treatment using this facility	The baseline plan anticipates that the majority of these treatability groups will be processed using commercial treatment. Stored inventories are expected to decrease with anticipated processing rates. Because waste generation is expected to continue through the life of the Hanford Site cleanup operations, continued treatment will be needed into the foreseeable future.
Alternative facilities that could be used in place of this facility or to supplement capacity for this facility	The T Plant Complex has macroencapsulation capability and could be used to supplement commercial facilities. Other commercial facilities also could be used in the future.

9.1.3 Thermal Treatment of Organics

MLLW containing organic materials will be treated thermally. The material could be debris waste, other solid waste, or liquid waste. Waste currently is properly characterized and designated for storage on the Hanford Site. Before waste treatment, the existing TSD record information will be reviewed and corrected as necessary by qualified Waste Management Representatives based on available historical records and acceptable knowledge. The thermal treatment process destroys organic materials by oxidation, combustion, and/or pyrolysis.

Additional commercial processing contracts will be competitively awarded as needed. Table 9-3 contains information concerning the commercial thermal treatment process.

Table 9-3. Commercial Thermal Treatment Process Summary.

Type of Information	Information
Treatability groups the process is expected to treat	MLLW-03, Organic Non-Debris
Tri-Party Agreement milestones related to this treatability group	M-091-42
Projected volume of MLLW to be treated between CY 2010 and the end of CY 2014	Treatment will be performed in accordance with M-091 milestones.
Treatment capacity	Sufficient capacity exists to treat this volume of MLLW using the identified treatment processes and alternatives (commercial thermal treatment).
Budget status for continued operations	Funding has been requested in the FY 2010 budget and currently is planned to be requested through the FY 2014 as necessary.
Planned completion of treatment using commercial facilities	The baseline plan anticipates that the majority of this treatability group will be processed with commercial contracts because other DOE thermal treatment capability is not available. Stored inventories are expected to decrease with anticipated processing rates. Because waste generation is expected to continue through the life of Hanford Site cleanup operations, continued treatment will be needed into the foreseeable future.
Alternative facilities that could be used in place of this facility or to supplement capacity for this facility	None are currently identified.

9.1.4 T Plant Complex

Commercial treatment of waste by stabilization and macroencapsulation to meet land disposal requirements could be supplemented or replaced by capabilities that exist within the T Plant Complex. The T Plant Complex canyon has been used to open, inspect, segregate, and repackage mixed waste. The 2706-T Building within the T Plant Complex is a decontamination area with the capability to open, sample, sort, treat, and repackage boxes and drums of CH mixed waste. Some of the waste will be inspected in the 2706-T Building prior to off-site shipment for treatment at commercial treatment facilities. Also at the 2706-T Building, some treated waste will be inspected after return shipment from the off-site commercial treatment facilities. Table 9-4 contains information on the T Plant Complex.

Table 9-4. T Plant Complex Treatment Activities Summary.

Type of Information	Information
Treatability groups that the process is expected to treat	MLLW-02, Inorganic Non-Debris, and MLLW-04 Hazardous Debris
Tri-Party Agreement milestones related to these treatability groups	M-091-42
Projected volume of MLLW to be treated between CY 2010 and the end of CY 2014	Treatment will be performed in accordance with M-091 milestones.
Treatment capacity	Sufficient capacity exists.
Regulatory status information:	
- Date of RCRA permit application	T Plant Complex submitted in 2002 to Ecology
- Date treatment contract established	Not applicable (N/A)
- Date facility construction started	1943
- Date system testing started	N/A
- Date operations begin	Mixed waste operations under interim status, Part A Permit Application, began 8/19/87.
- Current regulatory status	Operating under interim status to a current Part A Permit Application.
Budget status for continued operations	Funding has been requested in the FY 2010 budget and currently is planned to be requested through FY 2014 as necessary.
Planned completion of treatment using this facility	The baseline plan anticipates that the majority of this treatability group will be processed using commercial treatment; however, significant treatment activities have occurred and could occur at T Plant Complex. Stored inventories are expected to decrease with anticipated processing rates. Because waste generation is expected to continue through the life of the Hanford Site cleanup operations, continued treatment will be needed into the foreseeable future.
Alternative facilities that could be used in place of this facility or to supplement capacity for this facility	The primary treatment processes are expected to be the commercial treatment facilities described in Sections 9.1.1 and 9.1.2.

9.1.5 Environmental Restoration Disposal Facility Treatment

Waste amenable for treatment through grouting or macroencapsulation is performed within the disposal cells. Specific information on the ERDF treatment activities is included in Table 9-5.

Table 9-5. Environmental Restoration Disposal Facility Treatment Activities Summary.

Type of Information	Information
Treatability groups that the process is expected to treat	ERDF – Treatment, MLLW-02, MLLW-04
Tri-Party Agreement milestones related to this treatability group	None. Treated as generated in compliance with regulatory timeframe; no compliance agreement required.
Projected volume of MLLW to be treated between CY 2010 and the end of CY 2014	53,054 m^3
Treatment capacity	N/A
Regulatory status information:	
- Date of RCRA permit application	N/A
- Date facility construction started	N/A
- Date operations begin	1996
- Current regulatory status	Facility is operating under a CERCLA ROD issued in 1995, as amended several times.
Budget status for continued operations	Funding is included as part of the River Corridor Closure Project.
Planned completion of treatment using this facility	2035
Alternative facilities that could be used in place of this facility or to supplement capacity for this facility	Commercial macroencapsulation or other commercial treatment methods could be used for some waste at significantly increased costs.

9.1.6 200 Area Effluent Treatment Facility and Liquid Effluent Retention Facility Liquid Wastes and Purgewater

Numerous Hanford Site activities generate low-level aqueous waste. Radioactive effluents are generated primarily in the 200 Areas. The LERF consists of three RCRA-compliant surface impoundments for storing low-level aqueous waste. The LERF provides equalization of the flow and pH of the feed to the ETF. Each LERF basin has a capacity of 30 million L (7.8 million gal). A truck unloading station allows receipt of liquid effluents from other projects for transfer either to the LERF for storage or directly to the ETF for treatment.

Liquid effluents stored in LERF are treated in ETF to remove toxic metals, radionuclides, and ammonia, and to destroy organics. The ETF treatment process constitutes BDAT and includes pH adjustment, filtration, ultraviolet light/peroxide destruction of organics, reverse osmosis, degasification, and ion exchange. Storage tanks allow for hold-up of the treated effluent to verify that the waste has been treated to meet concentration levels in the permit before discharge. The treated effluent is discharged under a WAC 173-216 State Waste Discharge Permit to a state-approved land disposal site (SALDS) north of the 200 West Area after being delisted (40 Code of Federal Regulations [CFR] 261, Appendix IX, Table 2). Table 9-6 contains information on ETF.

Currently, aqueous waste (Purgewater treatability group) from wells is received at the 600 Area PSTF and is treated via solar evaporation. The aqueous waste is from activities such as well sampling, well maintenance, and well drilling. For this report, the purgewater forecast is limited to 2010 based on the anticipated closure of PSTF Unit #1.

Table 9-6. 200 Area Effluent Treatment Facility Summary.

Type of Information	Information
Treatability Groups that the process is expected to treat	LERF/ETF Liquid Waste
Tri-Party Agreement milestones related to this treatability group	M-026-07C, Submit Development Status of Tritium Treatment Technology, 3/31/2014
Projected volume of MLLW to be treated between CY 2010 and the end of CY 2014	ETF will process up to 130,000 m^3 of effluent from various generating units. The exact volume of effluent processed depends on the actual volumes transferred to the LERF/ETF.
Treatment capacity	210,000 m^3/yr
Regulatory status information:	
- Date of RCRA permit	1997 (final status)
- Date facility construction started	1992
- Date system testing started	1994
- Date operations begin	1995
- Current regulatory status	Operating under a final status RCRA permit.
Budget status for continued operations	Funded for minimum safe operations.
Planned completion of treatment using this facility	2032
Alternative facilities that could be used in place of this facility or to supplement capacity for this facility	None

9.1.7 325 Hazardous Waste Treatment Units

The 325 HWTUs are a RCRA permitted TSD unit used to perform tank- and bench-scale treatment of mixed waste and to investigate other treatment technologies. The 325 HWTUs are located in the 325 Building in the 300 Area and are intended to treat small volumes of mixed waste to meet waste acceptance criteria for storage or disposal. Wastes that are not LDR compliant for disposal are shipped off-site for treatment. Wastes that meet land disposal requirements are sent to the LLBG or ERDF. Table 9-7 contains information on the 325 HWTUs.

Table 9-7. 325 Hazardous Waste Treatment Units Summary.

Type of Information	Information
Treatability groups that the process is expected to treat	325 HWTU
Tri-Party Agreement milestones related to this treatability group	M-094-00
Projected volume of MLLW to be treated between CY 2010 and the end of CY 2014	48 m^3
Treatment capacity	14 m^3/day
Regulatory status information:	
- Date of RCRA permit (final status)	1998
- Date facility construction started	1952
- Date system testing started	1991
- Date operations begin	1991
- Current regulatory status	Final permit
Budget status for continued operations	Funding has been included in the current eight-year plan.
Planned completion of treatment using this facility	2028
Alternative facilities that could be used in place of this facility or to supplement capacity for this facility	Commercial treatment facilities could have capacity to treat some of the waste streams.

9.1.8 222-S Laboratory Complex

The 222-S Laboratory Complex is a RCRA permitted TSD unit used to manage waste generated from 222-S Laboratory Complex operations and other Tank Operations Contractor wastes that cannot be sent off-site for treatment within the 90-day accumulation time frame. The storage locations reported in this treatability group include the three container storage units identified on the 222-S Laboratory Complex Part A Permit Application. The 222-S Laboratory Complex is located in the 200 West Area. Waste that is not LDR compliant for disposal is sent off-site for treatment. Waste that meets disposal requirements is sent to the LLBG. Table 9-8 contains information on the 222-S Laboratory Complex.

Table 9-8. 222-S Laboratory Complex Summary. (2 sheets)

Type Of Information	Information
Treatability groups that the process is expected to treat	222-S Laboratory Complex
Tri-Party Agreement milestones related to this treatability group	None
Projected volume of MLLW to be treated between CY 2010 and the end of CY 2014	46 m^3

Table 9-8. 222-S Laboratory Complex Summary. (2 sheets)

Type Of Information	Information
Treatment capacity	None at the 222-S Laboratory Complex.
Regulatory status information:	
- Date of RCRA permit application	August 2000, October 2000, and March 2001
- Date facility construction started	1950
- Date system testing started	1951
- Date operations begin	1951
- Current regulatory status	Interim status
Budget status for continued operations	Funding has been included in the current eight-year plan.
Planned completion of treatment of waste from this facility.	2035
Alternative facilities that could be used in place of this facility or to supplement capacity for this facility	Commercial treatment facilities will have capacity to treat the waste streams.

9.1.9 Commercial Amalgamation and/or RMERC

MLLW-06 Mercury waste requires amalgamation as the BDAT treatment. Mercury can be present as a small-percentage waste component, but also can be present in high concentrations. Mercury present in concentrations >260 mg/kg requires retorting or roasting to recover mercury (RMERC). The Hanford Site inventory of mercury-bearing waste is currently zero. Commercial capabilities are available when the wastes are generated. Table 9-9 contains information on commercial amalgamation.

Table 9-9. Commercial Amalgamation Summary. (2 sheets)

Type of Information	Information
Treatability group that the process is expected to treat	MLLW-06, Elemental Mercury
Tri-Party Agreement milestones related to this treatability group	M-091-42
Technology needed for facility	Commercial amalgamation (also might require RMERC technology)
Projected volume of MLLW to be treated between CY 2010 and the end of CY 2014	Treatment will be performed in accordance with M-091 milestones.
Treatment capacity	Treatment capacity to support the Hanford Site needs is expected to be <10 m^3 per year. The current inventory is zero.

Table 9-9. Commercial Amalgamation Summary. (2 sheets)

Type of Information	Information
Regulatory status information:	
- Design reports	N/A
- Submittal of permit application	N/A
- Date design and construction contract to be awarded	N/A
- Date facility construction begins	N/A
- Date operations begin	2005
- Current regulatory status	N/A
Budget status for design, construction, and operations	Baseline budgets assume commercial treatment will continue.
Estimated date of completion of treatment with the assumption of available funding.	N/A
Alternatives for treatment of this waste	Alternatives are under evaluation. An LDR treatability variance is planned for some waste in this treatability group.

9.1.10 Waste That Currently Meets Disposal Requirements

Some mixed wastes do not require treatment to meet LDR requirements prior to disposal. Based on an agreement with Ecology on February 6, 2003, waste that is directly disposed is excluded from the LDR report. The largest volume of mixed waste that meets disposal requirements is generated by the environmental restoration activities conducted under CERCLA that is transferred directly to ERDF for disposal. The MLLW-01, LDR Compliant and LERF/ETF Solid Waste treatability groups include wastes that do not require treatment to meet LDR standards prior to disposal. Most of these wastes will be disposed in the LLBG or ERDF, depending on waste acceptance criteria. While MLLW-01, LDR Compliant Waste does not require treatment, it is stored at the CWC. Most of the MLLW-01 waste stream will be disposed of in the LLBG and ERDF. However, a fraction of the waste in the MLLW-01 treatability group does not meet DOE requirements for direct disposal, and will be processed to meet disposal requirements (e.g., filling of voids). LERF/ETF solid waste is stored at ETF and wastes not meeting all disposal requirements are stored until processed to meet disposal requirements. Section 9.5 summarizes the information for the ERDF and LLBG capabilities.

9.2 MIXED WASTE STREAMS FOR WHICH TECHNOLOGY EXISTS BUT NEEDS ADAPTATION

As discussed in the following sections, processing is required for the RH waste and large container waste currently on the Hanford Site and waste expected to be generated in the future.

9.2.1 M-091-01 Capability

Current capabilities cannot provide for the disposition of RH MLLW and large-container CH MLLW. Alternative approaches are currently planned for evaluation based on the Tri-Party

Agreement negotiations that began in September 2009 under milestone M-091-45. Based on Tri-Party Agreement change notice M-91-08-05 signed August 11, 2009, the due date for providing the capability described in M-091-01 was updated to "to be determined per M-091-45." Progress towards evaluating and/or establishing the capability has been reported under the project management plan required by M-091-03. Table 9-10 contains information on the M-091-01 Capability for MLLW.

Table 9-10. Summary of the M-091-01 Capability.

Type of Information	Information
Treatability groups that the process is expected to treat	MLLW-07, RH and Large Container
Tri-Party Agreement milestones related to this treatability group	M-091-43, M-091-01, and M-091-45
Technology needed	Technology needs for processing this waste are planned for evaluation following completion of TPA negotiations.
Projected volume of MLLW to be treated between CY 2010 and the end of CY 2014	Treatment will be performed in accordance with M-091 milestones.
Treatment capacity	To be determined based on design reports.
Regulatory status information:	
- Design reports	To be determined following TPA negotiations.
- Submittal of RCRA permit application	To be determined during design, as applicable.
- Date operations begin	N/A
- Current regulatory status	N/A
Budget status for design, construction, and operations	Funding will be requested to support the M-091 milestones resulting from the current negotiations.
Alternatives for treating this waste	Under evaluation

9.2.2 Commercial Reactive Metal Deactivation

Waste in the MLLW-10 treatability group, Reactive Metals, requires deactivation prior to land disposal. Currently, commercial treatment capacity is too limited to deactivate the remaining MLLW-10 in storage in accordance with the M-091 milestone schedules. Table 9-11 contains information on commercial reactive metal deactivation.

Table 9-11. Commercial Reactive Metal Deactivation Summary. (2 sheets)

Type of Information	Information
Treatability group that the process is expected to treat	MLLW-10, Reactive Metals
Tri-Party Agreement milestones related to this treatability group	M-091-42
Technology needed for facility	Commercial deactivation

Table 9-11. Commercial Reactive Metal Deactivation Summary. (2 sheets)

Type of Information	Information
Projected volume of MLLW to be treated between CY 2010 and the end of CY 2014	Treatment will be performed in accordance with M-091 milestones.
Treatment capacity	Treatment capacity to support the Hanford Site needs is the current inventory of 24 m^3.
Regulatory status information:	
- Design reports	N/A
- Submittal of permit application	N/A
- Date design and construction contract to be awarded	N/A
- Date facility construction begins	N/A
- Date operations begin	2005
- Current regulatory status	N/A
Budget status for design, construction, and operations	Baseline budgets assume commercial treatment to support the M-091 milestones.
Estimated date of completion of treatment with the assumption of available funding	Because waste generation is expected to continue through the life of Hanford Site cleanup operations, continued treatment will be needed through the foreseeable future.
Alternatives for treatment of this waste	Not anticipated

9.3 MIXED WASTE TREATABILITY GROUPS REQUIRING FURTHER CHARACTERIZATION, OR FOR WHICH TECHNOLOGY DOES NOT EXIST OR A TECHNOLOGY ASSESSMENT HAS NOT BEEN DONE

Treatment planning for these waste treatability groups are incomplete and evaluations continue based on available treatment technologies.

9.3.1 Treatability Groups for which Further Characterization is Needed

Waste in the MLLW-03, MLLW-04, and MLLW-07 treatability groups from retrieval operations at the Hanford Site may contain non-conforming waste items once the treatment facility opens the packages for receipt inspections and/or treatment. The non-conforming waste items are characterized and dispositioned accordingly.

The current baseline of waste requiring additional characterization is characterized in sequence with and near planned treatment and disposal dates. The close coordination of waste characterization schedules with planned treatment and disposal dates has the following benefits:

- Coordination avoids long lag times between characterization and treatment and disposal, minimizing the potential need to recharacterize waste as acceptance, treatment, and disposal criteria evolve.

- Coordination allows for closer matching of characterization efforts with budget constraints.

For other treatability groups, tank waste in the 241-CX Tank System requires characterization. Tank 72, one of the three tanks in this treatability group will be characterized to determine its disposition path.

9.3.2 Treatability Groups for Which Treatment Technology Has Not Been Selected

Some waste streams in storage have not had technology assessments assigning treatability groups for existing treatment processes. When the technology assessments for the waste in this category are completed, many of the waste streams can be treated in one of the existing processes. Waste treatability groups for which treatment technologies have not been selected include the following:

- MLLW-08, Unique Waste
- B Plant Cell 4
- B Plant Containment Building
- 241-CX Tank System
- HSTF
- 222-S T8 Tunnel
- 221-T Tank System
- 400 Area WMU.

More than one land disposal restriction treatability variance is planned for waste in this category. Wastes in the MLLW-08 Unique Waste and the HSTF treatability groups are expected to be candidates for a treatability variance. The quantity of waste within the MLLW-08 treatability group is relatively small. If a treatability variance is granted by Ecology for the waste, the treatment technology will be in accordance with the approved variance treatment and disposition.

The wastes included in the B Plant Cell 4 and B Plant Containment Building treatability groups are stored in a facility managed under a regulator-approved long-term S&M plan, *Surveillance and Maintenance Plan for the 221-B Facility (B-Plant)* (DOE/RL-99-24). Therefore, treatment or disposal of the waste is not planned in the near term. Ongoing S&M activities for these two B Plant Complex treatability groups will be conducted in accordance with the approved S&M plan and associated Tri-Party Agreement commitments until DOE Headquarters initiates the disposition phase or other actions as required under the terms of the Tri-Party Agreement Action Plan, Section 8.1 or 8.3.3.

Waste in both the 241-CX Tank System and the HSTF treatability groups will be addressed as part of the closure actions documented in the closure plans prepared for the TSD units.

In the resolution negotiations for the Notices of Deficiency the 222-S Laboratory Complex Part B permit application, Ecology approved the 222-S T8 Tunnel waste to remain in the 222-S Laboratory Complex until closure. The current schedule reflects initiating cleanout of the 222-S Laboratory Complex in FY 2033 and transition to facility disposition in FY 2035.

Information concerning the 221-T Tank System Waste is included in Table 9-12.

Table 9-12. Information for the 221-T Tank System Waste for Which Treatment Technology Assessments Have Not Been Completed.

Type of Information	Facility Information
Treatability group included in this category	221-T Tank System
Tri-Party Agreement milestones related to this treatability group	None
Technology needed for facility	None
Projected volume of MLLW to be treated between CY 2010 and the end of CY 2014	0
Characterization status information	
- Characterization needed defined	Unknown until the treatment capability is defined. This waste might change radioactivity categories from LLMW to TRUM through evaporation.
- Characterization milestones	N/A
Treatment status information:	
- Treatability testing	N/A
- Feasibility analysis and reports	N/A
- Bench- and pilot-scale testing reports	N/A
- Research, development, and demonstration projects	N/A
- Design reports	N/A
- Permitting milestones	T Plant Complex submitted in 2002 to Ecology.
- Treatment milestones	None, residues to be handled with canyon disposition, in accordance with DOE-RL to Ecology letter #01-RCA-192, dated 3/09/01.
Budget status for testing, development, design, construction, and operations	Priorities within the next five-year window do not include working on this waste group.
Estimated completion date for treatment of treatability group with the assumption of available funding	With canyon disposition

9.4 RADIONUCLIDE SEPARATION PLANS

For MLLW, the only process that involves extensive separations is aqueous waste treatment at ETF. No separation activities are planned for any other MLLW treatability group.

9.5 MIXED WASTE DISPOSAL

MLLW is disposed of in the LLBG mixed waste trenches, ERDF, and Trench 94 of LLBG for defueled naval reactor compartments. The mixed waste trenches and ERDF are discussed in this section. Trench 94 is not included in the scope of this report. Disposal facilities to be used for the disposal of LAW from the vitrification of HLW are discussed in Section 11.6.

The MLLW shipped for treatment at the EnergySolutions Clive Utah site is also disposed at that site. This is a condition of their permits and license

9.5.1 Low-Level Burial Ground Mixed Waste Trenches

The LLBG mixed waste trenches (218-W-5, Trenches 31 and 34) have been constructed to provide disposal capabilities for a portion of the Hanford Site RCRA mixed waste. Each disposal trench has a capacity of about 24,000 m^3 air volume. The LLBG mixed waste trenches are RCRA compliant. The estimated volumes contained in this report show that Trenches 31 and 34 will not be filled during the next five-year period.

9.5.2 Environmental Restoration Disposal Facility

ERDF is a landfill authorized under CERCLA that meets the substantive requirements of RCRA. The landfill is used primarily for disposal of environmental restoration waste generated from cleanup activities. ERDF is designed to receive and dispose of low-level radioactive waste or mixed waste generated through remediation activities on the Hanford Site. The original two cells have been filled since the landfill opened in 1996. Cells 3 through 8 have been constructed.

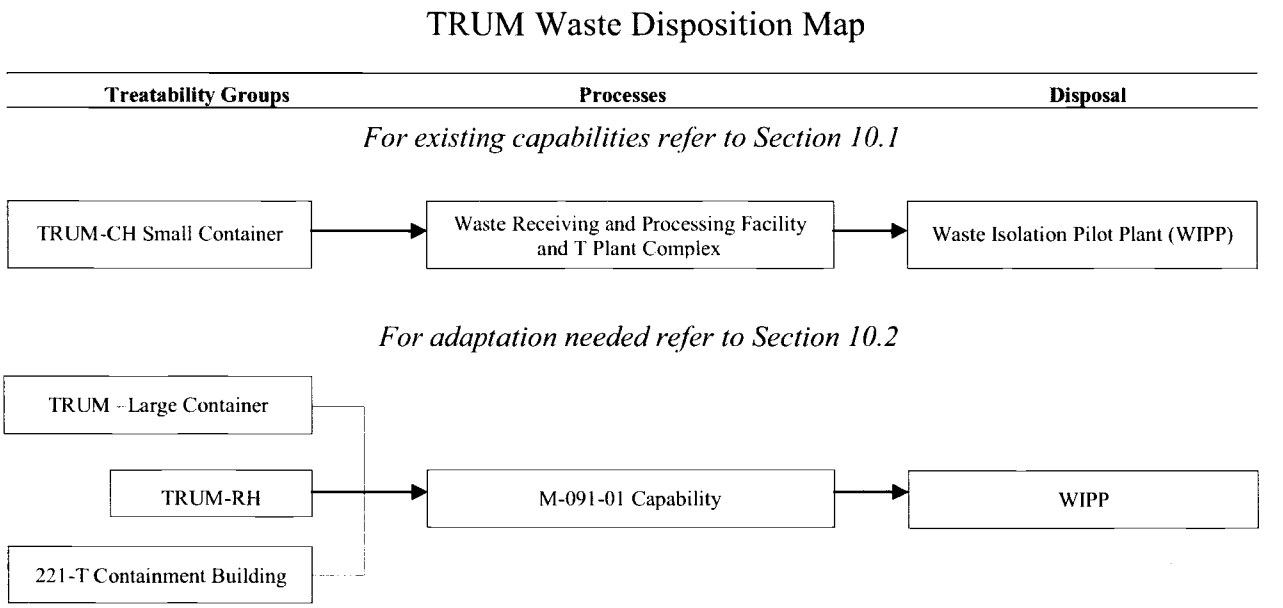
This page intentionally left blank.

Section 10.0

10.0 TRANSURANIC MIXED WASTE STREAMS

On the Hanford Site, small container CH TRUM waste is repackaged through the Hanford Site TRU Program. Functions in support of repackaging are conducted predominantly at WRAP and T Plant. Large container TRUM waste and RH TRUM waste are stored mostly within the Central Waste Complex until such time as repackaging capabilities become available. The disposition map in Figure 10-1 shows an overview of the anticipated processing of TRUM waste treatability groups. This figure shows the major waste treatability groups and the planned process for each group.

Figure 10-1. Site Disposition Map for TRUM Treatability Groups.



10.1 TRANSURANIC MIXED WASTE STREAMS FOR WHICH PROCESSING TECHNOLOGY EXISTS

The primary purpose of WRAP and T Plant is to repackage and support certification of small container CH TRUM waste to meet WIPP waste acceptance criteria for disposal. WRAP and T Plant provide capabilities to receive waste; confirm contents of drummed and standard waste boxes; repackage waste and support certification of waste. WRAP and T Plant currently only process CH TRUM waste in drums or standard waste boxes. Table 10-1 provides information concerning WRAP and T Plant.

Table 10-1. Information Concerning Processes at the WRAP Facility and T Plant Complex.

Type of Information	Facility-Specific information
Treatability group that the process is expected to treat	TRUM-CH Small Container
Tri-Party Agreement milestones related to this treatability group	M-91-42
Projected volume of TRUM to be processed between CY 2010 and the end of CY 2014	Processing will be performed according to M-091 milestones.
Treatment capacity	Permitted capacity is 13 m^3/day.
Regulatory status information for WRAP:	For T Plant regulatory status, see Table 9-4.
- Date of RCRA permit application	6/99 and settlement agreement in 2002
- Date treatment contract established	N/A
- Date facility construction started	Groundbreaking 4/94
- Date system testing started	Acceptance test procedures initiated on 2/13/96.
- Date for commencement of operations	1997
- Current regulatory status	Operating under interim status; transition to final status is pending.
Budget status for continued operations	Funding has been requested in the FY 2010 budget and currently is planned to be requested through FY 2014.
Planned completion of treatment using this process	2032
Alternative processes that could be used in place of this process or to supplement capacity for this process.	Processes are available at several other DOE locations: Idaho National Laboratory (INL), Savannah River Site (SRS), and Los Alamos. In addition, repackaging and characterization capabilities have been developed that can be deployed at sites, using temporary rather than permanent installation.

10.2 TRANSURANIC MIXED WASTE TREATABILITY GROUPS FOR WHICH CHARACTERIZATION AND PROCESSING TECHNOLOGIES NEED ADAPTATION

The requirements of M-091-01 are to provide for the processing of RH TRUM and oversize containers of TRUM waste. In addition, based on the latest approved project management plant for M-091, a needed capability is anticipated to provide for processing of unique TRUM waste streams such as waste in underground alpha cassions and to address loadout of RH shipments. Establishing these capabilities will be based on establishing milestones after completing the Tri-Party Agreement negotiations required by M-091-45. Negotiations for the M-091 milestones began in September 2009, and were not completed by the end of the LDR report reporting period (December 31, 2009). Table 10-2 provides information for the M-091-01 capability.

Table 10-2. Information for the M-091-01 Capability.

Type of Information	Information
Treatability group that the process is expected to treat	TRUM-CH Large Container; TRUM-RH; 221-T Containment Building
Tri-Party Agreement milestones related to these treatability groups pending finalization of the TPA M-091 settlement agreement	M-09-44, M-091-01, M-91-45
Technology needed for facility	Remote handling and large container processing technologies
Projected volume of TRUM to be processed between CY 2010 and the end of CY 2014	Processing will be performed according to M-091 milestones
Treatment capacity	To be determined by design reports.
Regulatory status information:	
- Design reports	To be determined following TPA negotiations.
- Submittal of permit application	To be determined during design, as applicable.
- Date for commencement of operations	To be determined.
- Current regulatory status	In planning
Budget status for design, construction, and operations	Funding will be requested to support the M-091 milestones resulting from the current negotiations.
Estimated date of processing completion of treatability groups with the assumption of available funding.	To be determined.
Alternatives for processing of this waste.	Under evaluation.

10.3 TRANSURANIC MIXED WASTE TREATABILITY GROUPS WITH PROCESSING TECHNOLOGY NOT SELECTED

This section covers treatability groups that do not have a processing method. Before a processing method can be specified for these media, additional technology assessments need to be performed and/or further characterization might need to occur. Once a processing method is specified and before waste treatment, the existing TSD record information will be reviewed and characterization corrections will be made as necessary based on existing acceptable knowledge. Process planning for the following treatability groups continues:

- PUREX Plant
- PUREX Storage Tunnel
- 324 Building REC Waste.

The waste associated with these treatability groups needs to be characterized to meet WIPP waste acceptance criteria. RH equipment and techniques are needed to support characterization for most of the waste.

Waste transfers to certain on-site TSD units are performed in accordance with *Hanford Site Solid Waste Acceptance Criteria* (HNF-EP-0063). This document specifies waste characterization

criteria necessary to support proper interim storage and future processing, storage, and/or disposal requirements for TRUM waste.

10.3.1 PUREX Storage Tunnels

The PUREX Storage Tunnels are a RCRA-regulated storage unit and are subject to Hanford Facility RCRA permit conditions. Waste in the PUREX Storage Tunnels treatability group is being stored at a final status miscellaneous unit. Under the Hanford Facility RCRA Permit, closure of the PUREX Storage Tunnels must be coordinated with the final closure plan for the PUREX facility which is under S&M provisions of Section 8.0 of the TPA. Therefore, PUREX Storage Tunnels waste disposition will be coordinated with PUREX Plant waste discussed in Section 10.3.2.

10.3.2 PUREX Plant

Ongoing S&M activities for the PUREX Plant treatability group are conducted in accordance with the approved S&M plan and associated Tri-Party Agreement commitments until DOE Headquarters decides to initiate the disposition phase or actions required by the lead regulatory agency pursuant to the terms of the Tri-Party Agreement Action Plan, Sections 8.1 or 8.3.3. The waste included in the PUREX Plant treatability group is stored under a regulator-approved long-term S&M plan. Therefore, certification/treatment or disposal of the waste is not planned in the near term.

10.3.3 324 Building Radiochemical Engineering Cell Waste

DOE-RL is working with Ecology to modify the closure plan and existing TPA milestones to perform closure of the mixed waste units in parallel with disposition/demolition of the 324 Building.

10.4 DISPOSAL OF TRANSURANIC MIXED WASTE

As noted in Figure 10-1, the current plan is to ship TRUM waste to WIPP. Waste being disposed of at WIPP must meet WIPP waste acceptance requirements. Waste is shipped to WIPP in appropriate containers and special packages.

10.5 RADIONUCLIDE SEPARATION PLANS

No plans exist for radionuclide separation as a processing step for TRUM waste because radionuclide separation is not required for these treatability groups to meet WIPP disposal criteria.

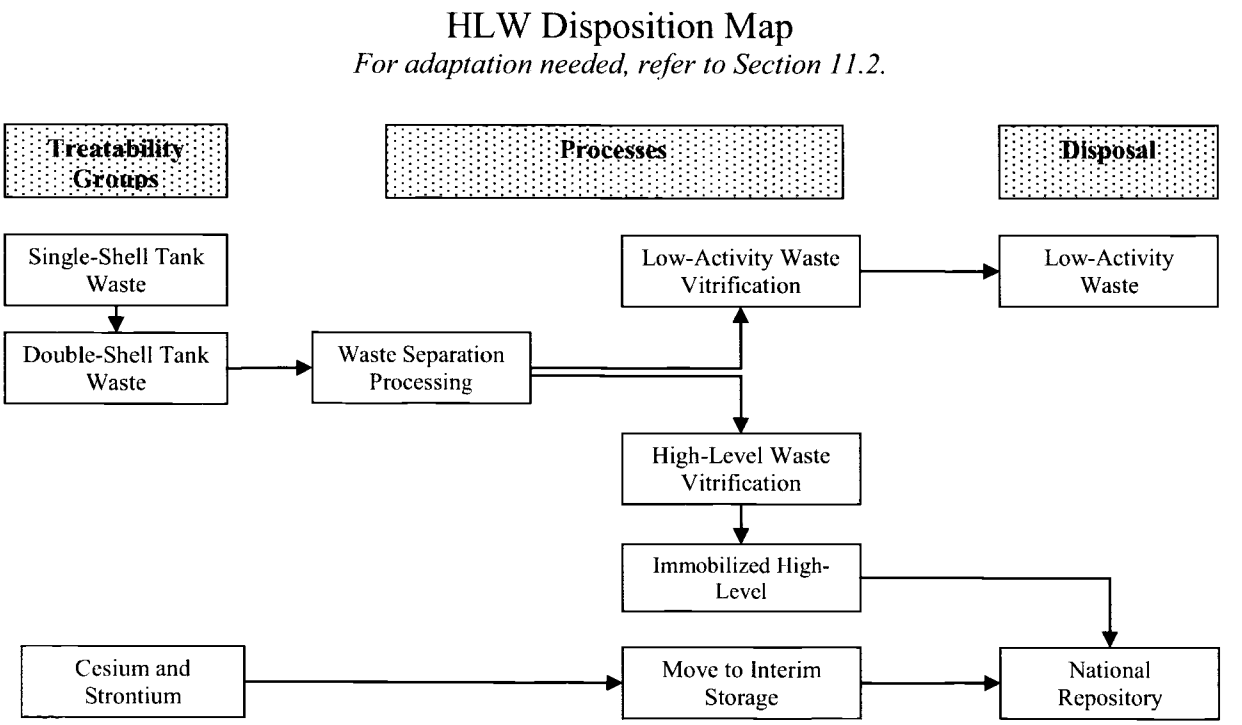
Section 11.0

11.0 HIGH-LEVEL WASTE STREAMS

Figure 11-1 shows an overview of the anticipated treatment of HLW treatability groups. The basic process will be for the SST System waste to be moved to the DST System as space becomes available. The waste will be moved from the DSTs to a waste pretreatment or separation unit where most of the high-activity material will be removed and sent to the high-level vitrification unit. The larger volume of remaining low-activity waste will be sent to a separate low-activity vitrification unit. The vitrification processes will convert the waste into a stable glass-like material for interim storage and eventual disposal. Note that the contents of some SSTs may classify as TRUM waste. If so, these wastes would be expected to follow a different treatment path.

It has been determined per the *Framework Agreement for Management of Polychlorinated Biphenyls (PCBs) in Hanford Tank Waste* (Ecology 2000), dated August 31, 2001, that some DSTs contain PCB remediation waste. The risk-based disposal approval process addresses the disposal of PCB remediation waste through the WTP where PCBs have been addressed as a constituent of concern. Figure 11-1 shows the HLW treatability groups and the planned treatment process.

Figure 11-1. High-Level Waste Disposition Map.



11.1 EXISTING TREATMENT PROCESSES

No HLW LDR treatment processes currently are available for treating the Hanford Site waste. The Hanford Site does have HLW evaporators used for many years to concentrate HLW in the tanks and to make tank space available for new or transferred waste. The 242-A Evaporator operation is not LDR treatment; however, operations result in sending a portion of the tank waste (condensate) to LDR treatment at LERF/ETF.

11.2 WASTE STREAMS FOR WHICH TREATMENT TECHNOLOGY IS NEEDED

The LDR-specified treatment technology for HLW is vitrification (HLVIT). Planning for vitrification processes for the Hanford Site is ongoing and is a high priority. Details of the contract for completion of the design and construction of the treatment units for the HLW are available on the Internet[1]. Additional details of the planning for HLW management also are available on the Internet[1]. Table 11-1 summarizes the key information.

Table 11-1. Information for High-Level Waste Vitrification.

Type of Information	Information
Treatability groups that the process is expected to treat	DST Waste; SST Waste
Tri-Party Agreement milestones related to these treatability groups	M-092-00; M-090-00; and M-062-00
Technology needed for facility	Vitrification technology has been used at both SRS and West Valley, but needs some modifications to be applicable to Hanford Site waste.
Projected volume of HLW to be treated between CY 2010 through the end of CY 2014	None, sustained throughput of HLW vitrification is scheduled to begin in 2019.
Treatment capacity	To be determined by final design.
Regulatory status information:	
- Submittal of RCRA permit application	WTP: Final status obtained September 2002. DST System: Revised Part B Permit Application 3/29/2004.
- Date design and construction contract established	2000
- Date facility construction began	2002
- Date complete hot commissioning	2018
- Current regulatory status	DST: Operating under interim status SST: Operating under interim status WTP: Construction under final status
Budget status for design, construction, and operations	Funding is available for FY 2010 to continue design and construction. Funding for FY 2011 and beyond is contingent on Congressional budgets and actions.
Estimated treatment completion date of treatability group with the assumption of available funding.	*Complete Pretreatment Processing and Verification of Hanford HLW and LAW Tank Wastes*, Tri-Party Agreement Milestone M-62-00 due 12/31/2028.
Alternatives for treatment of this waste.	None

[1] Internet address is provided in the reference list (ORP, 2001).

11.3 RADIONUCLIDE SEPARATION

The tank waste will be sent to the WTP where the waste will be separated into HLW and LAW fractions and treated to meet LDR standards.

11.4 STORAGE OF HIGH-LEVEL WASTE

Initial canisters of vitrified HLW are anticipated to be placed in an Interim High Level Waste Storage facility, pending final disposal. The facility will have the capability of adding modules and will be built as needed. The maximum need will be determined at a later date as it depends on the vitrification rate and ability to ship waste from the Hanford Site to a national repository.

WESF stores the cesium and strontium capsules in pool cells. Treatment options are still being assessed in order to meet M-092-05. Several details of the plan must be worked out with Ecology including how to address the existing TPA milestones relating to the capsules (see the datasheets in Appendix B) and how to address RCRA permitting of the activity.

11.5 SHIPMENT OF HIGH-LEVEL WASTE TO A NATIONAL REPOSITORY

A national repository is expected to be prepared for the HLW and for the spent nuclear fuel accumulating at commercial nuclear power plants. Shipment dates are uncertain at this time, but will become more specific when the site is licensed and the national repository constructed and prepared to receive the HLW. These activities are beyond the scope of this report.

11.6 DISPOSAL OF THE MIXED LOW-ACTIVITY WASTE ON-SITE

Vitrified mixed LAW from the WTP will be disposed on-site at the Integrated Disposal Facility (IDF). The IDF has been constructed under the Hanford Facility RCRA Permit (WA7890008967) and will accept LAW when WTP generates the waste.

This page intentionally left blank.

Section 12.0

12.0 TREATMENT OF POTENTIAL MIXED WASTE

Potential mixed waste is identified in Appendix C of this report. Some of the materials as managed in the future could result in the generation of mixed waste, which would be assigned to an existing or new treatability group. If the material is assigned to an existing treatability group, treatment can be considered along with that of the other location-specific waste streams within that treatability group. Other potential mixed waste may require new or modified treatment processes. Treatment plans for these waste streams will be defined further when the streams are determined to be mixed waste. Other materials will be determined not to be mixed waste and will be handled accordingly.

This page intentionally left blank.

Section 13.0

13.0 SUMMARY OF CHARACTERIZATION INFORMATION

As part of generation of any waste, a generating unit must take steps necessary to confirm the proper management of this waste. This includes identifying proper radioactive classification, understanding the physical matrix, properly designating the waste, and, where applicable, identifying the appropriate underlying hazardous constituents. Types of information that can be used to characterize waste can include data from analysis of the waste and knowledge of the materials and/or processes used to generate the waste. The information must be sufficient to quantify constituents of regulatory concern and to determine waste characteristics and unit-specific waste acceptance criteria.

This section discusses and summarizes the waste treatability groups and the planned characterization activities for the waste. Waste must be sufficiently characterized so the waste can be stored and managed properly. In addition, waste must be sufficiently characterized before treatment to ensure that the proper treatment processes are applied and that the resultant treated waste meets LDR standards. Table 13-1 summarizes the planned characterization activities for each of the treatability groups. Additional detail can be found on the individual location-specific data sheets (Appendix B). The planned characterization schedule information from Table 13-1 is reproduced in Table 2-2.

Table 13-1. Summary of Characterization Information for Each Treatability Group. (4 sheets)

Treatability Group Name	Report Section	Additional Characterization Activities	Planned Characterization Schedule	Related Tri-Party Agreement Milestone
221-T Containment Building	10.2	Completed[3]	Completed	None
221-T Tank System	9.3.2	Additional characterization might be required to support waste treatment.	Will be done in conjunction with T Plant Complex Canyon disposition.	None
222-S Laboratory Complex	9.1.8	Characterization performed as generated.	Ongoing	None
222-S T8 Tunnel	9.3.2	As required to support cleanout of 222-S.	Will be done in conjunction with 222-S Laboratory building disposition.	None
241-CX Tank System	9.3.2	Characterization will be performed on waste in tank 72 on a schedule determined with 200-IS-1.	To be determined through development of 200-IS-1 documentation.	Major Milestone M-015-00

Table 13-1. Summary of Characterization Information for Each Treatability Group. (4 sheets)

Treatability Group Name	Report Section	Additional Characterization Activities	Planned Characterization Schedule	Related Tri-Party Agreement Milestone
324 Building REC Waste	10.3.3	No further characterization planned.	Completed	M-089-00
325 HWTU	9.1.7	Characterization performed as generated.	Ongoing	M-094-00
400 Area WMU	9.3.2	Completed.[3]	Completed	None
B Plant Cell 4	9.3.2	To be determined via Tri-Party Agreement Action Plan, Section 8.0.	To be determined via Tri-Party Agreement Action Plan, Section 8.0.	None
B Plant Containment Building	9.3.2	To be determined via Tri-Party Agreement Action Plan, Section 8.0.	To be determined via Tri-Party Agreement Action Plan, Section 8.0.	None
Cesium and Strontium Capsules	11.4	None	Completed	M-092-05
DST Waste	11.2	Additional information could be required, per TPA milestone.	Ongoing	M-050, M-051, M-061, M-062, M-090
ERDF – Treatment	9.1.5	Characterized as generated. Treatment and disposal are performed under CERCLA decision documents and treatment plans.	Ongoing	None
HSTF	9.3.2	None	Completed	Major Milestone M-015-00
LERF/ETF Liquid Waste	9.1.6	Characterization performed as generated.	Ongoing	M-026-07
LERF/ETF Solid Waste	9.1.10	Characterization performed as generated.	Not required	None
MLLW-01 – LDR Compliant Waste	9.1.10	No further characterization is planned.	Completed	None
MLLW-02 – Inorganic Non-Debris	9.1.1	As necessary to meet treatment facility waste acceptance criteria[1].	M-091-42[2]	M-091-42[2]
MLLW-03 – Organic Non-Debris	9.1.3	As necessary to meet treatment facility waste acceptance criteria[1].	M-091-42[2]	M-091-42[2]

Table 13-1. Summary of Characterization Information for Each Treatability Group. (4 sheets)

Treatability Group Name	Report Section	Additional Characterization Activities	Planned Characterization Schedule	Related Tri-Party Agreement Milestone
MLLW-04 – Hazardous Debris	9.1.2	As necessary to meet treatment facility waste acceptance criteria[1].	M-091-42[2]	M-091-42[2]
MLLW-05 – Radioactive Lead Solids	9.1.2	As necessary to meet treatment facility waste acceptance criteria[1].	M-091-42[2]	M-091-42[2]
MLLW-06 – Mercury Wastes	9.1.9	As necessary to meet treatment facility waste acceptance criteria[1].	M-091-42[2]	M-091-42[2]
MLLW-07 – RH and Large Container	9.2.1	As necessary to meet treatment facility waste acceptance criteria[1].	M-091-43[2]	M-091-43[2]
MLLW-08 – Unique Waste	9.3.2	As necessary to meet treatment facility waste acceptance criteria[1].	M-091-42[2]	M-091-42[2]
MLLW-09 – Radioactive Batteries	9.1.2	As necessary to meet treatment facility waste acceptance criteria[1].	M-091-42[2]	M-091-42[2]
MLLW-10 – Reactive Metals	9.2.2	As necessary to meet treatment facility waste acceptance criteria[1].	M-091-42[2]	M-091-42[2]
PUREX Plant	10.3.2	To be determined via Tri-Party Agreement Action Plan, Section 8.0.	To be determined via Tri-Party Agreement Action Plan, Section 8.0.	None
PUREX Storage Tunnels	10.3.1	To be determined in conjunction with PUREX Plant based on RCRA Permit Closure Plan.	To be determined in conjunction with the PUREX Plant per the Tri-Party Agreement Action Plan, Section 8.0.	None
Purgewater	9.1	Characterization will be performed on sediments in Unit #1 during closure.	According to schedule in closure plan.	None
SST Waste	11.2	Further information may be required, per TPA milestone.	Ongoing	M-045, M-050, M-051, M-061, M-062, M-090.
TRUM-CH Large Container	10.2	As necessary to meet WIPP waste acceptance criteria.	M-091-44[2]	M-091-44[2]
TRUM-CH Small Container	10.1	As necessary to meet WIPP waste acceptance criteria.	M-091-42[2]	M-091-42[2]

Table 13-1. Summary of Characterization Information for Each Treatability Group. (4 sheets)

Treatability Group Name	Report Section	Additional Characterization Activities	Planned Characterization Schedule	Related Tri-Party Agreement Milestone
TRUM-RH	10.2	As necessary to meet WIPP waste acceptance criteria.	M-091-44[2]	M-091-44[2]

[1] Newly generated waste in these categories is fully characterized as generated. For waste in inventory before 1995, existing TSD record information will be reviewed and a graded approach to characterization will be made as necessary based on existing acceptable knowledge.
[2] Characterization is anticipated to be performed as necessary to meet M-091 milestones.
[3] Characterization information is contained in the Hanford Facility Operating Record unit-specific file for the TSD unit and is available upon request.

Section 14.0

14.0 SUMMARY OF TREATMENT INFORMATION

This section summarizes the waste treatability groups and the volume of waste that will be treated. Table 14-1 contains information on treatment. The treatability groups are in alphabetical order. Certain information from Table 14-1 is reproduced in Table 2-2.

Table 14-1. Summary of Treatment Information for Each Treatability Group. (3 sheets)

Treatability Group Name	Report Section	Treatment Process	Volume Currently Stored (m^3)[1]	Projected Generation Volume 2010 Through 2014 (m^3)[1]	Projected Volume to be Treated 2010 Through 2014 (m^3)[1]	Planned Treatment Period	Tri-Party Agreement Milestone
221-T Containment Building	10.2	Not yet determined	58	0	0	2035[4]	None
221-T Tank System	9.3.2	Not yet determined	.36	0	0	2035[4]	None
222-S Laboratory Complex	9.1.8	222-S Laboratory Complex, Commercial Stabilization, Commercial Thermal	.96	45	46	Through 2035.	None
222-S T8 Tunnel	9.3.2	Not yet determined	0.2	0	0	2047	None
241-CX Tank System[2]	9.3.2	Not yet determined	6.4	0	0	To be determined through development of 200-IS-1 documentation.	M-015-00
324 Building REC Waste	10.3.3	Not yet determined	5.0	0	0	In accordance with schedules established under M-089 milestone.	M-089-00, M-094-03
325 HWTU	9.1.7	HWTU, Commercial Stabilization, Commercial Thermal	3.4	45	48	Through 2028.[4]	M-094-00
400 Area WMU	9.3.2	Deactivation and conversion to sodium hydroxide, however, adaptation required	1.5	0	0	Treatment is planned to begin after 2016[4]	None
B Plant Cell 4	9.3.2	Not yet determined	1.4	0	0	In accordance with Tri-Party Agreement Action Plan, Section 8.0	None

Table 14-1. Summary of Treatment Information for Each Treatability Group. (3 sheets)

Treatability Group Name	Report Section	Treatment Process	Volume Currently Stored (m^3)[1]	Projected Generation Volume 2010 Through 2014 (m^3)[1]	Projected Volume to be Treated 2010 Through 2014 (m^3)[1]	Planned Treatment Period	Tri-Party Agreement Milestone
B Plant Containment Building	9.3.2	Not yet determined	290,000 kilograms	0	0	In accordance with Tri-Party Agreement Action Plan, Section 8.0	None
Cesium and Strontium Capsules	11.4	Not yet determined	2.0	0	0	Treatment options are still being assessed.	M-092-05
DST Waste	11.2	WTP vitrification	98,000	190	0	2018-2047	M-050, M-051, M-061, M-062, and M-090
ERDF – Treatment	9.1.5	ERDF treatment	0	53,000	53,000	Through 2035.[4]	None. Treatment and disposal are performed under a CERCLA decision document and treatment plans.
HSTF	9.3.2	Not yet determined	2.1	0	0	To be determined through development of 200-IS-1 documentation.	M-015-00
LERF/ETF Liquid Waste	9.1.6	ETF	64,000	66,000	130,000	Through 2032.	M-026-07
LERF/ETF Solid Waste	9.1.10	No treatment required	45	1,200	No treatment required	N/A	None
MLLW-01 – LDR-Compliant Waste	9.1.10 & 9.1.6	No treatment required	0.4	2.7	No treatment required.	N/A	None
MLLW-02 – Inorganic Non-Debris	9.1.1 9.1.4	Stabilization	2.3	0	2.3[3]	M-091-42[3]	M-091-42
MLLW-03 – Organic Non-Debris	9.1.3	Thermal	.83	0.28	1.1[3]	M-091-42[3]	M-091-42
MLLW-04 Hazardous Debris	9.1.2	Macroencapsulation	48.	8.4	52[3]	M-091-42[3]	M-091-42
MLLW-05 – Radioactive Lead Solids	9.1.2	Macroencapsulation	.21	0	0.21[3]	M-091-42[3]	M-091-42
MLLW-06 – Mercury Waste	9.1.9	Amalgamation	0	0	0	M-091-42[3]	M-091-42

Table 14-1. Summary of Treatment Information for Each Treatability Group. (3 sheets)

Treatability Group Name	Report Section	Treatment Process	Volume Currently Stored (m^3)[1]	Projected Generation Volume 2010 Through 2014 (m^3)[1]	Projected Volume to be Treated 2010 Through 2014 (m^3)[1]	Planned Treatment Period	Tri-Party Agreement Milestone
MLLW-07 – RH and Large Container	9.2.1	T Plant Complex	120	0	120[3]	M-091-43[3]	M-091-43
MLLW-08 – Unique Waste	9.3.2	To be determined	18	0	18[3]	M-091-42[3]	M-091-42
MLLW-09 – Radioactive Batteries	9.1.2	Macroencapsulation	.21	0	0.21[3]	M-091-42[3]	M-091-42
MLLW-10 – Reactive Metals	9.2.2	Deactivation with selected stablization	24	0	24[3]	M-091-42[3]	M-091-42
PUREX Plant	10.3.2	Not yet determined	1.0	0	0	In accordance with Tri-Party Agreement Action Plan, Section 8.0	None
PUREX Storage Tunnels	10.3.1	Not yet determined	2,800	0	0	Coordinated with PUREX Plant waste.	None
Purgewater	9.1.6	Solar evaporation at PSTF and ETF Treatment	3,700	1,000	4,700	Ongoing	None
SST Waste	11.2	WTP vitrification	110,000	0	0	2018-2047	M-050, M-051, M-061, M-062, and M-090
TRUM-CH Large Container	10.2	M-091-01	7,500	0	TBD[3]	M-091-44[3]	M-91-44
TRUM-CH Small Container	10.1	WRAP Facility and/or T-Plant Complex	5,300	650	TBD[3]	M-091-42[3]	M-091-42
TRUM-RH	10.2	M-091-01	410	10.	TBD[3]	M-091-44[3]	M-091-44

[1] Volume numbers in this table have been rounded to two significant figures.
[2] The stored volume reported contains uncertainty as to the actual volume (DOE 2005).
[3] Treatment is anticipated to be performed as necessary to meet M-091 milestones. See the M-091 milestones to determine what portion of the total volume requires treatment under those milestones.
[4] Dates are anticipated to change based on changes to the DOE forecasted funding profile

Section 15.0

15.0 TRI-PARTY AGREEMENT INFORMATION

The Tri-Party Agreement is a legal document covering Hanford Site environmental compliance and cleanup activities. The Tri-Party Agreement Action Plan implements the agreements among Ecology, DOE (both DOE-RL and DOE-ORP), and EPA.

15.1 DOCUMENTATION AND RECORDS

The Tri Party Agreement Action Plan, Section 9.0, "Documentation and Records", defines the documents to be generated under the Action Plan, the classification and listing of primary and secondary documents, and the record systems to be implemented to preserve and access the documentation. The Action Plan, Section 12, "Changes to the Agreement," establishes a process for the parties to propose and implement changes to: elements of the Agreement; the Action Plan, and Appendices; and supporting plans (specifically, the annual update of the LDR report).

15.2 LAND DISPOSAL RESTRICTIONS RELATED TRI-PARTY AGREEMENT MILESTONES

Table 15-1 identifies the current (as of December 31, 2009), active Tri-Party Agreement milestone requirements through 2028. Pending TPA change control actions are not included.

Table 15-1. Tri-Party Agreement Milestones and Target Dates Through 2028. (7 sheets)

Tri-Party Agreement Milestone Requirement Number	Milestone Requirement Title	Due Date
M-015-00	Complete The RI/FS (Or RFI/CMS) Process For All Operable Units	TBD
M-015-00C	Complete 200 Area Non-Tank Farm OU Pre-ROD Site Investigations	TBD
M-015-00D	Submit PP For All 100 & 300 Area OUs To Complete RI/FS Process	12/31/2012
M-015-17A	Submit a 200-UP-1 OU Combined RI and FS Report	09/30/2010
M-015-21A	Submit 200-BP-5 OU FS and Proposed Plan to EPA	12/31/2012
M-015-38B	Submit Revised FS Report & Revised Proposed Plan for 200-CW-1	11/30/2010
M-015-40E	Complete Negotiations to Set Schedule to Complete RI/FS Process	02/28/2010
M-015-44B	Submit 200-MW-1 OU Feasibility Study to EPA	02/28/2010
M-015-44C	Submit 200-MW-1 OU Proposed Plan to EPA	02/28/2011
M-015-51	Submit Revised FS Report & Proposed Plan to EPA For 200-BC-1 OU	09/30/2010
M-015-54	Submit Report On Reactive Gas Testing For Sequestration of Uranium	01/31/2010
M-015-60	Submit RD/RAWork Plan if 100-NR-1/2 ROD Amend is issued	TBD
M-015-62-T01	Submit FS/PP for 100-NR-1/2 OUs including GW and Soil	12/31/2011
M-015-64-T01	RI/FS Report & PP For 100-FR-1/2/3 & 100-IU-2/6 For GW & Soil	11/30/2011
M-015-66-T01	Submit CERCLA RI/FS Report & PP 100-KR-1/2/4 OUs For GW & Soil	07/31/2011
M-015-68-T01	Submit CERCLA RI/FS Report & PP 100-BC-1/2/5 OUs for GW & Soil	11/30/2011
M-015-70-T01	Submit FS Report & PP for 100-HR-1/2/3 100-DR-1/2 OUs GW & Soil	07/30/2011
M-015-72-T01	Submit CERCLA RI/FS Report & PP for 300-FF-2/5 OUs for GW & Soil	12/31/2011
M-015-73	Submit FS Report & PP For 200-PO-1 OU	12/31/2011
M-015-82A	Submit Treatability Test Plan As Amendment of 200-BP-5 WP	12/31/2010

Table 15-1. Tri-Party Agreement Milestones and Target Dates Through 2028. (7 sheets)

Tri-Party Agreement Milestone Requirement Number	Milestone Requirement Title	Due Date
M-015-82B	Initiate 200-BP-5 Aquifer Tests Within 6 Months of TTP Approval	TBD
M-015-83	Submit A Proposed Plan For 200-UW-1	06/30/2010
M-016-00	Complete Remedial Actions For All Non-Tank Farm Operable Units	09/30/2024
M-016-00A	Complete All Interim Response Actions For The 100 Areas	12/31/2012
M-016-00B	Complete All Interim 300 Area Remedial Actions	09/30/2018
M-016-00C	Complete All Interim Response Actions For The 100K Area	TBD
M-016-110-T01	Take Actions to Contain Or Remediate Hexavalent CR 100A GW Plumes	12/31/2012
M-016-110-T02	Take Actions Such That Hexavalent Cr Meets Drinking Water Stds	12/31/2020
M-016-110-T03	Take Actions To Contain Sr-90 GW Plume at 100-NR-2 OU	12/31/2016
M-016-110-T04	Implement Remedial Actions in All 100A RODS For GW OUs	12/31/2016
M-016-110-T05	Implement Sys To Meet Drinking Water Stds. For U at 300-FF-5 OU	12/31/2015
M-016-111B	Expand P&T Sys at 100-HR-3 OU to 500 gmp Capacity	12/31/2010
M-016-111C	Expand P&T Sys at 100-HR-3 to 800 gmp Capacity	12/31/2011
M-016-119-T01	Operational Sys in Place To Contain GW Plumes in 200 NPL Area	12/31/2020
M-016-120	GW Treatment Sys <50 gpm for Tc-99 Plume at S/SX Tank Farm	12/31/2011
M-016-122	Begin Phase I Operation of new 200 West Pump & Treat System	12/31/2011
M-016-124	Submit 200-ZP-1 Remedial Design Report	08/31/2010
M-016-139	Complete Revegetation of 300-FF-2 Waste Sites	03/31/2013
M-016-140	Submit Revised RD/RA Work Plans for 100K Area RODS	03/31/2011
M-016-143	Complete The Interim Response Actions For The 100K Area Phase 2	12/31/2015
M-016-145	Complete Interim Response Actions 100K Area Not in Phase 1/2/3	12/31/2012
M-016-155	Submit Revised RD/RA Work Plans For 100A Interim Remedial Actions	06/30/2010
M-016-47	Complete The Interim Remedial Actions For The 100 D Area	12/31/2011
M-016-51	Complete The Interim Remedial Actions For The 100 H Area	12/31/2011
M-016-51-T02	Complete Excavation of a total of 3 of 5 100-H Burial Grounds	12/31/2010
M-016-53	Complete The Interim Response Actions For The 100 K Area	12/31/2012
M-016-55	Complete The Interim Response Actions For The 100 N Area	12/31/2012
M-016-56	Complete The Interim Remedial Actions For 100-IU-2 And 100-IU-6	02/28/2012
M-016-62	Complete Interim Remedial Actions For 300-FF-2 Waste Sites	12/31/2012
M-016-64	Complete Interim Remedial Actions For 300-FF-2 Waste Sites	09/30/2010
M-016-69	Complete All Interim 300 Area Remedial Actions	09/30/2015
M-016-74	Complete Interim Remediation for 300 Area Waste Sites (Inside)	09/30/2012
M-016-75	Initiate Substantial & Continuous Remediation On The 309 Facility	09/30/2013
M-016-93B	Submit Implementation Workplan To Prepare TRU/TRUM Waste	12/31/2012
M-016-94	Complete Interim Remedial Actions	11/30/2010
M-024-00O	Complete Well Installations with RCRA/CERCLA Requirements	TBD
M-024-58C	Initiate Discussions of Well Commitments	06/01/2010
M-024-61	DOE Shall Complete Construction of 90 Wells	12/31/2010
M-024-61-T01	Conclude Discussions of Well Commitments	08/01/2010
M-024-62	DOE Shall Complete Construction Of All Wells Listed	12/31/2011
M-024-62-T01	Conclude Discussions of Well Commitments	08/01/2011
M-024-63	DOE Shall Complete the Construction of all Wells for CY2012	12/31/2012
M-024-63-T01	Conclude Discussions of Well Commitments Initiated Under M-024-58	08/01/2012

Table 15-1. Tri-Party Agreement Milestones and Target Dates Through 2028. (7 sheets)

Tri-Party Agreement Milestone Requirement Number	Milestone Requirement Title	Due Date
M-026-01T	Submit An Annual Hanford Land Disposal Restrictions Report	04/30/2010
M-026-01U	Submit An Annual Hanford Land Disposal Restrictions Report	04/30/2011
M-026-01V	Submit An Annual Hanford Land Disposal Restrictions Report	04/30/2012
M-026-01W	Submit An Annual Hanford Land Disposal Restrictions Report	04/30/2013
M-026-07C	Evaluation of Tritium Treatment Technology to EPA & Ecology	03/31/2014
M-026-07D	Evaluation of Tritium Treatment Technology to Regs	03/31/2019
M-035-00	Complete Data Management Enhancements	TBD
M-035-09G	Conduct Biennial Assessments Of Information And Data Access Needs	03/31/2010
M-035-09H	Conduct Biennial Assessments Of Information And Data Access Needs	03/31/2012
M-042-00	Provide Additional Double-Shell Tank Capacity	TBD
M-045-00	Complete Closure Of SST Farms With Retrieval Of Waste	09/30/2024
M-045-00B	Complete Specified SST Waste Retrieval/Closure Activities	09/30/2006
M-045-00C	Initiate Negotiation Of SST Waste Retrieval (2/07 thru 8/08)	09/30/2006
M-045-00C-A	Ecology And DOE Negotiations Shall Be Completed Within 120 Days	01/28/2007
M-045-00D	Initiate Negotiation Of SST Waste Retrieval (9/2008 thru 9/2013)	01/31/2008
M-045-00D-A	Ecology And DOE Negotiations Shall Be Completed Within 150 Days	06/28/2008
M-045-00E	Initiate Negotiation Of SST Waste Retrieval- Remainder Of Program	10/31/2012
M-045-00E-A	Ecology And DOE Negotiations Shall Be Completed Within 120 Days	02/27/2013
M-045-02	Submit Biennial Update To SST Retrieval Sequence Document	TBD
M-045-02O	Submit Biennial Update To SST Retrieval Sequence Document	03/01/2010
M-045-02O-A	3 Parties Shall Meet To Establish New Milestones Within 60 Days	04/30/2010
M-045-02P	Submit Biennial Update To SST Retrieval Sequence Document	03/01/2012
M-045-02P-A	3 Parties Shall Meet To Establish New Milestones Within 60 Days	04/30/2012
M-045-02Q	Submit Biennial Update To SST Retrieval Sequence Document	03/01/2014
M-045-02Q-A	3 Parties Shall Meet To Establish New Milestones Within 60 Days	04/30/2014
M-045-02R	Submit Biennial Update To SST Retrieval Sequence Document	03/01/2016
M-045-02R-A	3 Parties Shall Meet To Establish New Milestones Within 60 Days	04/30/2016
M-045-02S	Submit Biennial Update To SST Retrieval Sequence Document	03/01/2018
M-045-02S-A	3 Parties Shall Meet To Establish New Milestones Within 60 Days	04/30/2018
M-045-05	Retrieve Waste From All Remaining Single-Shell Tanks	09/30/2018
M-045-05A	Complete Waste Retrieval From Tank S-102	03/31/2007
M-045-05-T05	Initiate Tank Retrieval From 5 Additional SSTs	09/30/2007
M-045-05-T06	Initiate Tank Retrieval From 5 Additional SSTs	09/30/2008
M-045-05-T07	Initiate Tank Retrieval From 7 Additional SSTs	09/30/2009
M-045-05-T08	Initiate Tank Retrieval From 8 Additional SSTs	09/30/2010
M-045-05-T09	Initiate Tank Retrieval From 10 Additional SSTs	09/30/2011
M-045-05-T10	Initiate Tank Retrieval From 12 Additional SSTs	09/30/2012
M-045-05-T11	Initiate Tank Retrieval From 14 Additional SSTs	09/30/2013
M-045-05-T12	Initiate Tank Retrieval From 17 Additional SSTs	09/30/2014
M-045-05-T13	Initiate Tank Retrieval From 20 Additional SSTs	09/30/2015
M-045-05-T14	Initiate Tank Retrieval From 20 Additional SSTs	09/30/2016
M-045-05-T15	Initiate Tank Retrieval From 20 Additional SSTs	09/30/2017
M-045-06	Complete Closure Of SST Farms with Approved Closure Plan	09/30/2024

Table 15-1. Tri-Party Agreement Milestones and Target Dates Through 2028. (7 sheets)

Tri-Party Agreement Milestone Requirement Number	Milestone Requirement Title	Due Date
M-045-06-T03	Initiate Closure Actions On WMA Basis	03/31/2012
M-045-06-T04	Complete Closure Actions On One WMA	03/31/2014
M-045-13	Interim Completion Of Tank S-112 SST Waste Retrieval And Closure	06/30/2011
M-045-13C	Update to the S-112 Component Closure Activity submitted	06/30/2011
M-045-13D	Exception to Waste Retrieval Criteria Pursuant to Agree Append H	06/30/2011
M-045-15	Interim Completion Of Tank S-102 SST Waste Retrieval And Closure	06/30/2011
M-045-15A	Submit A Retrieval Data Report Pursuant to Agee Appendix I	06/30/2011
M-045-15B	Remaining Wastes adequately Characterized, comp Risk Assessment	06/30/2011
M-045-15C	Update S-102 Component Closure Activity Plan	06/30/2011
M-045-15D	Exception to Waste Retrieval Criteria Pursuant to Agreem Appnx H	06/30/2011
M-045-56	Complete Implementation Of Agreed-To Interim Measures	TBD
M-045-56E	Ecology And DOE Agree, At A Minimum, To Meet Yearly (By July)	07/31/2009
M-045-56F	Ecology And DOE Agree, At A Minimum, To Meet Yearly (By July)	07/31/2010
M-045-59	Control Surface Water Infiltration Pathways As Needed	TBD
M-045-61	Phase 2 RCRA Facility Investigation/Corrective Measures Study	12/31/2010
M-045-62	Phase 2 Corrective Measures Implementation Work Plan For WMA C	07/31/2012
M-047-00	Complete Work Supporting Acquisition/Operation Of Waste Treatment	02/28/2018
M-047-03A	Complete Startup/Turnover For Waste Retrieval For Initial Tank	03/31/2009
M-047-06	Complete Negotiation Of Agreement Requirements-Treatment Complex	06/30/2010
M-050-00	Complete Pretreatment Processing Of Hanford Tank Waste	12/31/2028
M-051-00	Complete Vitrification Of Hanford High Level Tank Waste	12/31/2028
M-061-00	Complete Pretreatment And Immobilization Of Hanford LAW	12/31/2028
M-062-00	Complete Pretreatment Processing/Vitrification Of HLW & LAW	12/31/2028
M-062-00A	Complete WTP Pretreatment Processing/Vitrification Of Hanford HLW	02/28/2018
M-062-01T	Submit Semi-Annual Project Compliance Report	01/31/2010
M-062-01U	Submit Semi-Annual Project Compliance Report	07/31/2010
M-062-01V	Submit Semi-Annual Project Compliance Report	01/31/2011
M-062-01W	Submit Semi-Annual Project Compliance Report	07/31/2011
M-062-07B	Complete Assembly Of Low Activity Waste Vitrification Melter #1	12/31/2007
M-062-08	Submit Hanford Tank Waste Supp Treatment Technologies Report	06/30/2006
M-062-09	Start Cold Commissioning - Waste Treatment Plant	02/28/2009
M-062-10	Complete Hot Commissioning - Waste Treatment Plant	01/31/2011
M-062-11	Submit A Final Hanford Tank Waste Treatment Baseline	06/30/2007
M-083-00A	PFP Facility Transition And Selected Disposition Activities	09/30/2016
M-083-24	Submit S&M Plan Pursuant to Agreement Section 8.5.4	06/30/2012
M-083-43	Complete Transition of 242-Z Waste Treatment Facility & 236-Z PRF	09/30/2013
M-083-44	Complete Transition of 234-5Z&ZA/243-Z/291-Z & 291-Z-1 Facilities	09/30/2015
M-089-00	Closure Of Non-Permitted MW Units In 324 Bldg REC B&D Cells	09/30/2012
M-090-00	Acquire/Modify Facilities For Storage/Disposal of IHLW & ILAW	TBD
M-090-11	Complete Canister Storage Facility Construction	08/31/2010
M-091-00	Complete All Facilities For Handling TRU/TRUM And LLMW	TBD
M-091-01	Complete Facilities Prior To Disposal Of Post-1970 TRU/TRUM	TBD
M-091-03	Submit Hanford Site TRU/TRUM Waste PMP	TBD

Table 15-1. Tri-Party Agreement Milestones and Target Dates Through 2028. (7 sheets)

Tri-Party Agreement Milestone Requirement Number	Milestone Requirement Title	Due Date
M-091-03D-01	Submit Annual Revision of TRUM And MLLW PMP To Ecology	06/30/2010
M-091-03E	Submit Annual Revision Of TRUM And MLLW PMP To Ecology	06/30/2011
M-091-03F	Submit Annual Revision Of TRUM and MLLW PMP To Ecology	06/30/2012
M-091-03G	Submit Annual Revision Of TRUM And MLLW PMP To Ecology	06/30/2013
M-091-03H	Submit Annual Revision Of TRUM And MLLW PMP To Ecology	06/30/2014
M-091-03I	Submit Annual Revision Of TRUM And MLLW PMP To Ecology	06/30/2015
M-091-03J	Submit Annual Revision Of TRUM And MLLW PMP To Ecology	06/30/2016
M-091-03K	Submit Annual Revision Of TRUM And MLLW PMP To Ecology	06/30/2017
M-091-03L	Submit Annual Revision Of TRUM And MLLW PMP To Ecology	06/30/2018
M-091-03M	Submit Annual Revision Of TRUM And MLLW PMP To Ecology	06/30/2019
M-091-03N	Submit Annual Revision Of TRUM And MLLW PMP To Ecology	06/30/2020
M-091-03O	Submit Annual Revision Of TRUM And MLLW PMP To Ecology	06/30/2021
M-091-03P	Submit Annual Revision Of TRUM And MLLW PMP To Ecology	06/30/2022
M-091-40	Complete Retrieval Of CH-RSW & Substrate Sampling	TBD
M-091-40G-001	DOE Shall Retrieve All CH-RSW Within Burial Grounds	TBD
M-091-40G-T01	Retrieve 9,950 Cubic Meters of CH RSW	09/30/2009
M-091-40G-T02	Retrieve 10,700 cubic meters of CH RSW	09/30/2010
M-091-40G-T03	Retrieve CH-RSW 1000 Cubic Meters Per Year	09/30/2011
M-091-40G-T04	Retrieve CH-RSW 1000 Cubic Meters Per Year	09/30/2012
M-091-40G-T05	Retrieve CH-RSW 1000 Cubic Meters Per Year	09/30/2013
M-091-40G-T06	Retrieve CH-RSW 1000 Cubic Meters Per Year	09/30/2014
M-091-40L	Submit Quarterly Burial Ground Vent/Substrate Sampling Results	TBD
M-091-40L-025	Submit Oct-Dec 1st Quarter FY10 Burial Ground Sample Results	03/15/2010
M-091-40L-026	Submit Jan-Mar 2nd Quarter FY10 Burial Ground Sample Results	06/15/2010
M-091-40L-027	Submit Apr-Jun 3rd Quarter FY10 Burial Ground Sample Results	09/15/2010
M-091-40L-028	Submit Jul-Sep 4th Quarter FY10 Burial Ground Sample Results	12/15/2010
M-091-40L-029	Submit Oct-Dec 1st Quarter FY11 Burial Ground Sample Results	03/15/2011
M-091-40L-030	Submit Jan-Mar 2nd Quarter FY11 Burial Ground Sample Results	06/15/2011
M-091-40L-031	Submit Apr-Jun 3rd Quarter FY11 Burial Ground Sample Results	09/15/2011
M-091-40L-032	Submit Jul-Sep 4th Quarter FY11 Burial Ground Sample Results	12/15/2011
M-091-40L-033	Submit Oct-Dec 1st Quarter FY12 Burial Ground Sample Results	03/15/2012
M-091-40L-034	Submit Jan-Mar 2nd Quarter FY12 Burial Ground Sample Results	06/15/2012
M-091-40L-035	Submit Apr-Jun 3rd Quarter FY12 Burial Ground Sample Results	09/15/2012
M-091-40L-036	Submit Jul-Sep 4th Quarter FY12 Burial Ground Sample Results	12/15/2012
M-091-40L-037	Submit Oct-Dec 1st Quarter FY13 Burial Ground Sample Results	03/15/2013
M-091-40L-038	Submit Jan-Mar 2nd Quarter FY13 Burial Ground Sample Results	06/15/2013
M-091-40L-039	Submit Apr-Jun 3rd Quarter FY13 Burial Ground Sample Results	09/15/2013
M-091-40L-040	Submit Jul-Sep 4th Quarter FY13 Burial Ground Sample Results	12/15/2013
M-091-40L-041	Submit Oct-Dec 1st Quarter FY14 Burial Ground Sample Results	03/15/2014
M-091-40L-042	Submit Jan-Mar 2nd Quarter FY14 Burial Ground Sample Results	06/15/2014
M-091-40L-043	Submit Apr-Jun 3rd Quarter FY14 Burial Ground Sample Results	09/15/2014
M-091-40L-044	Submit Jul-Sep 4th Quarter FY14 Burial Ground Sample Results	12/15/2014
M-091-40L-045	Submit Oct-Dec 1st Quarter FY15 Burial Ground Sample Results	03/15/2015

Table 15-1. Tri-Party Agreement Milestones and Target Dates Through 2028. (7 sheets)

Tri-Party Agreement Milestone Requirement Number	Milestone Requirement Title	Due Date
M-091-40L-046	Submit Jan-Mar 2nd Quarter FY15 Burial Ground Sample Results	06/15/2015
M-091-40L-047	Submit Apr-Jun 3rd Quarter FY15 Burial Ground Sample Results	09/15/2015
M-091-40L-048	Submit Jul-Sep 4th Quarter FY15 Burial Ground Sample Results	12/15/2015
M-091-40L-049	Submit Oct-Dec 1st Quarter FY16 Burial Ground Sample Results	03/15/2016
M-091-40L-050	Submit Jan-Mar 2nd Quarter FY16 Burial Ground Sample Results	06/15/2016
M-091-40L-051	Submit Apr-Jun 3rd Quarter FY16 Burial Ground Sample Results	09/15/2016
M-091-40L-052	Submit Jul-Sep 4th Quarter FY16 Burial Ground Sample Results	12/15/2016
M-091-40L-053	Submit Oct-Dec 1st Quarter FY17 Burial Ground Sample Results	03/15/2017
M-091-40L-054	Submit Jan-Mar 2nd Quarter FY17 Burial Ground Sample Results	06/15/2017
M-091-40L-055	Submit Apr-Jun 3rd Quarter FY17 Burial Ground Sample Results	09/15/2017
M-091-40L-056	Submit Jul-Sep 4th Quarter FY17 Burial Ground Sample Results	12/15/2017
M-091-40L-057	Submit Oct-Dec 1st Quarter FY18 Burial Ground Sample Results	03/15/2018
M-091-40L-058	Submit Jan-Mar 2rd Quarter FY18 Burial Ground Sample Results	06/15/2018
M-091-40L-059	Submit Apr-Jun 3rd Quarter FY18 Burial Ground Sample Results	09/15/2018
M-091-40L-060	Submit Jul-Sep 4th Quarter FY18 Burial Ground Sample Results	12/15/2018
M-091-40M	Designate All CH RSW Retrieved From The RSW Trenches	TBD
M-091-40O	Designate Large Containers Determined To Be TRU Waste	TBD
M-091-41	Complete Retrieval Of RH RSW	12/31/2018
M-091-41A	Complete Retrieval Of Non-Caisson RH RSW	12/31/2014
M-091-41B	Complete Retrieval Of The 200A Caisson RH RSW In 218-W-4B	12/31/2018
M-091-41-T01	Initiate Full Scale Retrieval of RH RSW	01/01/2011
M-091-42	Complete The Treatment Or Certification Of CH TRUM (Paragraph 5)	TBD
M-091-42J-T02	Complete 200 Cubic Meters CH-TRUM by Target Date 9/30/10	09/30/2010
M-091-42O	Complete Treatment of CH-TRUM Volume TBD Per M-091-45	12/31/2011
M-091-42P	Treat All CH-TRUM In Storage on 7/1/11 by Date TBD per M-091-45	TBD
M-091-42Q	Complete Treatment of All CH-MLLW by Date TBD	TBD
M-091-43D-T01	Treat Additional 300 Cubic Meters	06/30/2010
M-091-43T-T01	Treat 300 CM Per Year Beg.No Later than Date TBD Per M-091-45	TBD
M-091-44A-T02	Treat RH TRUM at 300 Cubic Meters/Year by Target Date 6/30/2012	06/30/2012
M-091-44B	Treat Newly Generated RH TRUM Generated After 12/31/18	TBD
M-091-44C	Treat RH TRUM & CH TRUM At Minimum Rate Of 300 CM Per Year	06/30/2013
M-091-44D	Treat RH TRUM & CH TRUM At Minimum Rate Of 300 CM Per Year	06/30/2014
M-091-44E	Treat RH TRUM & CH TRUM At Minimum Rate Of 300 CM Per Year	06/30/2015
M-091-44F	Treat RH TRUM & CH TRUM At Minimum Rate Of 300 CM Per Year	06/30/2016
M-091-44G	Treat RH TRUM & CH TRUM At Minimum Rate Of 300 CM Per Year	06/30/2017
M-091-44H	Treat RH TRUM & CH TRUM At Minimum Rate Of 300 CM Per Year	06/30/2018
M-091-44I	Treat RH TRUM & CH TRUM At Minimum Rate Of 300 CM Per Year	06/30/2019
M-091-44J	Treat RH TRUM & CH TRUM At Minimum Rate Of 300 CM Per Year	06/30/2020
M-091-44K	Treat RH TRUM & CH TRUM At Minimum Rate Of 300 CM Per Year	06/30/2021
M-091-44L	Treat RH TRUM & CH TRUM At Minimum Rate Of 300 CM Per Year	06/30/2022
M-091-44M	Treat RH TRUM & CH TRUM At Minimum Rate Of 300 CM Per Year	06/30/2023
M-091-44N	Treat RH TRUM & CH TRUM At Minimum Rate Of 300 CM Per Year	06/30/2024
M-091-44O	Treat RH TRUM & CH TRUM At Minimum Rate Of 300 CM Per Year	06/30/2025

Table 15-1. Tri-Party Agreement Milestones and Target Dates Through 2028. (7 sheets)

Tri-Party Agreement Milestone Requirement Number	Milestone Requirement Title	Due Date
M-091-44-T01	Designate All RH TRU & Lrg Containers of CH TRU Above Ground	12/31/2012
M-091-44X	Treat Newly Generated RH-TRUM Within 1 Year Of Generation	TBD
M-091-45	Parties Will Complete Negotiations & DOE will submit Change Pkg	02/28/2010
M-092-00	Acquire Facilities For Cs/Sr, Na & SCW	TBD
M-092-05	Determine Disposition Path and Establish Cs/Sr Milestones.	06/30/2017
M-092-09	Establish Milestones and/or Target Dates For Sodium Facilities	09/30/2018
M-092-16	Complete Removal/Transfer/Initiate Storage Of PH-III 300 Area SCW	09/30/2015
M-093-00	Final Disposition Of 100 Area Surplus Production Reactor Bldgs	TBD
M-093-20	Complete 105-N Reactor Interim Safe Storage	09/30/2012
M-093-22	Complete 105-KE Reactor Interim Safe Storage	07/31/2014
M-094-00	Complete Disposition Of 300 Area Surplus Facilities	09/30/2015
M-094-08	Complete the selected removal and/or remedial actions	12/31/2011
M-094-09	Complete the selected removal and/or remedial actions	09/30/2013

This page intentionally left blank.

Section 16.0

16.0 REFERENCES

DOE, 2005, *Calendar Year 2004 Land Disposal Restrictions Report Comment Responses*, 05-AMCP-0318, July 12, 2005, U.S. Department of Energy, Richland Operations Office, Richland, Washington.

DOE/EIS-0391, 2009, *Draft Tank Closure and Waste Management Environmental Impact Statement for the Hanford Site, Richland, Washington*, U.S. Department of Energy, Richland Operations Office, Richland, Washington.

DOE/EIS-0113, 1987, *Disposal of Hanford Defense High-Level Transuranic and Tank Wastes Environmental Impact Statement*, U.S. Department of Energy, Richland Operations Office, Richland, Washington.

DOE/EIS-0189, 1996, *Final Environmental Impact Statement for the Tank Waste Remediation System*, U.S. Department of Energy, Washington, D.C.

DOE/EIS-0200-F, *Final Waste Management Programmatic Environmental Impact Statement for Managing Treatment, Storage, and Disposal of Radioactive and Hazardous Wastes*, U.S. Department of Energy, Richland Operations Office, Richland, Washington.

DOE/EIS-0222-F, *Final Hanford Comprehensive Land-Use Plan Environmental Impact Statement*, U.S. Department of Energy, Richland Operations Office, Richland, Washington.

DOE/EIS-0286-F, 2004, *Final Hanford Site Solid (Radioactive and Hazardous) Waste Program Environmental Impact Statement,* U.S. Department of Energy, Richland Operations Office, Richland, Washington.

DOE/RL-91-27, *Hanford Facility Dangerous Waste Permit Application, 222-S Laboratory Complex*, U.S. Department of Energy, Richland Operations Office, Richland, Washington, latest revision.

DOE/RL-95-35, 1995, *Direct Disposal Team Report*, Rev. 0, U.S. Department of Energy, Richland, Washington.

DOE/RL-95-36, 2002, *Hanford Facility Dangerous Waste Permit Application, T Plant Complex*, Rev. 1, U.S. Department of Energy, Richland Operations Office, Richland, Washington.

DOE/RL-96-73, 1998, *324 Building Radiochemical Engineering Cells, High-Level Vault, Low-Level Vault, and Associated Areas Closure Plan*, Rev. 1, U.S. Department of Energy, Richland Operations Office, Richland, Washington.

DOE/RL-98-19, 2008, *Surveillance and Maintenance Plan for the 202-S Reduction Oxidation (REDOX) Facility*, Rev. 3, U.S. Department of Energy, Richland Operations Office, Richland, Washington.

DOE/RL-98-20, 2000, *Surveillance and Maintenance Plan for the 221-U Facility (U Plant)*, Rev. 1, U.S. Department of Energy, Richland Operations Office, Richland, Washington.

DOE/RL-98-22, 1999, *Surveillance and Maintenance Plan for the Uranium Trioxide (UO_3) Facility*, Rev. 0, U.S. Department of Energy, Richland Operations Office, Richland, Washington.

DOE/RL-98-35, 2008, *Surveillance and Maintenance Plan for the Plutonium-Uranium Extraction (PUREX) Facility*, Rev. 3, U.S. Department of Energy, Richland Operations Office, Richland, Washington.

DOE/RL-98-64, 1998, *Surveillance and Maintenance Plan for the 100-N Area Deactivated Facilities*, Rev. 0, U.S. Department of Energy, Richland Operations Office, Richland, Washington.

DOE/RL-99-24, 2008, *Surveillance and Maintenance Plan for the 221-B Facility (B-Plant)*, Rev. 3, U.S. Department of Energy, Richland, Washington.

DOE/RL-2000-39, 2000, *Interim Report on Hanford Site Land Disposal Restrictions for Mixed Waste*, three volumes, U.S. Department of Energy, Richland Operations Office, Richland, Washington.

DOE/RL-2002-14, 2007, *Tanks/Lines/Pits/Boxes/Septic Tank and Drain Fields Waste Group Operable Unit RI/FS Work Plan and RCRA TSD Unit Sampling Plan; Includes: 200 IS-1 and 200-ST-1 Operable Units*, Rev. 1, U.S. Department of Energy, Richland Operations Office, Richland, Washington.

DOE/RL-2004-57, 2004, *Hanford Site Pollution Prevention and Waste Minimization Program Plan*, Rev. 0, U.S. Department of Energy, Richland Operations Office, Richland, Washington.

DOE/RL-2004-68, 2005, *Action Memorandum for the Non-Time-Critical Removal Action for the 224-T Plutonium Concentration Facility*, Rev. 0, U.S. Department of Energy, Richland Operations Office, Richland, Washington.

DOE/RL-2004-83, 2008, *U Plant Ancillary Facilities Removal Action Work Plan, Phase II*, Rev. 1, U.S. Department of Energy, Richland Operation Office, Richland, Washington.

DOE/RL-2008-51, 2008, *241-CX Tank System Closure Plan*, Rev. 0, U.S. Department of Energy, Richland Operations Office, Richland, Washington.

Ecology, *Hanford Facility Resource Conservation and Recovery Act Permit* (WA7890008967), as revised.

Ecology, 2000, Washington State Department of Ecology, U.S. Environmental Protection Agency, U.S. Department of Energy, Richland Operations Office, U.S. Department of Energy, Office of River Protection, *Framework Agreement for Management of Polychlorinated Biphenyls (PCBs) in Hanford Tank Waste*, dated August 31, 2000.

Ecology, EPA, 2000, *Final Determination,* March 29, 2000, Washington State Department of Ecology and U.S. Environmental Protection Agency, Region 10.

Ecology, EPA, and DOE, 1989, *Hanford Federal Facility Agreement and Consent Order*, Washington State Department of Ecology, U.S. Environmental Protection Agency, U.S. Department of Energy, Olympia, Washington, as amended.

Ecology, DOE-ORP, and DOE-RL, 2003, "M-026 LDR Report Project Manager Meeting Minutes," October 21, 2003, Washington State Department of Ecology; U.S. Department of Energy, Office of River Protection; and U.S. Department of Energy, Richland Operations Office.

Ecology, DOE-ORP, and DOE-RL, 2004, "M-026 LDR Report Project Manager Meeting Minutes," January 20, 2004, Washington State Department of Ecology; U.S. Department of Energy, Office of River Protection; and U.S. Department of Energy, Richland Operations Office.

Ecology to DOE-RL, Approval of Site-Specific Land Disposal Restrictions (LDR) Variance Request, August 21, 2009.

EPA, 1990, *Guidance on the Land Disposal Restrictions' Effect on Storage and Disposal of Commercial Mixed Waste*, Directive #9555.00-01, U.S. Environmental Protection Agency, Office of Solid Waste and Emergency Response, Washington, D.C.

Electronic Reporting Forms for Waste Reduction Accomplishments and Status, database maintained by the Mission Support Alliance, LLC Pollution Prevention Group, Intranet address http://www7.rl.gov/rapidweb/POLPREV/polprev/addform.cfm.

French, R. T., 2000, "Submittal of Sixty-Day Notifications Required by Final Determination," (letter 00-ORL-055 to T. C. Fitzsimmons, Washington State Department of Ecology) U.S. Department of Energy, Richland Operations Office, Richland, Washington, May 23.

Hebdon, J., 2001, "Request to Formalize 221-T Tank System Closure Agreement," (letter 01-RCA-192 to F. C. Jamison, Washington State Department of Ecology) U.S. Department of Energy, Richland Operations Office, Richland, Washington, March 9.

HNF-7342, 2000, *Waste Encapsulation and Storage Facility Waste Analysis Plan*, Rev. 0, Fluor Hanford, Inc., Richland, Washington.

HNF-17211, 2003, *As Low As Reasonably Achievable Control Technology Demonstration for the T Plant Complex*, Rev. 0, Fluor Hanford, Inc., Richland, Washington.

HNF-19169, 2009, *M-91 Transuranic Mixed/Mixed Low-Level Waste Project Management Plan*, Rev. 6, CH2M HILL Plateau Remediation Company, Richland, Washington.

HNF-EP-0063, 2009, *Hanford Site Solid Waste Acceptance Criteria*, Rev. 15, CH2M HILL Plateau Remediation Company, Richland, Washington.

HNF-EP-0182, *Waste Tank Summary Report for the Month Ending December 31, 2004*, Rev. 201, CH2M HILL Hanford Group, Inc., Richland, Washington.

HNF-EP-0918, 2004, *Solid Waste Integrated Forecast Technical (SWIFT) Report, FY2008 – FY2035*, Fluor Hanford, Inc., Richland, Washington.

HNF-SD-WM-PLN-119, 1997, *Tank Farms Solid Waste Characterization Guide with Sampling and Analysis Plan Attachment*, Rev. 1, RUST Federal Services of Hanford, Inc., Richland, Washington.

ORP, 2001, *Bechtel National, Inc., Design, Construction, and Commissioning of the Hanford Tank Waste Treatment and Immobilization Plant*, Contract No. DE-AC27-01RV14136, U.S. Department of Energy, Office of River Protection, Richland, Washington.

PNNL-11927, 1998, *A Compilation of Regulated Organic Constituents Not Associated with the Hanford Site, Richland, Washington*, Pacific Northwest National Laboratory, Richland, Washington.

PNNL-11943, 1998, *An Assessment of the Stability and the Potential for In-Situ Synthesis of Regulated Organic Compounds in High Level Radioactive Waste Stored at Hanford, Richland, Washington*, Pacific Northwest National Laboratory, Richland, Washington.

PNNL-12039, 1998, *Rationale for Selection of Pesticides, Herbicides, and Related Compounds from the Hanford SST/DST Waste Considered for Analysis in Support of the Regulatory DQO (Privatization)*, Pacific Northwest National Laboratory, Richland, Washington.

RPP-29498, 2006, *Waste Analysis Plan for the 222-S Dangerous and Mixed Waste Treatment, Storage, and Disposal Unit*, Rev. 0, CH2M HILL Hanford Group, Inc., Richland, Washington.

Solid Waste Information Tracking System (SWITS)

Washington v. Bodman, Civil No. 2:03-cv-05018-AAM, January 6, 2006.

Appendix A

APPENDIX A

LAND DISPOSAL RESTRICTIONS REPORTING REQUIREMENTS

This page intentionally left blank.

APPENDIX A

LAND DISPOSAL RESTRICTIONS REPORTING REQUIREMENTS

The LDR reporting requirements and requirements of the Final Determination (Ecology, EPA 2000) are presented in Table A-1. Table A-1 is a crosswalk linking the requirements for this document to the location in the document where these requirements are addressed. Some of the items identified in the table were one-time requirements from the Final Determination that have been met already. For those items, the table indicates how the one-time requirements were closed out.

Additional LDR reporting requirements are established through monthly Tri-Party Agreement Project Manager Meetings.

Table A-1. Land Disposal Restrictions Requirements. (8 sheets)

Item[1]	Section ID[2]	Requirement[3]	Location of Information[4]
1	1.a (1990) IV.3.A.1, pg 16 (FD) IV.3.A.1.a, pg 16 (FD) IV.3.A.1, pg 17 (FD) IV.3.A.3, pg 18 (FD) IV.3.B.a, pg 19 (FD) 23 items (Ltr)	Identification of mixed waste	Treatability Group Data Sheet (TGDS) 1.1 and 1.2, as well as LSDS** 1.1. LDR mixed waste is presented by a combination of treatment path forward and storage location on the two types of waste stream data sheets. In addition, the Potential Mixed Waste (PMW) Table (Appendix C) presents PMW that have the potential to be reported in the data sheets in future years, but currently are reported in a format that resulted from discussions with Ecology and EPA.
2	1.a (1990) IV.3.A.1, pg 16 (FD) IV.3.A.1.a, pg 16 (FD) IV.3.B.a, pg 19 (FD)	Description of mixed waste	Identification and description are included as part of Items 3 through 11 of this table. TGDS 1.2 and portions of 3.0, as well as LSDS 1.3.1 and other portions of 1.0
3	1.a (1990) IV.3.A.1.b, pg 16 (FD)	RCRA hazardous waste code	TGDS 3.3.2
4	IV.3.A.1.c, pg 16 (FD)	Applicable LDR treatment standard(s) and underlying hazardous constituents	TGDS 3.3.2
5	1.a (1990) IV.3.A.1, pg 16 (FD) IV.3.A.1.a, pg 16 (FD) IV.3.A.1.c, pg 16 (FD)	Process information necessary for waste identification and LDR determinations	LSDS 1.3 and 2.12, applicable profiles referenced in LSDS 1.2
6	1.a (1990) IV.3.A.1.c, pg 16 (FD)	History of how the waste was generated	LSDS 1.3 and 2.12
7	1.a (1990) IV.3.A.1.c, pg 16 (FD)	Source of the hazardous constituents	LSDS 1.3
8	1.a (1990) IV.3.A.1.c, pg 16 (FD)	How the waste was managed before storage	LSDS 2.1.1
9	1.a (1990) IV.3.A.1.c, pg 16 (FD)	General timeframe determination that serves to categorize when the waste was placed in storage	LSDS 2.1.2 and portions of 1.3

Table A-1. Land Disposal Restrictions Requirements. (8 sheets)

Item[1]	Section ID[2]	Requirement[3]	Location of Information[4]
10	1.a (1990) IV.3.A.1.d, pg 16 (FD)	Radioactivity type	TGDS 3.1.1 and 3.1.2.
11	1.a (1990) IV.3.A.1.e, pg 16 (FD)	Physical form of the waste	TGDS 3.2.1 and 3.3.2.
12	1.b (1990) IV.3.A.1.f, pg 16 (FD)	Quantity of waste	TGDS 2.1, as well as LSDS 2.3.
13	1.c (1990) IV.3.A.1.g, pg 16 (FD) IV.3.A.1, pg 17 (FD)	Physical location	LSDS 2.1 and 2.2
14	1.c (1990) IV.3.A.1.g, pg 16 (FD)	Method of storage	LSDS 2.1 and 2.2.
15	1.c (1990) IV.3.A.1.g, pg 16 (FD)	List of areas permitted for storage	LSDS 2.5.
16	1.d (1990) IV.3.A.1.h, pg 16 (FD) IV.3.A.2, pg 17 (FD) IV.3.A.2, pg 17 (FD) IV.3.A.2, pg 17 (FD)	DOE assessment of the compliance status	LSDS 2.7, Potential Mixed Waste Table (Appendix C), and Chapter 3.0.
17	IV.3.A.2, pg 17 (FD)	Notification of which DOE organization is responsible for assessment within 60 days of final determination issuance.	Timely notification was provided by letter (French 2000) and attachment. Item complete.
18	IV.3.A.2, pg 17 (FD)	Procedure used for assessments must meet minimum regulatory requirements (WAC 173-303 and 40 CFR 265)	Timely notification was provided by letter (French 2000) and attachment. Item complete.
19	IV.3.A.2, pg 17 (FD)	Opportunity for Ecology review and comment must be provided while developing assessment schedules and procedures	Timely notification was provided by letter (French 2000) and attachment. Item complete.
20	1.e (1990) IV.3.A.1.i, pg 17 (FD)	Identification of any releases	LSDS 2.9, as well as in Chapter 5.0.

Table A-1. Land Disposal Restrictions Requirements. (8 sheets)

Item[1]	Section ID[2]	Requirement[3]	Location of Information[4]
21	1.f (1990) IV.3.A.1.j, pg 17 (FD)	Generation rates	TGDS 2.2, as well as LSDS 2.6, Table 2-1 and Table 2-2 contain estimates for the next 5 years.
22	1.f (1990) IV.3.A.1.j, pg 17 (FD)	Estimate of the storage capacity	LSDS 2.4 and Section 4.1.
23	1.f (1990) IV.3.A.1.j, pg 17 (FD)	When storage capacity will be reached	LSDS 2.4 and Section 4.1.
24	1.f (1990) IV.3.A.1.j, pg 17 (FD)	Identification of the bases and assumptions used in making the estimate	LSDS 2.4 2.12, and Chapter 4.0 text when applicable.
25	1.g (1990) IV.3.A.1.k, pg 17 (FD)	Plans to submit requests for variances, case-by-case extensions of the LDR requirements, or other exemptions	TGDS 4.8 and 5.0, and LSDS 2.10, and Section 4.3.
26	2 (1990) IV.3.A.1.k, pg 17 (FD)	Provide for the submittal of requests for case-by-case extensions, variances, and other exemptions of the LDR requirements in accordance with Section 3004 of RCRA	TGDS 4.8 and 5.0, and LSDS 2.10, and Section 4.3.
27	3 (1990) IV.3.A.3.a, pg 19 (FD) IV.3.A.3.a, pg 19 (FD)	Plan and schedule to characterize all waste	LSDS 2.11, Chapter 9.0 Chapter 10.0, Chapter 11.0, Chapter 13.0, and Chapter 14.0.
28	IV.3.A.3, pg 19 (FD)	Reporting of waste characterization plan must delineate steps necessary to confirm which streams are subject to LDR	LSDS 2.11, Chapter 9.0 Chapter 10.0, Chapter 11.0, Chapter 13.0, and Chapter 14.0.
29	3 (1990) IV.3.A.3, pg 19 (FD)	Report characterization results to EPA and Ecology	Chapter 8.0
30	3 (1990)	Steps necessary to confirm which waste and which waste streams are subject to the LDR	TGDS 3.3.6
31	4.a (1990)	Treatment and disposal technologies	TGDS 3.3.2, and 5.0, Chapter 9.0, Chapter 10.0, Chapter 11.0, Chapter 13.0, and Chapter 14.0.
32	4.a (1990)	Treatment capacity	TGDS 4.3, Chapter 9.0, Chapter 10.0, Chapter 11.0, Chapter 13.0, and Chapter 14.0.
33	4.b (1990)	Commercial treatment technologies	Chapter 9.0.

Table A-1. Land Disposal Restrictions Requirements. (8 sheets)

Item[1]	Section ID[2]	Requirement[3]	Location of Information[4]
34	4.b (1990)	Capacity currently available	Chapter 9.0, Chapter 10.0, Chapter 11.0, Chapter 13.0, and Chapter 14.0.
35	4.c (1990)	DOE treatment technologies	Chapter 9.0, Chapter 10.0, and Chapter 11.0
36	4.c (1990)	Extent of capacity currently available	Chapter 9.0, Chapter 10.0, and Chapter 11.0
37	4.d (1990)	Whether any new commercial or DOE treatment capacity is scheduled to be available	Chapter 9.0, Chapter 10.0, and Chapter 11.0
38	4.d (1990)	When such new capacity will be available	Chapter 9.0, Chapter 10.0, and Chapter 11.0
39	4.e (1990)	Alternate technologies which are in development and which may be used to manage these LDR wastes	Chapter 9.0, Chapter 10.0, and Chapter 11.0
40	4.e (1990)	Assessment of when such alternate technologies may become available	Chapter 9.0, Chapter 10.0, and Chapter 11.0
41	4.f (1990)	Basis and assumptions used	TGDS 4.9 and Chapter 9.0, Chapter 10.0, and Chapter 11.0.
42	4.f (1990)	Foreseeable contingencies	Chapter 9.0, Chapter 10.0, and Chapter 11.0.
43	5 (1990) IV.3.A.3, pg 18 (FD)	Milestones and schedules for the development and implementation of treatment technologies	TGDS 4.4, 4.5, and 4.6, Chapter 9.0, Chapter 10.0, Chapter 11.0, Chapter 13.0, and Chapter 14.0.
44	5 (1990) IV.3.A.3, pg 18 (FD) IV.3.A.3.a, pg 18 (FD)	All applicable milestones and associated schedules for developing and implementing treatment or management technologies	TGDS 4.4, 4.5, and 4.6, Chapter 9.0, Chapter 10.0, Chapter 11.0, Chapter 13.0, and Chapter 14.0.
45	IV.3.A.3.a, pg 18 (FD)	Schedules for submitting applicable permit applications, initiating construction, conducting systems testing, commencing operations, and processing backlogged and currently generated waste, for those waste types for which treatment technologies exist	TGDS 4.4, 4.5, and 4.6, Chapter 9.0, Chapter 10.0, Chapter 11.0, and Chapter 15.0.

Table A-1. Land Disposal Restrictions Requirements. (8 sheets)

Item[1]	Section ID[2]	Requirement[3]	Location of Information[4]
46	IV.3.A.3.b, pg 18 (FD)	Schedules for identifying and developing treatment technologies for those waste types for which **no** treatment technologies currently exist, to include identification of funding requirements for the identification and development of such technologies, submitting treatability study exemptions, and submitting research and development permit applications	TGDS 4.4, 4.5, and 4.6, Chapter 9.0, Chapter 10.0, Chapter 11.0, and Chapter 15.0.
47	IV.3.A.3.c, pg 18 (FD)	Requirements for all cases where DOE proposes radionuclide separation of mixed waste or materials derived from mixed waste	Section 9.4, Section 10.5, and Section 11.3.
48	6 (1990)	Provide that DOE may treat LDR waste in accordance with applicable law in advance of approved milestone dates	Activities always can be completed in advance of the milestone date, and are whenever possible.
49	IV.3.A.3, pg 18 (FD)	Propose milestones and associated schedules for known waste not covered by the report to be incorporated and established in accordance with the Tri-Party Agreement Action Plan (Section 12)	TGDS 4.6, Section 1.3 Chapter 9.0, Chapter 10.0, Chapter 11.0, and Chapter 15.0.
50	7 (1990)	Identified methods for minimizing the generation of LDR waste	LSDS 3.2 and Chapter 6.
51	7 (1990)	Process changes that can be made to reduce or eliminate LDR waste	LSDS 3.2 and Chapter 6.
52	7 (1990)	Methods to minimize the volume of regulated and restricted waste through segregation and avoidance of commingling	LSDS 3.2, 3.3.3, and Chapter 6.
53	7 (1990)	Substitution of less toxic materials for materials currently used at the Hanford Site	LSDS 3.2, 3.3.3, and Chapter 6.
54	7 (1990)	Schedule for implementing waste minimization procedures	LSDS 3.3.2 and 3.3.3.
55	7 (1990)	Projections for reducing newly generated waste	LSDS 3.3.2.
56	7 (1990)	Basis for developing projections	LSDS 3.3.3.

Table A-1. Land Disposal Restrictions Requirements. (8 sheets)

Item[1]	Section ID[2]	Requirement[3]	Location of Information[4]
57	7 (1990)	Assumptions used in developing the projections	LSDS 3.3.3 (LSDS) and Chapter 6.0.
58	7 (1990)	Annually revise and submit as part of the annual report that portion of the storage report associated with Item 1 of this table, to conform with the generation projections contained in the Waste Minimization Plan	The LDR report is revised annually, including the waste minimization content.
59	7 (1990)	As part of the annual report, DOE shall submit an amendment to the Waste Minimization Plan	Chapter 6.0.
60	7 (1990)	Annually, DOE shall revise and submit that portion of the Storage Report associated with Item 1 (and the "1990" reference) of this table, to conform with generation projections contained in the update to the Waste Minimization Plan	LSDS 3.1, 3.2, 3.3, and Chapter 6.
61	IV.3.A.3, pg 18 (FD) IV.3.A.3, pg 18-19 (FD)	The Annual LDR Report must include a waste characterization plan and associated schedules based on the waste identified in accordance with the final determination.	Chapter 9.0, Chapter 10.0, Chapter 11.0, Chapter 13.0, and Chapter 14.0.
62	8 (1990)	Describe how information, plans, and schedules contained in the LDR Plan will be updated as part of the annual report	Section 1.3
63	8 (1990)	Describe how and when the LDR Plan will be revised and reissued	Section 1.3.
64	IV.3.B.c, pg 19 (FD)	Each waste stream has an associated statement by DOE documenting whether sufficient work has been performed for continued compliance	Not applicable, based on Pollution Control Hearings Board stipulations.
65	IV.3.B.d, pg 19 (FD)	The Annual LDR Report will serve as a vehicle to propose schedules for newly discovered or to be generated mixed waste not yet covered by the report or the Tri-Party Agreement	Newly identified waste has been and continues to be added to the report each year, subject to scope of the report and waste stream definition.

Table A-1. Land Disposal Restrictions Requirements. (8 sheets)

Item[1]	Section ID[2]	Requirement[3]	Location of Information[4]
66	IV.3.B.e, pg 19 (FD)	Annual LDR report will serve as vehicle to propose modified Tri-Party Agreement schedules as necessary to achieve compliance with LDR treatment requirements in a manner equivalent to STPs as required by FFCA	Section 1.3.
67	IV.3.A.3.a, pg 19 (FD)	Proposed plans and schedules to sufficiently characterize mixed waste, including an inventory of mixed waste not sufficiently characterized by sampling and analysis	LSDS 2.11, Chapter 9.0, Chapter 10.0, and Chapter 11.0.
68	IV.3.B.b, pg 19 (FD) IV.3.B.f, pg 20 (FD)	LDR report will be published as a primary document and will propose new waste streams as necessary	Signature page states that this report is a primary document, Section 1.1, and Section 1.3.
69	IV.3.B.b, pg 19 (FD)	LDR report will support equivalency to FFCA STPs	M-026-01 Milestone description. While not identical to an STP, the LDR report is equivalent to an STP.
70	IV.3.B.c, pg 19 (FD)	LDR report will serve as unified site-wide document detailing requirements of LDR Requirements Document[2]	This table delineates how the LDR report meets these requirements; refer to all items in second column of this table marked with "(1990)"
71	IV.3.B.c, pg 19 (FD)	LDR report will report DOE actions planned and taken to achieve and maintain full compliance with LDR and associated Tri-Party Agreement requirements in effect as of LDR report submittal date	This table delineates how the LDR report meets these requirements, refers to all items in second column of this table.
72	IV.3.B.f, pg 20 (FD)	Inclusion of specific statement regarding the LDR report being a primary document, and regarding binding and enforceable nature of contents: "This document has been prepared, submitted, revised and approved as a primary document in response to the requirements of Tri-Party Agreement Milestone Series M-26-01 and related RCRA LDR and Tri-Party Agreement requirements. As such, this document serves as a binding and enforceable document under the Tri-Party Agreement."	The signature page states that this report is a primary document and includes the required language.

Table A-1. Land Disposal Restrictions Requirements. (8 sheets)

Item[1]	Section ID[2]	Requirement[3]	Location of Information[4]
73	IV.3.B.f, pg 20 (FD)	Inclusion of specific statement regarding approval by DOE and Ecology: "Approval of DOE's annual LDR Report as a Tri-Party Agreement primary document shall be by written approval of DOE and Ecology IAMIT representatives." Signature blocks are to follow the above statement.	The signature page states that this report is a primary document, and includes signature blocks.
74	IV.3.C, pg 20 (FD)	The LDR report submitted in 2000 is an interim report documenting known information, and detailing actions planned to fully comply with the final determination.	Completed by issuing DOE/RL-2000-39, Volumes 1 through 3, July 2000.

FD = Final determination
LSDS = Location specific data sheet
STP = Site treatment plan

[1]Item number supplied for the convenience of the reader.
[2]The notation "(1990)" refers to the four-page "Requirements for the Hanford LDR Plan" (LDR Requirements Document) signed by EPA and Ecology in 1990. The notation "(FD)" refers to the "Director's Final Determination" issued by Ecology on March 29, 2000. The notation "(Ltr)" refers to the January 25, 2000 clarification letter from Ecology delineating the wastes required to be reported. Additional modifications to requirements have been made in the Resolution of Dispute dated March 14th, 2002 and during the monthly Tri-Party Agreement Project Managers Meeting for M-026-01.
[3]The text in this column is a brief summary of the requirement(s).
[4]The information in this column refers to the location of the information within this annual LDR report; For information presented on the data sheets of Appendix B "(TGDS)" refers to the treatability group data sheet, and "(LSDS)" refers to the location –specific data sheet. A brief description of how the two types of data sheets are related can be found in Section 1.2 (see also Figure B-1 of Appendix B)

This page intentionally left blank.

Appendix B

APPENDIX B

WASTE STORAGE REPORT DATA SHEETS

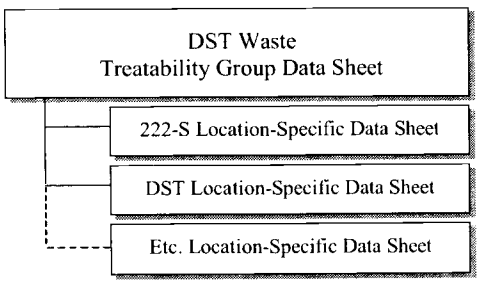
This page intentionally left blank.

APPENDIX B

WASTE STORAGE REPORT DATA SHEETS

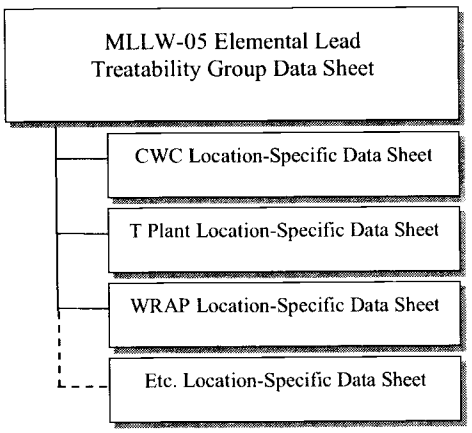
Figure B-1. Example Relationship Between Location-Specific and Treatability Group Data Sheets.

Relationship Between LDR Treatability Group and Location-Specific Data Sheets



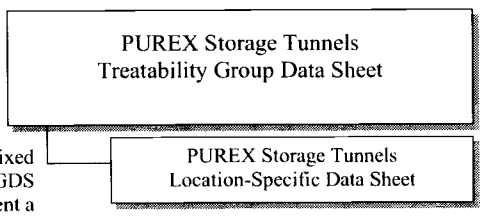
Treatability group data sheets (TGDSs) describe the common physical and chemical characteristics of the waste streams. They also provide a quantitative summary of some data in the associated location-specific data sheets (LSDSs).

Each TGDS has one or more LSDS associated with it. The LSDS describe on a plant/unit/project basis how, where, and how much of the waste is stored, and give a glimpse of the waste's past and future. Unique information is included on LSDSs that is not reflected on TGDS. The LDR report requires both to provide a clear picture of each waste stream.



In this example, the CWC LSDS would contain the CWC inventory and projected generation for any waste generated at CWC and coming from offsite directly to CWC.

LSDSs for generating locations contain the current facility inventory of this waste (if any, because SAA/90-day waste is not part of stored inventory), plus 5-year generation projections (including SAA/90-day waste).



This is an example of data sheets for mixed waste stored "long-term". Both a TGDS and a LSDS are required to present a complete picture of the waste.

Each treatability group data sheet is followed by one or more location-specific data sheets that fall within that treatability group. Refer to Figure B-1 of this document for details of how the two types of sheets relate to each other. Refer to Table B-1 of this document for the index of data sheets.

GENERAL INSTRUCTIONS FOR ALL DATA SHEETS:

The basis for LDR reporting in this document is CY 2009, unless stated otherwise.

B1.0 TREATABILITY GROUP DATA SHEET DATA FIELD DESCRIPTIONS

The following items are numbered to correspond to the numbers on the treatability group data sheets (i.e., the numbers refer to the data field locations in the data sheets).

1.0 Waste Stream Identification

1.1 Treatability group name: Supplies a short, descriptive name for the waste within the treatability group.

1.2 Description of waste (list WSRd [waste specification record] numbers for this waste stream, as applicable): Provides an overall description of the waste streams reported under the treatability group. WSRd numbers indicate a waste treatment and/or disposal pathway, and are used principally for waste stored at the CWC or received from off-site. Note that the grouping of waste into a treatability group can be based on any of the following: proposed treatment technology, storage location, or waste source. If there is no WSRd applicable to the treatability group, a description must still be provided.

2.0 Waste Stream Inventory and Generation

2.1 Current total inventory for this waste stream (stored waste only, not accumulation areas). Total volume (cubic meters): Automatically summed from stored inventory reported in individual location-specific data sheets contributing to the treatability group data sheet.

2.2 Estimated generation projection by calendar year: Listed by year, and m^3 and/or kg: Also automatically summed from individual location-specific data sheets contributing to the treatability group data sheet.

3.0 Waste Stream Characterization

3.1 Radiological characteristics

3.1.1 Mixed waste type. Lists three options, one of which must be selected. The choice indicates radiological classification (either high-level, transuranic, or low-level). If more than one selection applies to the treatability group data sheet, select the most appropriate one and enter explanatory comments in Section 3.1.3.

3.1.2 Handling (as package contents would need to be handled during treatment). Lists two options, one of which must be selected. The choice differentiates between contact- and remote-handled waste types. The choice made reflects the waste as if no longer packaged for storage, but instead as if it were unpackaged and handled for treatment. If more than one selection applies to the treatability group data sheet, select the most appropriate one and enter explanatory comments in Section 3.1.3.

3.1.3 Comments on radiological characteristics (e.g., more specific information on content, treatment concerns caused by radiation, confidence level): Provides space for explanatory information on radiological characteristics of the waste that cannot be supplied in the multiple-choice format used in previous sections of this data sheet. (Refer to explanations above for previous sections of the treatability group data sheet.)

3.2 Physical form

3.2.1 Physical form of the waste. Lists five options, one or more of which must be selected. The choice indicates the physical form (either solid, liquid, semi-solid, debris, or other). If the "Other" choice is selected or if there are any comments on the physical form, enter explanatory comments in Section 3.2.2.

3.2.2 Comments on physical form: Indicate any comments on the physical form of the waste within the treatability group data sheet. If there are no comments, enter "None."

3.3 Regulated constituents and wastewater/nonwastewater category

3.3.1 Wastewater/non-wastewater under RCRA. Lists three options, one of which must be selected. The choice indicates whether, under federal LDR requirements defined in 40 CFR 268.2, the waste stream is considered wastewater, non-wastewater, or is of an unknown type. For state-only dangerous waste select unknown.

3.3.2 Regulated constituent table including treatment requirements and UHCs, if applicable. Provides the following information in a table. Note that underlying hazardous constituent (UHC) information is included in this table. Footnotes provide further explanation for the table, as applicable:

- The EPA or state-only "EPA/State numbers" indicate the listed or characteristic waste numbers such as D001, F005, etc. Note that not all waste numbers listed in the table for waste reported on any particular treatability group data sheet will be applicable to all subcategories of waste in the treatability group (nor, therefore, will all waste numbers apply to each location-specific data sheet contributing to a particular treatability group). Note also that for waste for which more than one subcategory applies, the waste number appears in this table once for each of the applicable LDR subcategories.

- The "Waste description" indicates the characteristics of the waste or constituents of concern (e.g., "ignitable" or "methyl ethyl ketone").

- The "LDR subcategory" indicates any applicable subcategory of the assigned waste number (e.g., "corrosive characteristic waste" or "radioactive high level waste" for D002). The LDR subcategory applies only to D001 through D011. Some data sheets could show the constituent of concern in this field for F-coded waste. Note that if more than one subcategory applies, the waste number appears in this table once for each of the applicable LDR subcategories.

- "Concentration (typical or range)" of the constituent, if known, is included in the table as a range or a single value. In some cases, the concentration might not be known; in that case, this field is labeled "TBD" or explained with a footnote to the table or elsewhere in the data sheet.

- "Basis" explains how the concentration information was determined (i.e., "process knowledge" and/or "analytical data").

- The final column, "LDR Treatment Concentration Standard or Technology Code", lists either the regulatory-required method for treating the waste, or the required final concentration, as obtained from the applicable regulations. Note that transuranic mixed waste is a special case.

3.3.3 **List any waste numbers from Section 3.3.2 for which the waste stream already meets established LDR treatment standards**. Lists three options, one of which must be selected, that indicates the treatment status of the waste in the treatability group. When the "list" option is selected, the waste numbers from the Section 3.3.2 table must be entered meeting treatment standards.

3.3.4 **Does this waste stream contain PCBs?** Lists three options, one of which must be selected regarding PCB content. The basis for the choice made can be process knowledge or laboratory analysis.

3.3.4.1 **Is waste stream subject to TSCA regulations for PCBs?** Implies applicability as determined by TSCA regulations. Only answer this question when Section 3.3.4 is answered as "yes."

3.3.4.2 **Indicate the PCB concentration range (ppm)**. Lists three options in a multiple choice format for reporting the appropriate PCB concentration range. Only answer this question when Section 3.3.4 is answered as "yes."

3.3.5 **What is the confidence level for the regulated constituents?** Lists three options, one of which must be selected. This assigns a subjective rating to the accuracy of the information presented on regulated constituents.

3.3.6 **Comments on regulated constituents and wastewater/nonwastewater category:** Provides space for explanatory information on regulated constituents and wastewater/nonwastewater category of the waste and confidence in the accuracy of the information that cannot otherwise be supplied in the format provided for the other sections of the treatability group data sheet.

4.0 Waste Stream Treatment

4.1 **Is this waste stream currently being treated?** Lists two options, one of which must be selected. Details are provided only if treatment currently is under way. When no is selected, "N/A" will be entered.

4.2 **Planned treatment**. Lists four options in a multiple-choice format. The appropriate box(es) is/are checked to indicate the status of existing plans for treating the waste to meet applicable regulations. When no treatment is required, skip to Section 5.0.

4.3 **Planned treatment method, facility, and extent of treatment capacity available:** Describes details of planned treatment for on-site TSD units and off-site facilities, as well as details of how much of the required treatment capacity is available.

4.4 **Treatment schedule information:** Provides space to include such information as start date of treatment, end date of treatment, and how much waste will be treated each year. Either treatment schedule information or other schedule-related information is provided, or if none exists as of the status reporting date for the treatability group, the current status of any active negotiations or applicable actions are described instead.

4.5 **Applicable Tri-Party Agreement treatment milestone numbers (including permitting):** Provides table with Tri-Party Agreement milestone drop down menu to list appropriate existing milestone numbers related to treatment. "N/A" will be indicated when the table is empty. Milestones cited as commitments for treatment must be the specific milestone(s) that on completion will satisfy the LDR requirements for treatment.

4.6 **Proposed new Tri-Party Agreement treatment milestones:** Provides space to list appropriate proposed new treatment milestones. If applicable, make reference to any active Tri-Party Agreement negotiations.

4.7 **If treating or planning to treat onsite, was or will waste minimization be addressed in developing and/or selecting the treatment method?** If the corresponding box is selected in Section 4.2, three options for a multiple choice answer are provided to describe any waste minimization plans for the waste during treatment. **If yes, describe:** Self-explanatory. If the corresponding box in Section 4.2 is not checked, insert "N/A based on Section 4.2" in the comment field.

4.8 **List or describe treatability equivalency petitions, rulemaking petitions, and case-by-case exemptions needed for treatment already in place:** Space provided for supplying details of any existing or future treatability variances (40 CFR 268.44), equivalency petitions (40 CFR 268.42(b)), rulemaking petitions (WAC 173-303-910, 40 CFR 260.20), and case-by-case exemptions [WAC 173-303-140(6)]. If there are none, insert "None."

4.9 **Key assumptions:** Provides space to list assumptions concerning treatment that cannot otherwise be supplied in the format provided. If there are no key assumptions, insert "None."

5.0 Waste Stream Disposal

After treatment, how will the waste stream be disposed of (include locations, milestone numbers, variances required, etc., as applicable)? Provides space to describe disposal methods, locations, variances required, etc., as applicable.

B2.0 LOCATION-SPECIFIC DATA SHEET DATA FIELD DESCRIPTIONS

The following items are numbered to correspond to their numbers on the location-specific data sheets (i.e., the numbers refer to the data field locations in the data sheets). The numbers have no relation to their position in this document appendix. Note that the term "storage" is used throughout the location-specific data sheets based upon the definition of WAC 173-303-040. "Accumulation" or management in a CERCLA area of contamination is not considered "storage."

1.0 Waste Stream Identification and Source

1.1 **Unit/Plant Name:** Uniquely identifies the generating location of the waste.
Waste Stream: Supplies a short, descriptive name for the waste.
Treatability group name: Supplies the short, descriptive name for the waste treatability group to which the waste described in the particular location-specific data sheet is assigned.

1.2 **Applicable profile number(s) for this waste stream:** Lists waste profile numbers applicable to the waste if any. Waste profile numbers are used principally for waste that is transferred to the CWC or that is received from off-site generators. If there are no waste profiles, indicate "None."

1.3 **Waste stream source information**

1.3.1 **General description of the waste (e.g., spill cleanup waste, discarded lab materials, maintenance waste):** Describes where the waste came from, the general matrix, and constituents.

1.3.2 **History of how and where the waste was/is generated:** Describes how and where the waste was generated.

1.3.3 **Source of the regulated constituents**. Describes where the regulated constituents came from.

1.3.4 **Source of information (e.g., analytical data, process knowledge, document number, etc.)**. Information sources include analytical data, process knowledge, document number, etc.

1.3.5 **Additional notes:** Includes any information that would be helpful in identifying the waste and its generation. If no additional a notes apply, indicate "None."

2.0 Waste Stream Storage, Inventory, and Generation Information

If the waste stream reported is managed in satellite accumulation areas, 90-day accumulation areas, or CERCLA area of contamination, skip to Section 2.6. The comment field in Section 2.3 can be used if necessary.

2.1 **Current storage method**. Lists seven options in multiple choice format to describe the type of storage used. No box is chosen if the waste reported on the data sheet is only managed in accumulation areas or a CERCLA area of contamination. Storage pursuant to the Tri-Party Agreement must be addressed by checking the appropriate boxes. Note that as used here, "container (pad)" indicates drums or other containers such as boxes that are sitting on a concrete or other pad or area; "container (covered)" indicates drums or other containers such as boxes sitting under a roof or inside a building. Provide additional information about the storage location if other is checked (e.g., containment building).

2.1.1 **How was the waste managed prior to storage?** Describes routine and special management of the waste. Note: For waste in accumulation areas or CERCLA areas of contamination, the answer provided is "N/A".

2.1.2 **Timeframe when waste was placed into storage:** Supplies the date or dates the waste was placed in storage (waste storage history). Examples might be, "This waste has been generated and stored at this location from 1987 to the present" for waste continuously generated and stored, or "The waste currently in storage was generated in 1999" for waste no longer generated and stored. Note: For reporting of waste in accumulation areas or CERCLA areas of contamination, the answer provided is "N/A".

2.2 **Storage Inventory locations:** Lists the building and/or room number, as appropriate, with the number of storage containers/tanks for each storage location in a table format. Note: This section of this data sheet does not include satellite or 90-day accumulation areas. For reporting of waste in accumulation areas or CERCLA areas of contamination, the answer provided is "N/A" in both table cells.

2.3 **Current stored inventory for this stream**. Volume of waste (cubic meters) and reporting date in mm/dd/yyyy format of the volume is supplied. The default reporting date is December 31, 2009. In some cases, the date shown will be different if the volume is known only for another date. The volume information for each location-specific data sheet is summed to the reported volume for its associated treatability group data sheet. Note that for reporting of waste in accumulation areas or CERCLA areas of contamination, the answer provided here is "N/A" or zero. Accumulated waste or CERCLA areas of contamination volume is reported only in Section 2.6 of the location-specific data sheet as an estimated generation projection, as applicable. Note also that the volume will display three decimal points in the database. If necessary, comments on waste inventory can be entered in this section even if the waste is managed in a satellite accumulation area, 90-day accumulation area, or a CERCLA area of contamination. If there are no comments, enter "None."

2.4 **Is storage capacity at this location potentially an issue for this waste stream?** The two multiple choice options are "yes" and "no." **If "yes," what is the total estimated storage capacity?** Self-explanatory. Do not answer this question when no is selected, "N/A" will be displayed. **When is this capacity expected to be reached?** Self-explanatory. Do not answer this question when no is selected, "N/A" will be displayed. **Bases and assumptions used:** Lists any bases and assumptions used in estimating

storage capacity limitations. Note: For waste reported in accumulation areas or CERCLA areas of contamination, the answer provided here is "N/A".

2.5 **Planned storage areas for this waste:** Five types of storage areas are provided in a multiple-choice format. More than one choice could apply. If the waste was in its current location as of 12/31/04, or will remain in its current location for a finite period of time, the "current location" box in addition to any other known planned storage location indicates where the waste is intended to be stored. Note: For waste reported in accumulation areas or CERCLA areas of contamination, an answer can be provided here but is not required.

2.6 **Estimated generation projection by calendar year (includes waste in satellite accumulation areas, 90-day accumulation areas, or CERCLA areas of contamination):** Lists the estimated volume (m^3) or mass (kg) of the mixed waste or matrices projected to be generated as mixed waste in the next 5 years. When a volume is entered, the mass can be left blank. Waste volumes in satellite accumulation areas, 90-day accumulation area, or CERCLA areas of contamination at the end of the calendar year are reported in a location-specific data sheet for the first year's forecast. Note that the volume will display three decimal points.

2.7 **DOE Storage Compliance Assessment information:** Three options are provided in a multiple choice format. In some cases, more than one option is appropriate. The chosen option shows whether the assessment either has been or will be completed, and references the appropriate assessment end date or planned assessment date; or, it explains why neither of the other two options is an appropriate answer. For accumulation areas, CERCLA areas of contamination, or waste that has not been generated, check the "other" box and insert "N/A" for the explanation. When selecting "assessment has been completed," the assessment document number and the assessment date (e.g., transmittal letter date) must be entered into the table. The assessment schedule can be found in Section 3.2 of the report.

2.8 **Applicable Tri-Party Agreement milestones related to storage at this location:** Provides table with Tri-Party Agreement milestone drop down menu with associated due dates. Lists any applicable Tri-Party Agreement milestone(s) for storage. "N/A" indicates that this question is not applicable (i.e., waste is only in accumulation areas or there are no milestones). For TSD units, identifying the M-20 milestone or other permitting related milestone is appropriate. Milestones cited as commitments must be the specific milestone(s) that on completion will satisfy the LDR requirements.

2.9 **Has there ever been any non-permitted, unauthorized release of this waste stream from this storage unit to the environment?** Lists two options, one of which must be selected -- "yes" and "no" – to report known spills, such as those reported in accordance with WAC 173-303-145, and –360 and the tank waste release status reports. Note: For waste reported in accumulation areas, select "No." **If yes, summarize releases and quantities and provide date:** Provide information or reference the Section of the LDR report that discusses the releases.

2.10 Are there any plans to submit requests for variances or other exemptions related to storage? Lists two options, one of which must be selected, "yes" and "no." **If yes, explain:** If "yes" is chosen, an explanation is provided. (Variances and/or exemptions associated with waste treatment are addressed in treatability group data sheets, Section 4.8.).

2.11 Characterization:

2.11.1 Is further characterization needed about the waste prior to acceptance for storage? Three options, one of which must be selected: "yes," "no," and "unknown at this time." Answer the question as whether further information is needed about the waste before acceptance for storage. Use the explanation area of question 2.12 if additional space is necessary.

Answer yes if characterization is required for any parameter or aspect (e.g., LDR information, waste designation information, packaging information, radionuclide information). If the answer is Yes, an explanation is required. The explanation either will reference to the milestone table or make reference to an agreement to obtain the information, reference active negotiations addressing the commitment, include a commitment to obtain the information, or the text will describe why a commitment is not necessary. The following are examples of characterization information needs that do not require a commitment:

- Radioactive characterization issues
- Characterization required as normal process when a cradle to grave process is being implemented (e.g., waste being sent to 200 Area Liquids)
- Unit-specific waste acceptance data not required for LDR waste characterization (e.g., total suspended solids for sending waste to the 200 Area Liquids, or Real-Time radiography)

Answer the question No, if the mixed waste is in a satellite accumulation area or 90-day accumulation area and is ready to be placed into storage, or that the waste is already is storage.

Answer the question "unknown at this time," if characterization requirements for storage cannot be determined at this time. An explanation in the comment field is necessary. The explanation needs to identify what step(s) needs to be completed before the question can be answered.

If the answer is yes and Tri-Party Agreement milestones exist that address characterization, provide Tri-Party Agreement milestone number(s) in the table provided. If no milestones are selected from the drop down menu provided in the database, "N/A" will be automatically inserted. Milestones cited as commitments for characterization must be the specific milestone(s) that on completion will satisfy the LDR requirements for characterization.

2.11.2 Is further characterization needed about the waste prior to acceptance for treatment? Three options, one of which must be selected, are provided: "yes," "no," and "unknown at this time." Answer the question as whether further information is needed about the waste before acceptance for treatment. Use the explanation area of question 2.12 if additional space is necessary. Treatment is defined as any activity meeting the definition of treatment in WAC 173-303-040 (broader than LDR treatment) which states:

> *"Treatment" means the physical, chemical, or biological processing of dangerous waste to make such wastes nondangerous or less dangerous, safer for transport, amenable for energy or material resource recovery, amenable for storage, or reduced in volume, with the exception of compacting, repackaging, and sorting as allowed under WAC 173-303-400(2) and 173-303-600(3).*

Answer the question "yes" if any information is needed for any parameter or aspect to allow treatment of the mixed waste. If the answer is Yes, an explanation is required in the comment field. The explanation will reference to the milestone table, make reference to an agreement to obtain the information, reference active negotiations addressing the commitment, include a commitment to obtain the information, or the text will describe why a commitment is not necessary. Refer to the example circumstances in Section 2.11.1 for situations where a commitment is not required.

Answer the question "no" if the mixed waste is ready for treatment or if no treatment is required.

Answer the question "unknown at this time" if uncertainty exists about whether treatment is required for the mixed waste. An explanation in the comment field is necessary. The explanation needs to identify what step(s) needs to be completed before the question can be answered

If the answer is yes and Tri-Party Agreement milestones exist that address characterization, provide Tri-Party Agreement milestone number(s) in the table provided. If no milestones are selected from the drop down menu provided in the database, "N/A" will be automatically inserted. Milestones cited as commitments for characterization must be the specific milestone(s) that on completion will satisfy the LDR requirements for characterization.

2.11.3 Is further characterization needed about the waste prior to acceptance for disposal? Three options, one of which must be selected, are provided: "yes," "no," and "unknown at this time." Answer the question as whether further information is needed about the waste before acceptance for disposal. Use the explanation area of question 2.12 if additional space is necessary.

Answer the question "yes" if any LDR treatment standard for the mixed waste is a concentration based standard that requires sampling and analysis to confirm that the treatment standard has been met after treatment. In addition, answer "yes" if information about other parameters (e.g., voids) needs to be obtained. If the answer is Yes, an

explanation is required in the comment field. The explanation will reference to the milestone table, make reference to an agreement to obtain the information, reference active negotiations addressing the commitment, include a commitment to obtain the information, or the text will describe why a commitment is not necessary. Refer to the example circumstances in Section 2.11.1 for situations where a commitment is not required.

Answer the question "no" if all the LDR treatment standards for the mixed waste are a performance based treatment standard (e.g., a specified technology, debris rule macroencapsulation) or if the waste is TRUM destined for WIPP.

Answer the question "unknown at this time" if uncertainty exists about disposal location waste acceptance requirements. An explanation in the comment field is necessary. The explanation needs to identify what step(s) needs to be completed before the question can be answered

If the answer is yes and Tri-Party Agreement milestones exist that address characterization, provide Tri-Party Agreement milestone number(s) in the table provided. If no milestones are selected from the drop down menu provided in the database, "N/A" will be automatically inserted. Milestones cited as commitments for characterization must be the specific milestone(s) that on completion will satisfy the LDR requirements for characterization.

2.12 **Other key assumptions related to storage, inventory and generation information:** Explains anything about this waste that will provide greater understanding and clarification, or that cannot otherwise be supplied in the format provided. Also identifies assumptions that, if incorrect, would affect information in the data sheet or elsewhere in the report.

3.0 Waste Minimization

3.1 **Has a waste minimization assessment been completed for this stream?** Lists two options, one of which must be selected. "yes" and "no." **If yes, provide date assessment conducted:** If "yes" is chosen, provide date the assessment was conducted. **If yes, provide document number or other identification:** Provides the document number or other identification of the assessment and/or results. The information provided is sufficient for a reader to find the document. **If no, provide date assessment will be completed, or if waste stream is no longer generated then indicate N/A:** If "no" is chosen, provide a future date assessment is planned to be completed. "N/A" is used only if the waste is no longer generated or if yes was selected. Note that if the waste is not generated at this location (i.e., if the location is for storage only), then this space can be used to explain that fact.

3.2 **Provide details of current and proposed methods for minimizing the generation of this stream (e.g., process changes to reduce or eliminate LDR waste, methods to reduce volume through segregation and avoidance of commingling, substitution of less-toxic materials):** Space is provided for the explanation.

3.3 Waste minimization schedule

3.3.1 Reduction achieved during calendar year (volume or mass): How much waste has the facility avoided generating this past year as part of the waste minimization program?

3.3.2 Projected future waste volume reductions: Lists the next 5 years in volume (m^3) or mass (kg). The database will automatically add the individual years' entries to supply the location-specific data sheet total.

3.3.3 Bases and assumptions used in above estimates: Provide the bases and assumptions used to answer Sections 3.3.1 and 3.3.2 of the location-specific data sheet, if any estimates or schedules were provided. Note that any other explanation that will provide greater understanding and clarification about waste minimization activities for this waste can also be provided, in addition to the bases and assumptions required to support Sections 3.3.1 and 3.3.2 of the location-specific data sheet.

This page intentionally left blank.

Table B-1. Data Sheet Index. (5 sheets)

Treatability Group Data Sheets	Location Specific Data Sheets		
Treatability Group Name	**Unit/Plant**	**Waste Stream**	**Contractor**
221-T Containment Building			CHPRC
	T Plant Complex	221-T Containment Building	CHPRC
221-T Tank System			CHPRC
	T Plant Complex	RCRA Tank System	CHPRC
222-S Laboratory Complex			WRPS
	222-S	Containerized mixed waste	WRPS
	Tank Farm Facilities	Mixed waste from 616	WRPS
222-S T8 Tunnel			WRPS
	222-S Laboratory Complex	T8 Tunnel RH-MLLW	WRPS
241-CX Tank System			CHPRC
	241-CX Tank System	CX Tank System	CHPRC
324 Building REC Waste			WCH
	324 Building	Radiochemical Engineering Cells	WCH
325 HWTU			PNNL
	325 HWTU	325 HWTU	PNNL
400 Area WMU			CHPRC
	400 Area WMU	Mixed Waste	CHPRC
B Plant Cell 4			CHPRC
	B Plant Complex	Cell 4	CHPRC
B Plant Containment Building			CHPRC
	B Plant Complex	Containment Building Storage	CHPRC
Cesium and Strontium Capsules			CHPRC
	WESF	Cs and Sr Capsules	CHPRC
DST Waste			WRPS
	222-S Laboratory Complex/219-S Waste Handling Facility	Bulk Aqueous Liquids	WRPS
	DST System	DST System	WRPS

Table B-1. Data Sheet Index. (5 sheets)

Treatability Group Data Sheets	Location Specific Data Sheets		
Treatability Group Name	**Unit/Plant**	**Waste Stream**	**Contractor**
ERDF—Treatment			WCH
	CERCLA Waste	CERCLA Waste	WCH
	PFP	D&D Hazardous Debris to ERDF	CHPRC
	Waste Sampling and Characterization Facility (WSCF)	Laboratory E-Waste	MSC
HSTF			CHPRC
	HSTF	HSTF 276-S-141/142	CHPRC
LERF/ETF Liquid Waste			CHPRC
	200-UP-1	200-UP-1	CHPRC
	242-A Evaporator	Evaporator Process Condensate	WRPS
	LERF	Wastewater	CHPRC
	LLBG/MW Trench	TR34 and TR31 Leachate	CHPRC
	PFP	Aqueous Waste	CHPRC
	T Plant Complex/2706-T Tank System	2706-T Tank System	CHPRC
	WSCF	LERF/ETF	MSA
LERF/ETF Solid Waste			CHPRC
	ETF	Powder Drums	CHPRC
	LERF/ETF	Operations and Maintenance Waste	CHPRC
MLLW-01 – LDR Compliant Waste			CHPRC
	CS&I	Miscellaneous Non-Routine Streams	MSA
	CWC	LDR Compliant	CHPRC
	PFP	Lab Chemicals/Reagents, LDR Compliant	CHPRC
	T Plant Complex	LDR Compliant	CHPRC
	WRAP	LDR Compliant	CHPRC

Table B-1. Data Sheet Index. (5 sheets)

Treatability Group Data Sheets	Location Specific Data Sheets		
Treatability Group Name	**Unit/Plant**	**Waste Stream**	**Contractor**
MLLW-02 - Inorganic Non-Debris			CHPRC
	CWC	Inorganic Non-Debris Solids And Labpacks	CHPRC
	T Plant Complex	Inorganic Non-Debris	CHPRC
	WRAP	Inorganic Non-Debris Solids and Labpacks	CHPRC
MLLW-03 - Organic Non-Debris			CHPRC
	LLBG	MLLW Retrieval Organic Non-Debris	CHPRC
	T Plant Complex	Organic Non-Debris	CHPRC
	WRAP	Organic Non-Debris	CHPRC
MLLW-04 - Hazardous Debris			CHPRC
	CWC	Hazardous Debris	CHPRC
	LLBG	MLLW Retrieval Debris	CHPRC
	T Plant Complex	Hazardous Debris	CHPRC
	WRAP	Hazardous Debris	CHPRC
MLLW-05 – Radioactive Lead Solids			CHPRC
	CWC	Elemental Lead	CHPRC
	T Plant Complex	Elemental Lead	CHPRC
	WRAP	Radioactive Lead Solids	CHPRC
MLLW-06 – Mercury Wastes			CHPRC
	CWC	Elemental Mercury	CHPRC
	WRAP	Elemental Mercury	CHPRC
MLLW-07 - RH and Large Container			CHPRC
	325 HWTU	MLLW-07 RH	PNNL
	CWC	MLLW-07	CHPRC
	LLBG	MLLW-07	CHPRC
	T Plant Complex	RH and Large Container	CHPRC
	WRPS Tank Closure	RH and Large Container	WRPS

Table B-1. Data Sheet Index. (5 sheets)

Treatability Group Data Sheets	Location Specific Data Sheets		
Treatability Group Name	**Unit/Plant**	**Waste Stream**	**Contractor**
MLLW-08 - Unique Waste			CHPRC
	CWC	Unique Waste	CHPRC
	LLBG	Unique Waste	CHPRC
	T Plant Complex	MW Requiring Special Processing	CHPRC
	WRAP	Unique Waste	CHPRC
MLLW-09 – Radioactive Batteries			CHPRC
	CWC	Pb & Cd Batteries	CHPRC
	T Plant Complex	Radioactive Batteries	CHPRC
	WRAP	Misc. Heavy Metal Batteries	CHPRC
MLLW-10 - Reactive Metals			CHPRC
	CWC	Alkali Metals	CHPRC
	T Plant	Reactive Metals	CHPRC
PUREX Plant			CHPRC
	PUREX Plant	PUREX Containment Building	CHPRC
PUREX Storage Tunnels			CHPRC
	PUREX Storage Tunnels	Tunnels 1 and 2	CHPRC
Purgewater			CHPRC
	600 Area PSTF	Purgewater Modu-tanks	CHPRC
SST Waste			WRPS
	SST System	SST System	WRPS
TRUM – CH Small Container			CHPRC
	325 HWTU	TRUM-CH	PNNL
	CWC	CH TRUM	CHPRC
	LLBG	TRUM-CH Retrieval	CHPRC
	PFP	Legacy Holdup Waste	CHPRC
	PFP	TRUM Debris	CHPRC
	T Plant Complex	TRUM-CH	CHPRC
	WRAP	TRUM-CH	CHPRC

Table B-1. Data Sheet Index. (5 sheets)

Treatability Group Data Sheets	Location Specific Data Sheets		
Treatability Group Name	**Unit/Plant**	**Waste Stream**	**Contractor**
TRUM – CH Large Container			CHPRC
	CWC	TRUM Boxes	CHPRC
	LLBG	TRUM Retrieval Boxes	CHPRC
	T Plant Complex	TRUM Box	CHPRC
	WRAP	TRUM Large Container	CHPRC
TRUM - RH			CHPRC
	325 HWTU	TRUM-RH	PNNL
	CWC	RH TRUM	CHPRC
	LLBG	RH TRUM	CHPRC
	PFP	TRUM-RH	CHPRC
	T Plant Complex	TRUM-RH	CHPRC
	U-Plant	Tank D-10 from Cell 30	CHPRC
	WRAP	TRUM-RH	CHPRC

This page intentionally left blank.

221-T Containment Building

LDR REPORT TREATABILITY GROUP DATA SHEET

1.0 WASTE STREAM IDENTIFICATION

1.1 Treatability Group Name: 221-T Containment Building

1.2 Description of waste (list WSRd numbers for this waste stream, as applicable)

Equipment (e.g., jumpers, tanks, centrifuges, etc.,), other debris (e.g., pieces of concrete, etc.), and nondebris (e.g., sandblasting grit) generated during canyon deck and/or process cell cleanout, or from treatment and/or decontamination activities.

2.0 WASTE INVENTORY AND GENERATION

2.1 Current total inventory for this waste stream (stored waste only, not accumulation areas). [Equals sum of location-specific data sheets for this treatability group.]

Total volume (cubic meters): 58.000

2.2 Estimated generation projection by calendar year: [equals annual sums of location-specfic data sheets for this treatability group].

Year	m^3	and/or	kg
2010	0.000		0.000
2011	0.000		0.000
2012	0.000		0.000
2013	0.000		0.000
2014	0.000		0.000
Total	0.000		0.000

3.0 WASTE STREAM CHARACTERIZATION

3.1 Radiological Characteristics

3.1.1 Mixed waste type: ☐ High-level ☐ Transuranic ☒ Low-level

3.1.2 Handling (as package contents would need to be handled during treatment):

☐ Contact-handled ☒ Remote-handled

3.1.3 Comments on radiological characteristics (e.g., more specific information on content, treatment concerns caused by radiation, confidence level):

Typically remote handled waste but can also be contact handled large equipment/debris.

3.2 Physical Form

3.2.1 Physical form of the waste:

☒ Solid ☐ Liquid ☐ Semi-solid ☐ Debris

☐ Other (Describe in comments.)

3.2.2 Comments on physical form:

Large equipment and/or debris.

LDR REPORT TREATABILITY GROUP DATA SHEET

3.3 Regulated constituents and wastewater/non-wastewater category

3.3.1 Wastewater/non-wastewater under RCRA

☐ Wastewater ☒ Non-wastewater ☐ Unknown

3.3.2 Regulated constituents table including treatment requirements and UHCs, if applicable.

EPA/ State Number	Waste Description	LDR Sub-Category*	Concentration (Typical or Range)**	Basis	LDR Treatment Concentration Standard or Technology Code
D004	Arsenic	N/A	unknown	Process knowledge	unknown
D005	Barium	N/A	unknown	Process knowledge	unknown
D006	Cadmium	N/A	unknown	Process knowledge	unknown
D007	Chromium	N/A	unknown	Process knowledge	unknown
D008	Lead	N/A	unknown	Process knowledge	unknown
D009	Mercury	N/A	unknown	Process knowledge	260 mg/K
D010	Selenium	N/A	unknown	Process knowledge	unknown
D011	Silver	N/A	unknown	Process knowledge	unknown
D019	Carbon Tetrachloride	N/A	unknown	Process knowledge	unknown
D030	2, 4-Dinitrotoluene	N/A	unknown	Process knowledge	unknown
D034	Hexachloroethane	N/A	unknown	Process knowledge	unknown
D037	Pentachlorophenal	N/A	unknown	Process knowledge	unknown
D043	Vinly Chloride	N/A	unknown	Process knowledge	unknown
F001	1,1,1-trichloroethane	spent solvent	unknown	Process knowledge	6.0 mg/kg
F002	Methylene chloride	spent solvent	unknown	Process knowledge	30.0 mg/kg
F003	Acetone, MIK	spent solvent	unknown	Process knowledge	160 & 33 mg/kg
F004	Cresols	spent solvent	unknown	Process knowledge	5.6 mg/kg
F005	MEK	spent solvent	unknown	Process knowledge	36 mg/kg
WSC2	Solid Corrosive	N/A	unknown	Process knowledge	unknown

LDR REPORT TREATABILITY GROUP DATA SHEET

* LDR Subcategory marked N/A if no existing subcategory adequately describes this waste, or if there are no defined subcategories for the waste number (40 CFR 268.40).

** If waste is not consistent in concentration, this may not apply. Described in Section 3.3.6.

Waste typically consists of remote handled and/or contacted handled equipment/debris waste. This waste will either be treated under M-91, macroencapsulated, or treated with other approved methods.

3.3.3 List any waste numbers from Section 3.3.2 for which the waste stream already meets established LDR treatment standards.

☐ List:

☐ No LDR treatment required (e.g. TRUM waste destined for WIPP, exclusion, etc.)

☒ None (i.e. all constituents/waste numbers of this waste stream still require treatment).

3.3.4 Does this waste stream contain PCBs?

☒ Yes ☐ No ☐ Unknown

If no or unknown, skip to Section 3.3.5.

3.3.4.1 Is waste stream subject to TSCA regulations for PCBs?

☒ Yes ☐ No ☐ Unknown

3.3.4.2 Indicate the PCB concentration range.

☐ < 50 ppm ☒ ≥ 50 ppm ☐ Unknown

3.3.5 What is the confidence level for the regulated constituents?

☐ Low ☒ Medium ☐ High

3.3.6 Comments on regulated constituents and wastewater/non-wastewater category:

4.0 WASTE STREAM TREATMENT

4.1 Is this waste stream currently being treated?

☐ Yes ☒ No

If yes, provide details: N/A

LDR REPORT TREATABILITY GROUP DATA SHEET

4.2 Planned treatment: Check the appropriate box indicating future plans for treating this waste stream to meet applicable regulations, including LDR treatment standards.

☐ No treatment required (skip to Section 5.0)

☐ Treating or plan to treat on site

☐ Treating or plan to treat off site

☒ Treatment options still being assessed

4.3 Planned treatment method, facility, extent of treatment capacity available:

Waste will be processed per M-91, macroencapsulated, or other approved treatment methods.

4.4 Treatment schedule information:

Dependent upon M-091 capability, canyon deck and process cell cleanout continues, or in support of other missions.

4.5 Applicable Tri-Party Agreement treatment milestone numbers (including permitting):

Milestone Number	Due Date
N/A	N/A

4.6 Proposed new Tri-Party Agreement treatment milestones:

None.

4.7 If treating or planning to treat on site, was or will waste minimization be addressed in developing and/or selecting the treatment method?

☐ Yes ☐ No ☒ Unknown

If yes, describe:

4.8 List or describe treatability equivalency petitions, rulemaking petitions, and case-by-case exemptions needed for treatment or already in place.

None.

4.9 Key Assumptions:

All efforts to segregate low-level from mixed and transuranic from low-level and/or mixed waste. In addition, size reduction techniques will also be used.

5.0 WASTE STREAM DISPOSAL

After treatment, how will the waste stream be disposed of (include locations, milestone numbers, variances required, etc. as applicable):

Dependent upon M-91 as well as ongoing and future missions (e.g., K Basin sludge storage, etc.), and canyon/process cell cleanout.

LDR REPORT WASTE LOCATION-SPECIFIC DATA SHEET

1.0 WASTE STREAM IDENTIFICATION AND SOURCE

1.1 Unit/Plant name: T Plant Complex **Waste Stream:** 221-T Containment Building

Treatabilitiy Group Name: 221-T Containment Building

1.2 Applicable profile number(s) for this waste stream:

N/A

1.3 Waste stream source information

1.3.1 General description of the waste (e.g., spill clean-up waste, discarded lab materials, maintenance waste):

Equipment (e.g., jumpers, tanks, centrifuges, etc.,), other debris (e.g., pieces of concrete, etc.), and nondebris (e.g., sandblasting grit) generated during canyon deck and/or process cell cleanout or from treatment and/or decontamination activities.

1.3.2 History of how and where the waste was/is generated:

Waste generated as a result of decontamination, treatment, and/or canyon deck and process cell cleanout.

1.3.3 Source of the regulated constituents:

F listed (F001 through F005) based upon process knowledge from decontaminating of tank farms equipment.

1.3.4 Source of the information (e.g., analytical data, process knowledge, document number, etc.)

Process knowledge.

1.3.5 Additional notes:

None.

2.0 WASTE STREAM STORAGE, INVENTORY, AND GENERATION INFORMATION

(NOTE: For waste in satellite accumulation areas and 90-day accumulation areas, skip to Section 2.6.)

2.1 Current storage method

- ☐ Container (pad)
- ☐ Container (covered)
- ☐ Container (retrievably buried)
- ☐ Tank
- ☐ DST
- ☐ SST
- ☒ Other (explain): 221-T Containment Building in the T Plant Complex.

2.1.1 How was the waste managed prior to storage?

Stored on the canyon deck, railroad tunnel, or in process cells (process cells 3L, 7L, 8R, 9L, 10L, 13L, 13R, 14R, 15L, 16R, and 17R).

2.1.2 Timeframe when waste was placed to storage?

Waste was generated during canyon deck, cell cleanout activities and in support of other operational activities (e.g., decontamination). This process is ongoing as T Plant Complex continues to prepare for current as well as future missions.

LDR REPORT WASTE LOCATION-SPECIFIC DATA SHEET

2.2 Storage inventory locations:

Building/Room Number	Number of Containers/Tanks
221-T Canyon (RR, Deck)	(7L, 13R, 8R, 9L, 14R, 16R, 17R), deck, RR

2.3 Current stored inventory for this stream.

Total volume (cubic meters): 58.000

Date of inventory values: 12/31/2009

Comments on waste inventory:

Waste contents placed into process cells is documented in HNF-17211 as well as video taped.

2.4 Is storage capacity at this location potentially an issue for this waste stream?

☐ Yes ☒ No

If yes, what is the total estimated storage capacity? N/A

When is this capacity expected to be reached? N/A

Bases and assumptions used:

N/A

2.5 Planned storage areas for this waste:

☒ Current Location ☐ CWC ☐ DST

☐ Other Area(s) (list):

☐ None

2.6 Estimated generation projection by calendar year (includes waste in satellite and 90-day accumulation areas):

Year	m^3	and/or	kg
2010	0.000		0.000
2011	0.000		0.000
2012	0.000		0.000
2013	0.000		0.000
2014	0.000		0.000
Total	0.000		0.000

2.7 DOE Storage Compliance Assessment information:

☒ Assessment has been completed.

Document Number	Date
01-A&E-012	11/28/2000

☒ Assessment has been scheduled. Scheduled date: 3rd quarter CY2005.

☐ Other. Explain:

LDR REPORT WASTE LOCATION-SPECIFIC DATA SHEET

2.8 Applicable Tri-Party Agreement milestones related to storage at this location:

Milestone Number	Due Date
N/A	

2.9 Has there ever been any non-permitted, unauthorized release of this waste stream from this storage unit to the environment?

☐ Yes ☒ No

If yes, summarize releases and quantities and provide date:

N/A

2.10 Are there any plans to submit requests for variances or other exemptions related to storage?

☐ Yes ☒ No

If yes, explain: N/A

2.11 Characterization

2.11.1 Is further characterization needed about the waste prior to acceptance for storage?

☐ Yes ☒ No ☐ Unknown at this time

Milestone Number	Due Date
N/A	N/A

If yes or unknown, comment on characterization for storage.

N/A

2.11.2 Is further characterization needed about the waste prior to acceptance for treatment?

☐ Yes ☒ No ☐ Unknown at this time

Milestone Number	Due Date
N/A	N/A

If yes or unknown, comment on characterization for treatment.

N/A

2.11.3 Is further characterization needed about the waste prior to acceptance for disposal?

☐ Yes ☒ No ☐ Unknown at this time

Milestone Number	Due Date
N/A	N/A

If yes or unknown, comment on characterization for disposal.

N/A

LDR REPORT WASTE LOCATION-SPECIFIC DATA SHEET

2.12 Other key assumptions related to storage, inventory, and generation information:

Process knowledge for dangerous waste designation is adequate to store waste for long-term.

3.0 WASTE MINIMIZATION

3.1 Has a waste minimization assessment been completed for this stream?

☐ Yes ☒ No

If yes, provide date assessment conducted: N/A

If yes, provide document number or other identification:

N/A

If no, provide date assessment will be completed, or if waste stream is no longer generated, then indicate N/A:

N/A

3.2 Provide details of current and proposed methods for minimizing the generation of this stream (e.g., process changes to reduce or eliminate LDR waste, methods to reduce volume through segregation and avoidance of commingling, substitution of less-toxic materials):

Waste reduction and minimization will be addressed when canyon deck and/or cell clean out resumes (e.g., size reduction, etc.) in support of operational needs and/or future needed missions.

3.3 Waste minimization schedule

3.3.1 Reduction achieved during calendar year 2009 (volume or mass)

0.000 m3

3.3.2 Projected future waste volume reductions

Year	m^3	and/or	kg
2010	0.00		0.00
2011	0.00		0.00
2012	0.00		0.00
2013	0.00		0.00
2014	0.00		0.00
Total	0.00		0.00

3.3.3 Bases and assumptions used in above estimates:

None; however, this will be evaluated to reduce where possible mixed waste (e.g., separate low-level from mixed).

LDR REPORT TREATABILITY GROUP DATA SHEET

1.0 WASTE STREAM IDENTIFICATION

1.1 Treatability Group Name: 221-T Tank System

1.2 Description of waste (list WSRd numbers for this waste stream, as applicable)

Liquid mixed waste with settled solids/sludge (waste also contains PCBs at TSCA regulated concentrations).

2.0 WASTE INVENTORY AND GENERATION

2.1 Current total inventory for this waste stream (stored waste only, not accumulation areas). [Equals sum of location-specific data sheets for this treatability group.]

Total volume (cubic meters): 0.360

2.2 Estimated generation projection by calendar year: [equals annual sums of location-specfic data sheets for this treatability group].

Year	m^3	and/or	kg
2010	0.000		0.000
2011	0.000		0.000
2012	0.000		0.000
2013	0.000		0.000
2014	0.000		0.000
Total	0.000		0.000

3.0 WASTE STREAM CHARACTERIZATION

3.1 Radiological Characteristics

3.1.1 Mixed waste type: ☐ High-level ☐ Transuranic ☒ Low-level

3.1.2 Handling (as package contents would need to be handled during treatment):

☐ Contact-handled ☒ Remote-handled

3.1.3 Comments on radiological characteristics (e.g., more specific information on content, treatment concerns caused by radiation, confidence level):

The contents of the 221-T tank system are evaporating so that the concentration of radionuclides will be increasing over time. According to best information, at least one tank could be considered transuranic waste. Because a majority of the tanks are still considered to contain low-level waste, question 3.1.1 is answered as low-level waste.

3.2 Physical Form

3.2.1 Physical form of the waste:

☒ Solid ☒ Liquid ☒ Semi-solid ☐ Debris

☐ Other (Describe in comments.)

3.2.2 Comments on physical form:

LDR REPORT TREATABILITY GROUP DATA SHEET

The confidence level is high because of existing analytical data on the liquid and sludge fractions from representative tanks.

3.3 Regulated constituents and wastewater/non-wastewater category

3.3.1 Wastewater/non-wastewater under RCRA

☐ Wastewater ☒ Non-wastewater ☐ Unknown

3.3.2 Regulated constituents table including treatment requirements and UHCs, if applicable.

EPA/ State Number	Waste Description	LDR Sub-Category*	Concentration (Typical or Range)**	Basis	LDR Treatment Concentration Standard or Technology Code
D005	TC-Barium	N/A	>100 ppm	Analytical data	1.2 mg/L
D006	TC-Cadmium	N/A	>1 ppm	"	0.69 mg/L
D007	TC-Chromium	N/A	> 5 ppm	"	2.77 mg/L
D008	TC-Lead	Lead Charac.	>5 ppm	"	0.69 mg/L
F001	1,1,1-Trichloroethane	Spent Solvent	Unknown	Process knowledge	6.0 mg/kg
F002	Methylene chloride	Spent Solvent	"	"	30.0 mg/kg
F003	Acetone, MIK	Spent Solvent	"	"	160 & 33 mg/kg
F004	Cresols	Spent Solvent	"	"	5.6 mg/kg
F005	MEK	Spent Solvent	"	"	36 mg/kg

* LDR Subcategory marked N/A if no existing subcategory adequately describes this waste, or if there are no defined subcategories for the waste number (40 CFR 268.40).

** If waste is not consistent in concentration, this may not apply. Described in Section 3.3.6.

UHCs have not been determined for this waste stream.

3.3.3 List any waste numbers from Section 3.3.2 for which the waste stream already meets established LDR treatment standards.

☐ List: N/A

☐ No LDR treatment required (e.g. TRUM waste destined for WIPP, exclusion, etc.)

☒ None (i.e. all constituents/waste numbers of this waste stream still require treatment).

LDR REPORT TREATABILITY GROUP DATA SHEET

3.3.4 Does this waste stream contain PCBs?

☒ Yes ☐ No ☐ Unknown

If no or unknown, skip to Section 3.3.5.

3.3.4.1 Is waste stream subject to TSCA regulations for PCBs?

☒ Yes ☐ No ☐ Unknown

3.3.4.2 Indicate the PCB concentration range.

☐ < 50 ppm ☒ ≥ 50 ppm ☐ Unknown

3.3.5 What is the confidence level for the regulated constituents?

☐ Low ☒ Medium ☐ High

3.3.6 Comments on regulated constituents and wastewater/non-wastewater category:

There is a potential for additional sampling to evaluate waste for long term storage and underlying hazardous constituents.

4.0 WASTE STREAM TREATMENT

4.1 Is this waste stream currently being treated?

☐ Yes ☒ No

If yes, provide details: N/A

4.2 Planned treatment: Check the appropriate box indicating future plans for treating this waste stream to meet applicable regulations, including LDR treatment standards.

☐ No treatment required (skip to Section 5.0)

☐ Treating or plan to treat on site

☐ Treating or plan to treat off site

☒ Treatment options still being assessed

4.3 Planned treatment method, facility, extent of treatment capacity available:

To be determined.

4.4 Treatment schedule information:

Dispositioning of the 221-T RCRA Tank System has been accomplished and agreed to by Ecology through the Part B workshop process and reflected in the "Hanford Facility Dangerous Waste Permit Application, T Plant Complex," DOE/RL-95-36, Revision 1.

4.5 Applicable Tri-Party Agreement treatment milestone numbers (including permitting):

Milestone Number	Due Date
N/A	N/A

LDR REPORT TREATABILITY GROUP DATA SHEET

4.6 Proposed new Tri-Party Agreement treatment milestones:

None.

4.7 If treating or planning to treat on site, was or will waste minimization be addressed in developing and/or selecting the treatment method?

☐ Yes ☐ No ☒ Unknown

If yes, describe:

4.8 List or describe treatability equivalency petitions, rulemaking petitions, and case-by-case exemptions needed for treatment or already in place.

None.

4.9 Key Assumptions:

The liquid fraction of the waste will continue to evaporate. Dispositioning of the 221-T RCRA Tank System has been accomplished through the T Plant Complex Part B workshop/negotiations with Ecology and documented in "Hanford Facility Dangerous Waste Permit Application, T Plant Complex," DOE/RL-95-36, Revision 1.

5.0 WASTE STREAM DISPOSAL

After treatment, how will the waste stream be disposed of (include locations, milestone numbers, variances required, etc. as applicable):

NOTE: Discussions with Ecology regarding the waste within the 221-T RCRA Tank System have been concluded and the agreed upon pathway for managing this waste is documented in the "Hanford Facility Dangerous Waste Permit Application, T Plant Complex," DOE/RL-95-36, Revision 1.

LDR REPORT WASTE LOCATION-SPECIFIC DATA SHEET

1.0 WASTE STREAM IDENTIFICATION AND SOURCE

1.1 Unit/Plant name: T Plant Complex **Waste Stream:** RCRA Tank System

Treatabilitiy Group Name: 221-T Tank System

1.2 Applicable profile number(s) for this waste stream:

None.

1.3 Waste stream source information

1.3.1 General description of the waste (e.g., spill clean-up waste, discarded lab materials, maintenance waste):

Liquid mixed waste with settled solids. See Section 1.3.2 for additional description. NOTE: Discussions with Ecology regarding storage of existing waste within the 221-T RCRA Tank System have been discussed with Ecology during the Part B workshop process and is documented in the Part B. Closure currently is planned for 2025.

1.3.2 History of how and where the waste was/is generated:

Waste resulting from decontamination activities at the 221-T and 2706-T, including precipitation run-on and direct additions from other onsite and offsite generators (e.g., FFTF condensate, laboratory returns, etc.). These canyon tanks were permanently removed from service in June of 1999. Engineering and administrative measures have been taken to ensure that no additional liquids are placed into this tank system. New tanks have been installed in 2706-T/2706-TA for newly generated waste. See the 2706-T location specific data sheet.

1.3.3 Source of the regulated constituents:

Waste treatment process, decontamination, facility or equipment operation and maintenance waste, and analytical laboratory waste.

1.3.4 Source of the information (e.g., analytical data, process knowledge, document number, etc.)

Process knowledge, analytical data.

1.3.5 Additional notes:

None.

2.0 WASTE STREAM STORAGE, INVENTORY, AND GENERATION INFORMATION

(NOTE: For waste in satellite accumulation areas and 90-day accumulation areas, skip to Section 2.6.)

2.1 Current storage method

- ☐ Container (pad)
- ☐ Container (covered)
- ☐ Container (retrievably buried)
- ☒ Tank
- ☐ DST
- ☐ SST
- ☐ Other (explain): N/A

2.1.1 How was the waste managed prior to storage?

The waste was generated and placed into the 221-T RCRA Tank System.

LDR REPORT WASTE LOCATION-SPECIFIC DATA SHEET

2.1.2 Timeframe when waste was placed to storage?

Waste was received in these tanks throughout the history of the 221-T Building until June 1999 when the tanks were removed from service.

2.2 Storage inventory locations:

Building/Room Number	Number of Containers/Tanks
221-T Building	4 tanks

2.3 Current stored inventory for this stream.

Total volume (cubic meters): 0.360

Date of inventory values: 12/31/2009

Comments on waste inventory:

The liquid fraction of this waste will continue to evaporate.

2.4 Is storage capacity at this location potentially an issue for this waste stream?

☐ Yes ☒ No

If yes, what is the total estimated storage capacity? N/A

When is this capacity expected to be reached? N/A

Bases and assumptions used:

The 221-T RCRA Tank System waste is stored in tanks that do not have secondary containment and do not have an integrity assessment. As such, this tank system has been removed from service and will no longer accept additional waste.

2.5 Planned storage areas for this waste:

☒ Current Location ☐ CWC ☒ DST

☒ Other Area(s) (list): Refer to DOE/RL Letter 01-RCA-192 for discussion on proposed management of this waste and the "Hanford Facility Dangerous Waste Permit Application, T Plant Complex," DOE/RL-95-36, Revision 1.

☐ None

2.6 Estimated generation projection by calendar year (includes waste in satellite and 90-day accumulation areas):

Year	m^3	and/or	kg
2010	0.000		0.000
2011	0.000		0.000
2012	0.000		0.000
2013	0.000		0.000
2014	0.000		0.000
Total	0.000		0.000

LDR REPORT WASTE LOCATION-SPECIFIC DATA SHEET

2.7 DOE Storage Compliance Assessment information:

☒ Assessment has been completed.

Document Number	Date
01-A&E-012	11/28/2000

☒ Assessment has been scheduled. Scheduled date: 3rd quarter CY2005.

☐ Other. Explain:

2.8 Applicable Tri-Party Agreement milestones related to storage at this location:

Milestone Number	Due Date
N/A	

2.9 Has there ever been any non-permitted, unauthorized release of this waste stream from this storage unit to the environment?

☐ Yes ☒ No

If yes, summarize releases and quantities and provide date:

N/A

2.10 Are there any plans to submit requests for variances or other exemptions related to storage?

☐ Yes ☒ No

If yes, explain: N/A

2.11 Characterization

2.11.1 Is further characterization needed about the waste prior to acceptance for storage?

☐ Yes ☐ No ☒ Unknown at this time

Milestone Number	Due Date
N/A	N/A

If yes or unknown, comment on characterization for storage.

Dispositioning of the 221-T RCRA Tank has been accomplished and agreed upon with Ecology during Part B workshops and documented in "Hanford Facility Dangerous Waste Permit Application, T Plant Complex," DOE/RL-95-36, Revision 1. Additional characterization might be necessary to support long-term storage.

2.11.2 Is further characterization needed about the waste prior to acceptance for treatment?

☐ Yes ☐ No ☒ Unknown at this time

Milestone Number	Due Date
N/A	N/A

LDR REPORT WASTE LOCATION-SPECIFIC DATA SHEET

If yes or unknown, comment on characterization for treatment.

The treatment capability must be establshed to make this determination.

2.11.3 Is further characterization needed about the waste prior to acceptance for disposal?

☒ Yes ☐ No ☐ Unknown at this time

Milestone Number	Due Date
N/A	N/A

If yes or unknown, comment on characterization for disposal.

To meet concentration based treatment standards applicable for the residues, sampling will be required after treatment.

2.12 Other key assumptions related to storage, inventory, and generation information:

Negotiations on closure approach of the 221-T RCRA Tanks System have been accomplished with Ecology during the Part B workshop process. The disposition of the 221-T RCRA Tank System is documented in "Hanford Facility Dangerous Waste Permit Application, T Plant Complex," DOE/RL-95-36, Revision 1. The liquid fraction of the waste will continue to evaporate due to ventilation of the cells in 221-T Building containing the tank system. Information on evaporation has been discussed with Ecology. Administrative and engineering controls have been put in place to prevent additional liquids from entering this tank system.

3.0 WASTE MINIMIZATION

3.1 Has a waste minimization assessment been completed for this stream?

☐ Yes ☒ No

If yes, provide date assessment conducted: N/A

If yes, provide document number or other identification:

N/A

If no, provide date assessment will be completed, or if waste stream is no longer generated, then indicate N/A:

N/A

3.2 Provide details of current and proposed methods for minimizing the generation of this stream (e.g., process changes to reduce or eliminate LDR waste, methods to reduce volume through segregation and avoidance of commingling, substitution of less-toxic materials):

N/A - stream is no longer generated (see 2.12 of this data sheet).

3.3 Waste minimization schedule

3.3.1 Reduction achieved during calendar year 2009 (volume or mass)

0.000 m3

LDR REPORT WASTE LOCATION-SPECIFIC DATA SHEET

3.3.2 Projected future waste volume reductions

Year	m^3	and/or	kg
2010	0.00		0.00
2011	0.00		0.00
2012	0.00		0.00
2013	0.00		0.00
2014	0.00		0.00
Total	0.00		0.00

3.3.3 Bases and assumptions used in above estimates:

N/A

This page intentionally left blank.

222-S Laboratory Complex

LDR REPORT TREATABILITY GROUP DATA SHEET

1.0 WASTE STREAM IDENTIFICATION

1.1 Treatability Group Name: 222-S Laboratory Complex

1.2 Description of waste (list WSRd numbers for this waste stream, as applicable)

This waste stream consists of many different inorganic and organic solids and liquids that are RCRA regulated or have been contaminated with inorganic and organic regulated dangerous waste constituents, including PCBs. This waste stream also includes hazardous debris.

2.0 WASTE INVENTORY AND GENERATION

2.1 Current total inventory for this waste stream (stored waste only, not accumulation areas). [Equals sum of location-specific data sheets for this treatability group.]

Total volume (cubic meters): 0.962

2.2 Estimated generation projection by calendar year: [equals annual sums of location-specfic data sheets for this treatability group].

Year	m^3	and/or	kg
2010	11.000		0.000
2011	11.000		0.000
2012	11.000		0.000
2013	11.000		0.000
2014	1.000		0.000
Total	45.000		0.000

3.0 WASTE STREAM CHARACTERIZATION

3.1 Radiological Characteristics

3.1.1 Mixed waste type: ☐ High-level ☐ Transuranic ☒ Low-level

3.1.2 Handling (as package contents would need to be handled during treatment):

☒ Contact-handled ☐ Remote-handled

3.1.3 Comments on radiological characteristics (e.g., more specific information on content, treatment concerns caused by radiation, confidence level):

Due to process improvements (Debris Treatment/Decon) in the hot cell, it is unlikely that Remote Handled waste will be generated.

3.2 Physical Form

3.2.1 Physical form of the waste:

☒ Solid ☒ Liquid ☒ Semi-solid ☒ Debris

☐ Other (Describe in comments.)

3.2.2 Comments on physical form:

LDR REPORT TREATABILITY GROUP DATA SHEET

There is high confidence that the subject waste stream will not contain physical matrix characteristics that do not meet the waste stream description.

3.3 Regulated constituents and wastewater/non-wastewater category

3.3.1 Wastewater/non-wastewater under RCRA

☐ Wastewater ☒ Non-wastewater ☐ Unknown

3.3.2 Regulated constituents table including treatment requirements and UHCs, if applicable.

EPA/ State Number	Waste Description	LDR Sub-Category*	Concentration (Typical or Range)**	Basis	LDR Treatment Concentration Standard or Technology Code
D001	Ignitable	High TOC	***	***	RORGS; CMBST; POLYM
D001	Ignitable	Low TOC	***	***	DEACT & meet 268.48
D002	Corrosive	Corrosive Charac.	***	***	DEACT & meet 268.48
D003	Reactive	multiple	***	***	DEACT & meet 268.48
D004	TC-Arsenic	N/A	***	***	5.0 mg/L TCLP & meet 268.48
D005	TC-Barium	N/A	***	***	100 mg/L TCLP & meet 268.48
D006	TC-Cadmium	Cadmium Charac.	***	***	1.0 mg/L TCLP & meet 268.48
D007	TC-Chromium	N/A	***	***	5.0 mg/L TCLP & meet 268.48
D008	TC-Lead	Lead Charac.	***	***	5.0 mg/L TCLP & meet 268.48
D009	TC-Mercury	Low Mercury	<260 mg/kg	***	0.2 mg/L TCLP & meet 268.48
D010	TC-Selenium	N/A	***	***	5.7 mg/L TCLP & meet 268.48
D011	TC-Silver	N/A	***	***	5.0 mg/L TCLP & meet 268.48
D018	Benzene	N/A	***	***	10 mg/kg & meet 268.48
D019	Carbon Tetrachloride	N/A	***	***	6.0 mg/kg & meet 268.48
D021	Chlorobenzene	N/A	***	***	6.0 mg/kg & meet 268.48
D022	Chloroform	N/A	***	***	6.0 mg/kg & meet 268.48
D027	p-Dichlorobenzene	N/A	***	***	6.0 mg/kg & meet 268.48
D028	1,2-Dichlorethane	N/A	***	***	6.0 mg/kg & meet 268.48
D029	1,1-Dichloroethylene	N/A	***	***	6.0 mg/kg & meet 268.48

LDR REPORT TREATABILITY GROUP DATA SHEET

EPA/ State Number	Waste Description	LDR Sub-Category*	Concentration (Typical or Range)**	Basis	LDR Treatment Concentration Standard or Technology Code
D030	2,4-Dinitrotoluene	N/A	***	***	140.0 mg/kg & meet 268.48
D033	Hexachlorobutadiene	N/A	***	***	5.6 mg/kg & meet 268.48
D035	Methyl Ethyl Ketone	N/A	***	***	36 mg/kg & meet 268.48
D038	Pyridine	N/A	***	***	16 mg/kg & meet 268.48
D039	Tetrachloroethane	N/A	***	***	6.0 mg/kg & meet 268.48
D040	Trichloroethylene	N/A	***	***	6.0 mg/kg & meet 268.48
D043	Vinyl Chloride	N/A	***	***	6.0 mg/kg & meet 268.48
F001	1,1,1-Trichloroethane	Spent Solvent	***	***	6.0 mg/kg
F002	Methylene Chloride	Spent Solvent	***	***	30 mg/kg
F003	Acetone & Hexone	Spent Solvent	***	***	160 mg/kg
F004	o-Cresol & p-Cresol	Spent Solvent	***	***	5.6 mg/kg
F005	Methyl Ethyl Ketone	Spent Solvent	***	***	36 mg/kg
F027	Unused Formulations containing Pentchlorophenol	N/A	***	***	Multipl;e
F039	Leachate (F001-F005)	N/A	***	***	Multiple
P106	Cyanide	Total	***	***	1.2
U133	Hydrazine	N/A	***	***	CHOXD; CHRED OR CMBST
WP01	Persistent, EHW	N/A	***	***	None (1)
WP02	Persistent, DW	N/A	***	***	N/A
WP03	Persistent, EHW	N/A	***	***	None (1)
WSC2	Solid Corrosive	N/A	***	***	Remove solid-acid characteristic
WT01	Toxic, EHW	N/A	***	***	N/A
WT02	Toxic, DW	N/A	***	***	N/A

* LDR Subcategory marked N/A if no existing subcategory adequately describes this waste, or if there are no defined subcategories for the waste number (40 CFR 268.40).

** If waste is not consistent in concentration, this may not apply. Described in Section 3.3.6.

*** The concentration varies and is based on process knowledge and/or analytical data.

(1) Mixed extremely hazardous wastes may be land disposed in Wahington State in DOE facilities in accordance with RCW 70.105.050(2).

LDR REPORT TREATABILITY GROUP DATA SHEET

3.3.3 List any waste numbers from Section 3.3.2 for which the waste stream already meets established LDR treatment standards.

☐ List:

☐ No LDR treatment required (e.g. TRUM waste destined for WIPP, exclusion, etc.)

☒ None (i.e. all constituents/waste numbers of this waste stream still require treatment).

3.3.4 Does this waste stream contain PCBs?

☒ Yes ☐ No ☐ Unknown

If no or unknown, skip to Section 3.3.5.

3.3.4.1 Is waste stream subject to TSCA regulations for PCBs?

☒ Yes ☐ No ☐ Unknown

3.3.4.2 Indicate the PCB concentration range.

☒ < 50 ppm ☒ ≥ 50 ppm ☐ Unknown

3.3.5 What is the confidence level for the regulated constituents?

☐ Low ☐ Medium ☒ High

3.3.6 Comments on regulated constituents and wastewater/non-wastewater category:

Some of the waste does contain PCBs subject to TSCA regulation. If a waste package is regulated by TSCA, it is identified as such on the storage records. In Section 3.3.4.2 of this data sheet, the PCB concentration range is marked as both "<50" and ">=50" because concentrations occur below and above 50 ppm in individual waste packages. In Section 3.3.1 of this data sheet, waste may be either wastewater or non-wastewater at the point of generation but is most likely to be non-wastewater at the time of shipment.

4.0 WASTE STREAM TREATMENT

4.1 Is this waste stream currently being treated?

☐ Yes ☒ No

If yes, provide details: N/A

LDR REPORT TREATABILITY GROUP DATA SHEET

4.2 Planned treatment: Check the appropriate box indicating future plans for treating this waste stream to meet applicable regulations, including LDR treatment standards.

☐ No treatment required (skip to Section 5.0)

☒ Treating or plan to treat on site

☒ Treating or plan to treat off site

☐ Treatment options still being assessed

4.3 Planned treatment method, facility, extent of treatment capacity available:

Waste requireing treatement will be treated using off-site commercial treatment facilities; facilities planned to be used are Perma Fix Northwest in Richland and PermaFix/DSSI in Oak Ridge, Tennessee. For wastes that cannot be treated by either of the above means to meet LDR standards, the waste will be shipped to Central Waste Complex under an exception to current requirements to only receive LDR-compliant waste from CHPRC.

4.4 Treatment schedule information:

The goal of the 222-S Laboratory Complex is to treat waste off-site at commercial treatment facilities generally within one year. Waste that cannot be treated off-site will be shipped to CWC and will be subject to the schedules for treatment set forth in proposed TPA milestone M-091-42 (for contact-handled waste).

4.5 Applicable Tri-Party Agreement treatment milestone numbers (including permitting):

Milestone Number	Due Date
N/A	N/A

4.6 Proposed new Tri-Party Agreement treatment milestones:

See Section 4.4.

4.7 If treating or planning to treat on site, was or will waste minimization be addressed in developing and/or selecting the treatment method?

☐ Yes ☒ No ☐ Unknown

If yes, describe: N/A

4.8 List or describe treatability equivalency petitions, rulemaking petitions, and case-by-case exemptions needed for treatment or already in place.

N/A

4.9 Key Assumptions:

None

5.0 WASTE STREAM DISPOSAL

After treatment, how will the waste stream be disposed of (include locations, milestone numbers, variances required, etc. as applicable):

Subject waste will ultimately be disposed of in mixed waste trenches located on the Hanford Site or at commercial facilities.

LDR REPORT WASTE LOCATION-SPECIFIC DATA SHEET

1.0 WASTE STREAM IDENTIFICATION AND SOURCE

1.1 Unit/Plant name: 222-S **Waste Stream:** Containerized mixed waste

Treatabilitiy Group Name: 222-S Laboratory Complex

1.2 Applicable profile number(s) for this waste stream:

Profile numbers are associated with the WSRD categories: 400, 401, 402, 404, 420, 500, 503, 504, 525, 627, 820, 900, and 921

1.3 Waste stream source information

1.3.1 General description of the waste (e.g., spill clean-up waste, discarded lab materials, maintenance waste):

Waste is generated from analytical procedures, unused or expired standards and reagents, tank farm samples and maintenance.

1.3.2 History of how and where the waste was/is generated:

The facility will generate waste throughout the 222-S Laboratory Complex (analytical procedures, hot cells, operations)

1.3.3 Source of the regulated constituents:

Analytical procedures, standards, reagents, tank samples and maintanence.

1.3.4 Source of the information (e.g., analytical data, process knowledge, document number, etc.)

Waste Stream Fact Sheets (WSFS), Container Disposal Request Database (CDRD), Inventory sheets, MSDSs, Request for Sample Analysis, Analysis and Waste Planning Checklists

1.3.5 Additional notes:

None.

2.0 WASTE STREAM STORAGE, INVENTORY, AND GENERATION INFORMATION

(NOTE: For waste in satellite accumulation areas and 90-day accumulation areas, skip to Section 2.6.)

2.1 Current storage method

- ☐ Container (pad)
- ☒ Container (covered)
- ☐ Container (retrievably buried)
- ☐ Tank
- ☐ DST
- ☐ SST
- ☐ Other (explain):

2.1.1 How was the waste managed prior to storage?

Per the Hanford Facility Dangerous Waste Permit Application, 222-S Laboratory Complex (DOE/RL-91-27 Rev. 2).

2.1.2 Timeframe when waste was placed to storage?

8/95

LDR REPORT WASTE LOCATION-SPECIFIC DATA SHEET

2.2 Storage inventory locations:

Building/Room Number	Number of Containers/Tanks
HS-00082 A&B	4
HS-00083 A&B	3
Room 4E	0
Room 2B	0
N/A	N/A

2.3 Current stored inventory for this stream.

Total volume (cubic meters): 0.962

Date of inventory values: 12/31/2009

Comments on waste inventory:

Mixed Waste is shipped to an off-site TSDF.

2.4 Is storage capacity at this location potentially an issue for this waste stream?

☐ Yes ☒ No

If yes, what is the total estimated storage capacity? N/A

When is this capacity expected to be reached? N/A

Bases and assumptions used:

2.5 Planned storage areas for this waste:

☒ Current Location ☒ CWC ☐ DST

☒ Other Area(s) (list): Offsite treatment facilities.

☐ None

2.6 Estimated generation projection by calendar year (includes waste in satellite and 90-day accumulation areas):

Year	m^3	and/or	kg
2010	10.000		0.000
2011	10.000		0.000
2012	10.000		0.000
2013	10.000		0.000
2014	0.000		0.000
Total	40.000		0.000

2.7 DOE Storage Compliance Assessment information:

☒ Assessment has been completed.

LDR REPORT WASTE LOCATION-SPECIFIC DATA SHEET

Document Number	Date
A&E-SEC-01-018	12/30/2001

☐ Assessment has been scheduled. Scheduled date:

☐ Other. Explain:

2.8 Applicable Tri-Party Agreement milestones related to storage at this location:

Milestone Number	Due Date
N/A	

2.9 Has there ever been any non-permitted, unauthorized release of this waste stream from this storage unit to the environment?

☐ Yes ☒ No

If yes, summarize releases and quantities and provide date:

N/A

2.10 Are there any plans to submit requests for variances or other exemptions related to storage?

☐ Yes ☒ No

If yes, explain: N/A

2.11 Characterization

2.11.1 Is further characterization needed about the waste prior to acceptance for storage?

☐ Yes ☒ No ☐ Unknown at this time

Milestone Number	Due Date
N/A	N/A

If yes or unknown, comment on characterization for storage.

N/A

2.11.2 Is further characterization needed about the waste prior to acceptance for treatment?

☐ Yes ☒ No ☐ Unknown at this time

Milestone Number	Due Date
N/A	N/A

If yes or unknown, comment on characterization for treatment.

2.11.3 Is further characterization needed about the waste prior to acceptance for disposal?

☐ Yes ☒ No ☐ Unknown at this time

LDR REPORT WASTE LOCATION-SPECIFIC DATA SHEET

Milestone Number	Due Date
N/A	N/A

If yes or unknown, comment on characterization for disposal.

N/A

2.12 Other key assumptions related to storage, inventory, and generation information:

This waste will be managed under current operational procedures

3.0 WASTE MINIMIZATION

3.1 Has a waste minimization assessment been completed for this stream?

☐ Yes ☒ No

If yes, provide date assessment conducted: N/A

If yes, provide document number or other identification:

N/A

If no, provide date assessment will be completed, or if waste stream is no longer generated, then indicate N/A:

Unknown at this time.

3.2 Provide details of current and proposed methods for minimizing the generation of this stream (e.g., process changes to reduce or eliminate LDR waste, methods to reduce volume through segregation and avoidance of commingling, substitution of less-toxic materials):

Proper planning is used prior to waste generation through work planning, pre-job meetings and consistent review of routine operations to minimize waste generation where possible. The Laboratory constantly seeks innovative opportunities to reduce waste by being aware of current waste minimizing technology.

3.3 Waste minimization schedule

3.3.1 Reduction achieved during calendar year 2009 (volume or mass)

0.833 m3

3.3.2 Projected future waste volume reductions

Year	m^3	and/or	kg
2010	0.00		0.00
2011	0.00		0.00
2012	0.00		0.00
2013	0.00		0.00
2014	0.00		0.00
Total	0.00		0.00

3.3.3 Bases and assumptions used in above estimates:

LDR REPORT WASTE LOCATION-SPECIFIC DATA SHEET

222-S has no waste minimization goals for this waste stream; therefore, no projected future waste volume reductions are reported in Section 3.3.2. However, the analytical process generating this stream is continuously evaluated for waste minimization opportunities.

LDR REPORT WASTE LOCATION-SPECIFIC DATA SHEET

1.0 WASTE STREAM IDENTIFICATION AND SOURCE

1.1 Unit/Plant name: Tank Farm Facilities **Waste Stream:** Mixed waste from 616

Treatabilitiy Group Name: 222-S Laboratory Complex

1.2 Applicable profile number(s) for this waste stream:

N/A

1.3 Waste stream source information

1.3.1 General description of the waste (e.g., spill clean-up waste, discarded lab materials, maintenance waste):

Organic non-debris contaminated soil, sand, rocks, gravel and spill clean up. The waste is contaminated with tank waste. The waste matrix may include small amount of debris such as plastic, and cloth. The containers may also include shielding material such as rubber or lead when necessary.

1.3.2 History of how and where the waste was/is generated:

Waste is generated at DST and SST tank farms and associated facilities. It can be generated by some of the following activities: sampling (core sampling, grab sampling), maintenance, surveillance, clean up and upgrades/construction, tank stabilization and tank waste transfers.

1.3.3 Source of the regulated constituents:

Non-debris from tank farms is considered mixed waste when it contains (as described by RCRA "contained-in policy" provisions) tank waste. Debris may also be hazardous due to regulated chemical products.

1.3.4 Source of the information (e.g., analytical data, process knowledge, document number, etc.)

MSDS, process knowledge and analytical data. The document "Tank Farms Solid Waste Characterization Guide with Sampling and Analysis Attachment", HNF-SD-WM-PLN-119, Rev.1, describes the basis for historical and process knowledge used for designation.

1.3.5 Additional notes:

None.

2.0 WASTE STREAM STORAGE, INVENTORY, AND GENERATION INFORMATION

(NOTE: For waste in satellite accumulation areas and 90-day accumulation areas, skip to Section 2.6.)

2.1 Current storage method

- ☐ Container (pad)
- ☐ Container (covered)
- ☐ Container (retrievably buried)
- ☐ Tank
- ☐ DST
- ☐ SST
- ☐ Other (explain):

2.1.1 How was the waste managed prior to storage?

N/A

LDR REPORT WASTE LOCATION-SPECIFIC DATA SHEET

2.1.2 Timeframe when waste was placed to storage?

N/A

2.2 Storage inventory locations:

Building/Room Number	Number of Containers/Tanks
N/A	N/A

2.3 Current stored inventory for this stream.

Total volume (cubic meters): 0.000

Date of inventory values: 12/31/2009

Comments on waste inventory:

2.4 Is storage capacity at this location potentially an issue for this waste stream?

☐ Yes ☒ No

If yes, what is the total estimated storage capacity? N/A

When is this capacity expected to be reached? N/A

Bases and assumptions used:

N/A

2.5 Planned storage areas for this waste:

☐ Current Location ☐ CWC ☐ DST

☐ Other Area(s) (list): N/A

☐ None

2.6 Estimated generation projection by calendar year (includes waste in satellite and 90-day accumulation areas):

Year	m^3	and/or	kg
2010	1.000		0.000
2011	1.000		0.000
2012	1.000		0.000
2013	1.000		0.000
2014	1.000		0.000
Total	5.000		0.000

2.7 DOE Storage Compliance Assessment information:

☐ Assessment has been completed.

Document Number	Date

LDR REPORT WASTE LOCATION-SPECIFIC DATA SHEET

☐ Assessment has been scheduled. Scheduled date:

☒ Other. Explain: Storage assessment not required.

2.8 Applicable Tri-Party Agreement milestones related to storage at this location:

Milestone Number	Due Date
N/A	

2.9 Has there ever been any non-permitted, unauthorized release of this waste stream from this storage unit to the environment?

☐ Yes ☒ No

If yes, summarize releases and quantities and provide date:

N/A

2.10 Are there any plans to submit requests for variances or other exemptions related to storage?

☐ Yes ☒ No

If yes, explain: N/A

2.11 Characterization

2.11.1 Is further characterization needed about the waste prior to acceptance for storage?

☐ Yes ☒ No ☐ Unknown at this time

Milestone Number	Due Date
N/A	N/A

If yes or unknown, comment on characterization for storage.

N/A

2.11.2 Is further characterization needed about the waste prior to acceptance for treatment?

☐ Yes ☒ No ☐ Unknown at this time

Milestone Number	Due Date
N/A	N/A

If yes or unknown, comment on characterization for treatment.

N/A

2.11.3 Is further characterization needed about the waste prior to acceptance for disposal?

☐ Yes ☒ No ☐ Unknown at this time

Milestone Number	Due Date
N/A	N/A

LDR REPORT WASTE LOCATION-SPECIFIC DATA SHEET

If yes or unknown, comment on characterization for disposal.

N/A

2.12 Other key assumptions related to storage, inventory, and generation information:

None.

3.0 WASTE MINIMIZATION

3.1 Has a waste minimization assessment been completed for this stream?

☐ Yes ☒ No

If yes, provide date assessment conducted: N/A

If yes, provide document number or other identification:

N/A

If no, provide date assessment will be completed, or if waste stream is no longer generated, then indicate N/A:

Unknown at this time.

3.2 Provide details of current and proposed methods for minimizing the generation of this stream (e.g., process changes to reduce or eliminate LDR waste, methods to reduce volume through segregation and avoidance of commingling, substitution of less-toxic materials):

1) Segregation of LLW from mixed waste; 2) Minimize the use of regulated products; 3) Encourage the use non-regulated products; 4) Minimize the volume of regulated chemicals used in Rad. Zone; and 5) Release items by sampling and analysis.6) Perform a Contained In Determination

3.3 Waste minimization schedule

3.3.1 Reduction achieved during calendar year 2009 (volume or mass)

0.100 m3

3.3.2 Projected future waste volume reductions

Year	m^3	and/or	kg
2010	0.10		0.00
2011	0.10		0.00
2012	0.10		0.00
2013	0.10		0.00
2014	0.10		0.00
Total	0.50		0.00

3.3.3 Bases and assumptions used in above estimates:

The site goal is 10% of forecasted volumes. At this time, construction and upgrade activities are being performed for preparation of feed delivery to the waste treatment plant. No waste reduction is expected.

222-S T8 Tunnel

LDR REPORT TREATABILITY GROUP DATA SHEET

1.0 WASTE STREAM IDENTIFICATION

1.1 Treatability Group Name: 222-S T8 Tunnel

1.2 Description of waste (list WSRd numbers for this waste stream, as applicable)

This waste stream is comprised of debris that has come into contact with waste from the 219-S Waste Handling Facility (WHF) tank system waste. The debris is designated as remote-handled mixed low-level waste (RH MLLW) as a result of this contact.

2.0 WASTE INVENTORY AND GENERATION

2.1 Current total inventory for this waste stream (stored waste only, not accumulation areas). [Equals sum of location-specific data sheets for this treatability group.]

Total volume (cubic meters): 0.200

2.2 Estimated generation projection by calendar year: [equals annual sums of location-specfic data sheets for this treatability group].

Year	m^3	and/or	kg
2010	0.000		0.000
2011	0.000		0.000
2012	0.000		0.000
2013	0.000		0.000
2014	0.000		0.000
Total	0.000		0.000

3.0 WASTE STREAM CHARACTERIZATION

3.1 Radiological Characteristics

3.1.1 Mixed waste type: ☐ High-level ☐ Transuranic ☒ Low-level

3.1.2 Handling (as package contents would need to be handled during treatment):

☐ Contact-handled ☒ Remote-handled

3.1.3 Comments on radiological characteristics (e.g., more specific information on content, treatment concerns caused by radiation, confidence level):

RH waste must be shielded down to contact-handled (CH) levels before accepted into a Hanford Site TSD unit; therefore, RH waste packages in a Hanford Site TSD unit are actually input into SWITS as CH. To determine if a waste package contains RH waste, the radionuclide, dose rate, physical form, and generator information in SWITS are reviewed for clues that might lead a reviewer to believe a waste may be RH. Since the T-8 Tunnel waste may be high dose, RH will apply to this waste stream.

LDR REPORT TREATABILITY GROUP DATA SHEET

3.2 Physical Form

3.2.1 Physical form of the waste:

☐ Solid ☐ Liquid ☐ Semi-solid ☒ Debris

☐ Other (Describe in comments.)

3.2.2 Comments on physical form:

This waste matrix is hazardous debris containing 219-S WHF waste.

3.3 Regulated constituents and wastewater/non-wastewater category

3.3.1 Wastewater/non-wastewater under RCRA

☐ Wastewater ☒ Non-wastewater ☐ Unknown

3.3.2 Regulated constituents table including treatment requirements and UHCs, if applicable.

EPA/ State Number	Waste Description	LDR Sub-Category*	Concentration (Typical or Range)**	Basis	LDR Treatment Concentration Standard or Technology Code
F001	1,1,1-Trichloroethane	Spent Solvent	<6 mg/kg	***	6.0 mg/kg
F002	Methylene Chloride	Spent Solvent	< 30 mg/kg	***	30 mg/kg
F003	Acetone & Hexone	Spent Solvent	<160 mg/kg	***	160 mg/kg
F004	o-Cresol & p-Cresol	Spent Solvent	< 5.6 mg/kg	***	5.6 mg/kg
F005	Methyl Ethyl Ketone	Spent Solvent	< 36 mg/kg	***	36 mg/kg

* LDR Subcategory marked N/A if no existing subcategory adequately describes this waste, or if there are no defined subcategories for the waste number (40 CFR 268.40).

** If waste is not consistent in concentration, this may not apply. Described in Section 3.3.6.

***generator knowledge based on the process that generated this waste.

UHCs do not apply to debris.

3.3.3 List any waste numbers from Section 3.3.2 for which the waste stream already meets established LDR treatment standards.

☐ List:

☐ No LDR treatment required (e.g. TRUM waste destined for WIPP, exclusion, etc.)

☒ None (i.e. all constituents/waste numbers of this waste stream still require treatment).

LDR REPORT TREATABILITY GROUP DATA SHEET

3.3.4 Does this waste stream contain PCBs?

☐ Yes ☒ No ☐ Unknown

If no or unknown, skip to Section 3.3.5.

3.3.4.1 Is waste stream subject to TSCA regulations for PCBs?

☐ Yes ☒ No ☐ Unknown

3.3.4.2 Indicate the PCB concentration range.

☐ < 50 ppm ☐ ≥ 50 ppm ☐ Unknown

3.3.5 What is the confidence level for the regulated constituents?

☐ Low ☐ Medium ☒ High

3.3.6 Comments on regulated constituents and wastewater/non-wastewater category:

Characterization of the waste is based on characterization of the 219-S waste. Only F and D waste codes originally applied to the piping before it was taken out of service. The piping was rinsed prior to placement in the tunnel. Therefore, the piping no longer carries D waste codes, and only F waste codes apply. Underlying hazardous constituents do not apply.

4.0 WASTE STREAM TREATMENT

4.1 Is this waste stream currently being treated?

☐ Yes ☒ No

If yes, provide details: N/A

4.2 Planned treatment: Check the appropriate box indicating future plans for treating this waste stream to meet applicable regulations, including LDR treatment standards.

☐ No treatment required (skip to Section 5.0)

☐ Treating or plan to treat on site

☐ Treating or plan to treat off site

☒ Treatment options still being assessed

4.3 Planned treatment method, facility, extent of treatment capacity available:

TBD.

4.4 Treatment schedule information:

Treatment will be scheduled to coincide with the 222-S Laboratory Complex closure.

4.5 Applicable Tri-Party Agreement treatment milestone numbers (including permitting):

Milestone Number	Due Date
N/A	N/A

LDR REPORT TREATABILITY GROUP DATA SHEET

4.6 Proposed new Tri-Party Agreement treatment milestones:

None.

4.7 If treating or planning to treat on site, was or will waste minimization be addressed in developing and/or selecting the treatment method?

☐ Yes ☐ No ☒ Unknown

If yes, describe: N/A

4.8 List or describe treatability equivalency petitions, rulemaking petitions, and case-by-case exemptions needed for treatment or already in place.

TBD

4.9 Key Assumptions:

N/A

5.0 WASTE STREAM DISPOSAL

After treatment, how will the waste stream be disposed of (include locations, milestone numbers, variances required, etc. as applicable):

Disposal will be discussed as a part of the 222-S Laboratory Complex closure.

LDR REPORT WASTE LOCATION-SPECIFIC DATA SHEET

1.0 WASTE STREAM IDENTIFICATION AND SOURCE

1.1 Unit/Plant name: 222-S Laboratory Complex **Waste Stream:** T-8 Tunnel RH-MLLW

Treatabilitiy Group Name: 222-S T8 Tunnel

1.2 Applicable profile number(s) for this waste stream:

None.

1.3 Waste stream source information

1.3.1 General description of the waste (e.g., spill clean-up waste, discarded lab materials, maintenance waste):

Waste was generated from removal of pipelines and other debris used in the transfer of aqueous analytical waste from the 222-S Laboratory Complex to the 219-S WHF.

1.3.2 History of how and where the waste was/is generated:

The waste consists of debris (used pipes that transferred chemicals, unused samples, standards and reagents during analytical procedures).

1.3.3 Source of the regulated constituents:

The source of the hazardous constituents is 222-S Laboratory waste entering 219-S WHF.

1.3.4 Source of the information (e.g., analytical data, process knowledge, document number, etc.)

Approval of waste entering 219-S WHF is in accordance 222-S Waste Analysis Plan (WAP), RPP-29498 which superseded DOE/RL-91-27.

1.3.5 Additional notes:

None.

2.0 WASTE STREAM STORAGE, INVENTORY, AND GENERATION INFORMATION

(NOTE: For waste in satellite accumulation areas and 90-day accumulation areas, skip to Section 2.6.)

2.1 Current storage method

- ☐ Container (pad)
- ☐ Container (covered)
- ☐ Container (retrievably buried)
- ☐ Tank
- ☐ DST
- ☐ SST
- ☒ Other (explain): This debris waste stream is currently in shielded alcove of the T8 tunnel.

2.1.1 How was the waste managed prior to storage?

This waste was being staged in the shielded T-8 tunnel alcove per Ecology approval ("Request for Approval to Stage Out of Service Ancillary Drain Piping in the 222-S Laboratory Service Tunnels", dated October 10, 1997) until closure of the 222-S Laboratory Complex.

2.1.2 Timeframe when waste was placed to storage?

10/1997.

LDR REPORT WASTE LOCATION-SPECIFIC DATA SHEET

2.2 Storage inventory locations:

Building/Room Number	Number of Containers/Tanks
219-S T8 Tunnel	N/A - Pile

2.3 Current stored inventory for this stream.

Total volume (cubic meters): 0.200

Date of inventory values: 12/31/2009

Comments on waste inventory:

None.

2.4 Is storage capacity at this location potentially an issue for this waste stream?

☐ Yes ☒ No

If yes, what is the total estimated storage capacity? N/A

When is this capacity expected to be reached? N/A

Bases and assumptions used:

N/A

2.5 Planned storage areas for this waste:

☐ Current Location ☐ CWC ☐ DST

☒ Other Area(s) (list): This waste has been staged in a shielded alcove of T-8 tunnel. Final disposition will be determined at the time of 222-S Laboratory Complex closure.

☐ None

2.6 Estimated generation projection by calendar year (includes waste in satellite and 90-day accumulation areas):

Year	m^3	and/or	kg
2010	0.000		0.000
2011	0.000		0.000
2012	0.000		0.000
2013	0.000		0.000
2014	0.000		0.000
Total	0.000		0.000

2.7 DOE Storage Compliance Assessment information:

☒ Assessment has been completed.

Document Number	Date
A&E-SEC-01-018	12/03/2001

LDR REPORT WASTE LOCATION-SPECIFIC DATA SHEET

☐ Assessment has been scheduled. Scheduled date:

☒ Other. Explain: A&E-SEC-01-018 is attached to DOE letter numbered 02-A&E-002.

2.8 Applicable Tri-Party Agreement milestones related to storage at this location:

Milestone Number	Due Date
N/A	

2.9 Has there ever been any non-permitted, unauthorized release of this waste stream from this storage unit to the environment?

☐ Yes ☒ No

If yes, summarize releases and quantities and provide date:

N/A

2.10 Are there any plans to submit requests for variances or other exemptions related to storage?

☐ Yes ☒ No

If yes, explain: N/A

2.11 Characterization

2.11.1 Is further characterization needed about the waste prior to acceptance for storage?

☐ Yes ☒ No ☐ Unknown at this time

Milestone Number	Due Date
N/A	N/A

If yes or unknown, comment on characterization for storage.

N/A

2.11.2 Is further characterization needed about the waste prior to acceptance for treatment?

☐ Yes ☒ No ☐ Unknown at this time

Milestone Number	Due Date
N/A	N/A

If yes or unknown, comment on characterization for treatment.

N/A

2.11.3 Is further characterization needed about the waste prior to acceptance for disposal?

☐ Yes ☒ No ☐ Unknown at this time

Milestone Number	Due Date
N/A	N/A

LDR REPORT WASTE LOCATION-SPECIFIC DATA SHEET

If yes or unknown, comment on characterization for disposal.

N/A

2.12 Other key assumptions related to storage, inventory, and generation information:

None.

3.0 WASTE MINIMIZATION

3.1 Has a waste minimization assessment been completed for this stream?

☐ Yes ☒ No

If yes, provide date assessment conducted: N/A

If yes, provide document number or other identification:

N/A

If no, provide date assessment will be completed, or if waste stream is no longer generated, then indicate N/A:

N/A

3.2 Provide details of current and proposed methods for minimizing the generation of this stream (e.g., process changes to reduce or eliminate LDR waste, methods to reduce volume through segregation and avoidance of commingling, substitution of less-toxic materials):

N/A

3.3 Waste minimization schedule

3.3.1 Reduction achieved during calendar year 2009 (volume or mass)

0.000 m3

3.3.2 Projected future waste volume reductions

Year	m^3	and/or	kg
2010	0.00		0.00
2011	0.00		0.00
2012	0.00		0.00
2013	0.00		0.00
2014	0.00		0.00
Total	0.00		0.00

3.3.3 Bases and assumptions used in above estimates:

N/A

241-CX Tank System

LDR REPORT TREATABILITY GROUP DATA SHEET

1.0 WASTE STREAM IDENTIFICATION

1.1 Treatability Group Name: 241-CX Tank System

1.2 Description of waste (list WSRd numbers for this waste stream, as applicable)

Residual tank waste resulting from REDOX, PUREX, and Semiworks processes.

2.0 WASTE INVENTORY AND GENERATION

2.1 Current total inventory for this waste stream (stored waste only, not accumulation areas). [Equals sum of location-specific data sheets for this treatability group.]

Total volume (cubic meters): 6.390

2.2 Estimated generation projection by calendar year: [equals annual sums of location-specfic data sheets for this treatability group].

Year	m^3	and/or	kg
2010	0.000		0.000
2011	0.000		0.000
2012	0.000		0.000
2013	0.000		0.000
2014	0.000		0.000
Total	0.000		0.000

3.0 WASTE STREAM CHARACTERIZATION

3.1 Radiological Characteristics

3.1.1 Mixed waste type: ☐ High-level ☐ Transuranic ☒ Low-level

3.1.2 Handling (as package contents would need to be handled during treatment):

☐ Contact-handled ☒ Remote-handled

3.1.3 Comments on radiological characteristics (e.g., more specific information on content, treatment concerns caused by radiation, confidence level):

Waste in the CX-72 tank - high personnel dose potential, remote handled. Confidence high. No additional waste will be placed in storage.

3.2 Physical Form

3.2.1 Physical form of the waste:

☐ Solid ☐ Liquid ☐ Semi-solid ☐ Debris

☒ Other (Describe in comments.)

3.2.2 Comments on physical form:

Not a lot of definitive information is available on the contents of the waste in the 241-CX-72. Waste in the CX-72 tank was heated until nearly dry, and later, 24 feet of grout was placed over the 11-foot deep heel of non-liquid mixed waste.

LDR REPORT TREATABILITY GROUP DATA SHEET

3.3 Regulated constituents and wastewater/non-wastewater category

3.3.1 Wastewater/non-wastewater under RCRA

☐ Wastewater ☒ Non-wastewater ☐ Unknown

3.3.2 Regulated constituents table including treatment requirements and UHCs, if applicable.

EPA/ State Number	Waste Description	LDR Sub-Category*	Concentration (Typical or Range)**	Basis	LDR Treatment Concentration Standard or Technology Code
D002	corrosivity	corrosive char	**	process knowledge	DEACT, meet 268.48
D004	arsenic	N/A	**	process knowledge	5.0 mg/L TCLP, meet 268.48
D005	barium	N/A	**	process knowledge	21 mg/L TCLP, meet 268.48
D006	cadmium	cadmium char.	**	process knowledge	0.11 mg/l TCLP, meet 268.48
D007	chromium	N/A	**	process knowledge	0.60 mg/l TCLP, meet 268.48
D008	lead	Lead char.	**	process knowledge	5.0 mg/L TCLP, meet 268.48
D009	mercury	Low mercury	**	process knowledge	0.2 mg/l TCLP, meet 268.48
D010	selenium	N/A	**	process knowledge	5.7 mg/l TCLP, meet 268.48
D011	silver	N/A	**	process knowledge	0.14 mg/l TCLP, meet 268.48

* LDR Subcategory marked N/A if no existing subcategory adequately describes this waste, or if there are no defined subcategories for the waste number (40 CFR 268.40).

** If waste is not consistent in concentration, this may not apply. Described in Section 3.3.6.

Not all the codes apply to all three vessels (see the Part A). Only tank 241-CX-72 currently contains mixed waste.

3.3.3 List any waste numbers from Section 3.3.2 for which the waste stream already meets established LDR treatment standards.

☐ List:

☐ No LDR treatment required (e.g. TRUM waste destined for WIPP, exclusion, etc.)

☒ None (i.e. all constituents/waste numbers of this waste stream still require treatment).

LDR REPORT TREATABILITY GROUP DATA SHEET

3.3.4 Does this waste stream contain PCBs?

☐ Yes ☒ No ☐ Unknown

If no or unknown, skip to Section 3.3.5.

3.3.4.1 Is waste stream subject to TSCA regulations for PCBs?

☐ Yes ☐ No ☐ Unknown

3.3.4.2 Indicate the PCB concentration range.

☐ < 50 ppm ☐ ≥ 50 ppm ☐ Unknown

3.3.5 What is the confidence level for the regulated constituents?

☐ Low ☒ Medium ☐ High

3.3.6 Comments on regulated constituents and wastewater/non-wastewater category:

Assume treatment will be required for this waste stream as no information is available about the concentration levels of the waste.

4.0 WASTE STREAM TREATMENT

4.1 Is this waste stream currently being treated?

☐ Yes ☒ No

If yes, provide details: N/A

4.2 Planned treatment: Check the appropriate box indicating future plans for treating this waste stream to meet applicable regulations, including LDR treatment standards.

☐ No treatment required (skip to Section 5.0)

☐ Treating or plan to treat on site

☐ Treating or plan to treat off site

☒ Treatment options still being assessed

4.3 Planned treatment method, facility, extent of treatment capacity available:

To be determined.

4.4 Treatment schedule information:

Waste will be dispositioned with the TSD unit closure.

4.5 Applicable Tri-Party Agreement treatment milestone numbers (including permitting):

Milestone Number	Due Date
N/A	N/A

4.6 Proposed new Tri-Party Agreement treatment milestones:

None.

LDR REPORT TREATABILITY GROUP DATA SHEET

4.7 If treating or planning to treat on site, was or will waste minimization be addressed in developing and/or selecting the treatment method?

☐ Yes ☐ No ☒ Unknown

If yes, describe: N/A

4.8 List or describe treatability equivalency petitions, rulemaking petitions, and case-by-case exemptions needed for treatment or already in place.

Unknown at this time.

4.9 Key Assumptions:

Unknown at this time.

5.0 WASTE STREAM DISPOSAL

After treatment, how will the waste stream be disposed of (include locations, milestone numbers, variances required, etc. as applicable):

No active processing or waste generation is being done on these tanks.

LDR REPORT WASTE LOCATION-SPECIFIC DATA SHEET

1.0 WASTE STREAM IDENTIFICATION AND SOURCE

1.1 Unit/Plant name: 241-CX Tank System **Waste Stream:** CX Tank System

Treatabilitiy Group Name: 241-CX Tank System

1.2 Applicable profile number(s) for this waste stream:

N/A

1.3 Waste stream source information

1.3.1 General description of the waste (e.g., spill clean-up waste, discarded lab materials, maintenance waste):

241-CX-70, -71, and -72 were used to store process waste from REDOX, PUREX, and Strontium Semiworks Complex.

1.3.2 History of how and where the waste was/is generated:

Tanks were in operation beginning in early 1950's. On December 21, 1991, the remaining waste in Tank 241-CX-70 was placed in containers and transferred to 224-T TRUSAF and then Central Waste Complex. The tank was dried and is considered empty. Tanks 241-CX-71 contains non-dangerous waste and 241-CX-72 contains mixed waste.

1.3.3 Source of the regulated constituents:

Hazardous constituents resulted from past operations in REDOX, PUREX, and Strontium Semiworks Complex.

1.3.4 Source of the information (e.g., analytical data, process knowledge, document number, etc.)

Process knowledge and analytical data.

1.3.5 Additional notes:

All of the tanks have been out of service for at least 35 years. Further details can be found in the Part A permit application and DOE/RL-2002-14.

2.0 WASTE STREAM STORAGE, INVENTORY, AND GENERATION INFORMATION

(NOTE: For waste in satellite accumulation areas and 90-day accumulation areas, skip to Section 2.6.)

2.1 Current storage method

- ☐ Container (pad)
- ☐ Container (covered)
- ☐ Container (retrievably buried)
- ☒ Tank
- ☐ DST
- ☐ SST
- ☐ Other (explain): N/A

2.1.1 How was the waste managed prior to storage?

Waste was placed directly into storage from operations.

2.1.2 Timeframe when waste was placed to storage?

Waste was placed in storage between 1950 and 1967. Grout was added to the CX-72 tank in 1986.

LDR REPORT WASTE LOCATION-SPECIFIC DATA SHEET

2.2 Storage inventory locations:

Building/Room Number	Number of Containers/Tanks
241-CX-72	1 tank
241-CX-71	1 tank

2.3 Current stored inventory for this stream.

Total volume (cubic meters): 6.390

Date of inventory values: 01/27/2010

Comments on waste inventory:

2.66 m3 is reported for tank 72 based on 11 feet of non-liquid mixed waste located in a 3.3 foot circular tank diameter. 3.79m3 is reported for tank 71 based on assuming the tank is full and its capacity is 3.79m3 (DOE/RL-2002-14 Rev 1 Draft A). The stored volume reported contains uncertainty as to the actual volume.

2.4 Is storage capacity at this location potentially an issue for this waste stream?

☐ Yes ☒ No

If yes, what is the total estimated storage capacity? N/A

When is this capacity expected to be reached? N/A

Bases and assumptions used:

N/A

2.5 Planned storage areas for this waste:

☒ Current Location ☐ CWC ☐ DST

☐ Other Area(s) (list):

☐ None

2.6 Estimated generation projection by calendar year (includes waste in satellite and 90-day accumulation areas):

Year	m^3	and/or	kg
2010	0.000		0.000
2011	0.000		0.000
2012	0.000		0.000
2013	0.000		0.000
2014	0.000		0.000
Total	0.000		0.000

2.7 DOE Storage Compliance Assessment information:

☒ Assessment has been completed.

LDR REPORT WASTE LOCATION-SPECIFIC DATA SHEET

Document Number	Date
N/A - D&D Project Mangement Assessment Plan	10/22/2009
and Report: LDR Assessment of the 241-CXTank Syste	10/22/2009

☐ Assessment has been scheduled. Scheduled date:

☐ Other. Explain:

2.8 Applicable Tri-Party Agreement milestones related to storage at this location:

Milestone Number	Due Date
N/A	

2.9 Has there ever been any non-permitted, unauthorized release of this waste stream from this storage unit to the environment?

☐ Yes ☒ No

If yes, summarize releases and quantities and provide date:

N/A

2.10 Are there any plans to submit requests for variances or other exemptions related to storage?

☐ Yes ☒ No

If yes, explain: N/A

2.11 Characterization

2.11.1 Is further characterization needed about the waste prior to acceptance for storage?

☐ Yes ☒ No ☐ Unknown at this time

Milestone Number	Due Date
N/A	N/A

If yes or unknown, comment on characterization for storage.

N/A

2.11.2 Is further characterization needed about the waste prior to acceptance for treatment?

☒ Yes ☐ No ☐ Unknown at this time

Milestone Number	Due Date
N/A	N/A

If yes or unknown, comment on characterization for treatment.

Sampling and analysis of the contents of 241-CX-72 will be performed in conjunction with the CERCLA remedial investigation and in accordance with the approved sampling and analysis plan, DOE/RL-2002-14. Characterization results will be used to designate tank contents and support a tank disposition study to evaluate tank closure options (DOE/RL-2008-51).

LDR REPORT WASTE LOCATION-SPECIFIC DATA SHEET

2.11.3 Is further characterization needed about the waste prior to acceptance for disposal?

☒ Yes ☐ No ☐ Unknown at this time

Milestone Number	Due Date
N/A	N/A

If yes or unknown, comment on characterization for disposal.

Sampling and analysis of the contents of 241-CX-72 will be performed in conjunction with the CERCLA remedial investigation and in accordance with the approved sampling and analysis plan, DOE/RL-2002-14. Characterization results will be used to designate tank contents and support a tank disposition study to evaluate tank closure options (DOE/RL-2008-51).

2.12 Other key assumptions related to storage, inventory, and generation information:

None.

3.0 WASTE MINIMIZATION

3.1 Has a waste minimization assessment been completed for this stream?

☐ Yes ☒ No

If yes, provide date assessment conducted: N/A

If yes, provide document number or other identification:

N/A

If no, provide date assessment will be completed, or if waste stream is no longer generated, then indicate N/A:

N/A. Waste stream is no longer generated.

3.2 Provide details of current and proposed methods for minimizing the generation of this stream (e.g., process changes to reduce or eliminate LDR waste, methods to reduce volume through segregation and avoidance of commingling, substitution of less-toxic materials):

N/A

3.3 Waste minimization schedule

3.3.1 Reduction achieved during calendar year 2009 (volume or mass)

0.000 m3

3.3.2 Projected future waste volume reductions

Year	m^3	and/or	kg
2010	0.00		0.00
2011	0.00		0.00
2012	0.00		0.00
2013	0.00		0.00
2014	0.00		0.00
Total	0.00		0.00

LDR REPORT WASTE LOCATION-SPECIFIC DATA SHEET

3.3.3 Bases and assumptions used in above estimates:

The facility is inactive. No waste is being generated.

This page intentionally left blank.

324 Building REC
Waste

LDR REPORT TREATABILITY GROUP DATA SHEET

1.0 WASTE STREAM IDENTIFICATION

1.1 Treatability Group Name: 324 Building REC Waste

1.2 Description of waste (list WSRd numbers for this waste stream, as applicable)

Radioactive waste containing regulated quantities of toxic heavy metals. Mixed waste residue may be generated from the future REC decontamination and deactivation activities and disposed as CERCLA waste in accordance with M-094-00.

2.0 WASTE INVENTORY AND GENERATION

2.1 Current total inventory for this waste stream (stored waste only, not accumulation areas). [Equals sum of location-specific data sheets for this treatability group.]

Total volume (cubic meters): 5.000

2.2 Estimated generation projection by calendar year: [equals annual sums of location-specfic data sheets for this treatability group].

Year	m^3	and/or	kg
2010	0.000		0.000
2011	0.000		0.000
2012	0.000		0.000
2013	0.000		0.000
2014	0.000		0.000
Total	0.000		0.000

3.0 WASTE STREAM CHARACTERIZATION

3.1 Radiological Characteristics

3.1.1 Mixed waste type: ☐ High-level ☐ Transuranic ☒ Low-level

3.1.2 Handling (as package contents would need to be handled during treatment):

☒ Contact-handled ☐ Remote-handled

3.1.3 Comments on radiological characteristics (e.g., more specific information on content, treatment concerns caused by radiation, confidence level):

None.

3.2 Physical Form

3.2.1 Physical form of the waste:

☒ Solid ☐ Liquid ☐ Semi-solid ☒ Debris

☐ Other (Describe in comments.)

3.2.2 Comments on physical form:

None.

LDR REPORT TREATABILITY GROUP DATA SHEET

3.3 Regulated constituents and wastewater/non-wastewater category

3.3.1 Wastewater/non-wastewater under RCRA

☐ Wastewater ☒ Non-wastewater ☐ Unknown

3.3.2 Regulated constituents table including treatment requirements and UHCs, if applicable.

EPA/ State Number	Waste Description	LDR Sub-Category*	Concentration (Typical or Range)**	Basis	LDR Treatment Concentration Standard or Technology Code
D005	Barium	N/A	420 ppm	Sample analysis	21 mg/l TCLP
D006	Cadmium	TC-Cadmium	1.0 ppm	Sample analysis	0.11 mg/l TCLP
D007	Chromium	N/A	6.3 ppm	Sample analysis	0.60 mg/l TCLP
D008	Lead	Rad. Lead Solids	>5.0	Process knowledge	Macroencapsulation
D008	Lead	TC-Lead	34.6 ppm	Sample analysis	0.75 mg/l TCLP

* LDR Subcategory marked N/A if no existing subcategory adequately describes this waste, or if there are no defined subcategories for the waste number (40 CFR 268.40).

** If waste is not consistent in concentration, this may not apply. Described in Section 3.3.6.

3.3.3 List any waste numbers from Section 3.3.2 for which the waste stream already meets established LDR treatment standards.

☐ List:

☐ No LDR treatment required (e.g. TRUM waste destined for WIPP, exclusion, etc.)

☒ None (i.e. all constituents/waste numbers of this waste stream still require treatment).

3.3.4 Does this waste stream contain PCBs?

☐ Yes ☒ No ☐ Unknown

If no or unknown, skip to Section 3.3.5.

3.3.4.1 Is waste stream subject to TSCA regulations for PCBs?

☐ Yes ☒ No ☐ Unknown

3.3.4.2 Indicate the PCB concentration range.

☐ < 50 ppm ☐ ≥ 50 ppm ☐ Unknown

LDR REPORT TREATABILITY GROUP DATA SHEET

3.3.5 What is the confidence level for the regulated constituents?

☐ Low ☒ Medium ☐ High

3.3.6 Comments on regulated constituents and wastewater/non-wastewater category:

None.

4.0 WASTE STREAM TREATMENT

4.1 Is this waste stream currently being treated?

☐ Yes ☒ No

If yes, provide details: N/A

4.2 Planned treatment: Check the appropriate box indicating future plans for treating this waste stream to meet applicable regulations, including LDR treatment standards.

☐ No treatment required (skip to Section 5.0)

☐ Treating or plan to treat on site

☐ Treating or plan to treat off site

☒ Treatment options still being assessed

4.3 Planned treatment method, facility, extent of treatment capacity available:

TBD

4.4 Treatment schedule information:

None.

4.5 Applicable Tri-Party Agreement treatment milestone numbers (including permitting):

Milestone Number	Due Date
N/A	N/A

4.6 Proposed new Tri-Party Agreement treatment milestones:

None.

4.7 If treating or planning to treat on site, was or will waste minimization be addressed in developing and/or selecting the treatment method?

☐ Yes ☐ No ☒ Unknown

If yes, describe: N/A

4.8 List or describe treatability equivalency petitions, rulemaking petitions, and case-by-case exemptions needed for treatment or already in place.

TBD.

4.9 Key Assumptions:

None.

LDR REPORT TREATABILITY GROUP DATA SHEET

5.0 WASTE STREAM DISPOSAL

After treatment, how will the waste stream be disposed of (include locations, milestone numbers, variances required, etc. as applicable):

Waste will be disposed at ERDF.

LDR REPORT WASTE LOCATION-SPECIFIC DATA SHEET

1.0 WASTE STREAM IDENTIFICATION AND SOURCE

1.1 Unit/Plant name: 324 Building **Waste Stream:** Radiochemical Engineering Cells

Treatabilitiy Group Name: 324 Building REC Waste

1.2 Applicable profile number(s) for this waste stream:

None.

1.3 Waste stream source information

1.3.1 General description of the waste (e.g., spill clean-up waste, discarded lab materials, maintenance waste):

Waste residue from further REC deactivation and decontamination activities.

1.3.2 History of how and where the waste was/is generated:

Waste was generated during hot cell operations in the past, as described in the "324 Building Radiochemical Engineering Cells, High Level Vault, Low Level Vault, and Associated Areas Closure Plan", DOE/RL-96-73. Waste is being collected and containerized from the clean-up of the hot cells, pipe trench, and tank vault.

1.3.3 Source of the regulated constituents:

The hazardous constituents came from feed materials to support various research and development projects that were performed in the REC. This information is discussed in detail in DOE/RL-96-73, Rev.1, "324 Building Radiochemical Engineering Cells, High-Level Vault, Low-Level Vault, and Associated Areas Closure Plan".

1.3.4 Source of the information (e.g., analytical data, process knowledge, document number, etc.)

Analytical data, process knowledge.

1.3.5 Additional notes:

None.

2.0 WASTE STREAM STORAGE, INVENTORY, AND GENERATION INFORMATION

(NOTE: For waste in satellite accumulation areas and 90-day accumulation areas, skip to Section 2.6.)

2.1 Current storage method

- ☐ Container (pad)
- ☐ Container (covered)
- ☐ Container (retrievably buried)
- ☐ Tank
- ☐ DST
- ☐ SST
- ☒ Other (explain): The waste is in the form of radioactive contamination within the hot cells, pipe trench and tank vault.

2.1.1 How was the waste managed prior to storage?

In accordance with the "324 Building Radiochemical Engineering Cells, High Level Vault, Low Level Vault, and Associated Areas Closure Plan", DOE/RL-96-73.

LDR REPORT WASTE LOCATION-SPECIFIC DATA SHEET

2.1.2 Timeframe when waste was placed to storage?

As addressed in the 324 REC Closure Plan (DOE/RL-96-73), the waste is in the form of hot cell contamination from pre-1996 research and development operations.

2.2 Storage inventory locations:

Building/Room Number	Number of Containers/Tanks
324 REC	6 tanks

2.3 Current stored inventory for this stream.

Total volume (cubic meters): 5.000

Date of inventory values: 12/31/2009

Comments on waste inventory:

Facility is in deactivation and will not be accepting additional waste.

2.4 Is storage capacity at this location potentially an issue for this waste stream?

☐ Yes ☒ No

If yes, what is the total estimated storage capacity? N/A

When is this capacity expected to be reached? N/A

Bases and assumptions used:

N/A

2.5 Planned storage areas for this waste:

☐ Current Location ☐ CWC ☐ DST

☒ Other Area(s) (list): ERDF

☐ None

2.6 Estimated generation projection by calendar year (includes waste in satellite and 90-day accumulation areas):

Year	m^3	and/or	kg
2010	0.000		0.000
2011	0.000		0.000
2012	0.000		0.000
2013	0.000		0.000
2014	0.000		0.000
Total	0.000		0.000

2.7 DOE Storage Compliance Assessment information:

☒ Assessment has been completed.

LDR REPORT WASTE LOCATION-SPECIFIC DATA SHEET

Document Number	Date
324-LDR-S/A	02/26/2003

☐ Assessment has been scheduled. Scheduled date:

☐ Other. Explain:

2.8 Applicable Tri-Party Agreement milestones related to storage at this location:

Milestone Number	Due Date
N/A	

2.9 Has there ever been any non-permitted, unauthorized release of this waste stream from this storage unit to the environment?

☐ Yes ☒ No

If yes, summarize releases and quantities and provide date:

N/A

2.10 Are there any plans to submit requests for variances or other exemptions related to storage?

☐ Yes ☒ No

If yes, explain: N/A

2.11 Characterization

2.11.1 Is further characterization needed about the waste prior to acceptance for storage?

☐ Yes ☒ No ☐ Unknown at this time

Milestone Number	Due Date
N/A	N/A

If yes or unknown, comment on characterization for storage.

N/A

2.11.2 Is further characterization needed about the waste prior to acceptance for treatment?

☐ Yes ☒ No ☐ Unknown at this time

Milestone Number	Due Date
N/A	N/A

If yes or unknown, comment on characterization for treatment.

N/A

2.11.3 Is further characterization needed about the waste prior to acceptance for disposal?

☐ Yes ☒ No ☐ Unknown at this time

LDR REPORT WASTE LOCATION-SPECIFIC DATA SHEET

Milestone Number	Due Date
N/A	N/A

If yes or unknown, comment on characterization for disposal.

N/A

2.12 Other key assumptions related to storage, inventory, and generation information:

None.

3.0 WASTE MINIMIZATION

3.1 Has a waste minimization assessment been completed for this stream?

☐ Yes ☒ No

If yes, provide date assessment conducted: N/A

If yes, provide document number or other identification:

N/A

If no, provide date assessment will be completed, or if waste stream is no longer generated, then indicate N/A:

Not scheduled at this time.

3.2 Provide details of current and proposed methods for minimizing the generation of this stream (e.g., process changes to reduce or eliminate LDR waste, methods to reduce volume through segregation and avoidance of commingling, substitution of less-toxic materials):

Waste minimization is accomplished through waste segregation. Waste minimization will be considered during the development and/or selection of the treatment method.

3.3 Waste minimization schedule

3.3.1 Reduction achieved during calendar year 2009 (volume or mass)

0.000 m3

3.3.2 Projected future waste volume reductions

Year	m^3	and/or	kg
2010	0.00		0.00
2011	0.00		0.00
2012	0.00		0.00
2013	0.00		0.00
2014	0.00		0.00
Total	0.00		0.00

3.3.3 Bases and assumptions used in above estimates:

None.

LDR REPORT TREATABILITY GROUP DATA SHEET

1.0 WASTE STREAM IDENTIFICATION

1.1 Treatability Group Name: 325 HWTU

1.2 Description of waste (list WSRd numbers for this waste stream, as applicable)

This waste stream consists of many different inorganic and organic solids and liquids that are contaminated with inorganic and organic regulated dangerous waste constituents, including PCBs. This waste stream also includes hazardous debris. WSRds in this waste stream include PNNL-930-05 and PNNL-931-04.

2.0 WASTE INVENTORY AND GENERATION

2.1 Current total inventory for this waste stream (stored waste only, not accumulation areas). [Equals sum of location-specific data sheets for this treatability group.]

Total volume (cubic meters): 3.411

2.2 Estimated generation projection by calendar year: [equals annual sums of location-specfic data sheets for this treatability group].

Year	m^3	and/or	kg
2010	9.000		0.000
2011	9.000		0.000
2012	9.000		0.000
2013	9.000		0.000
2014	9.000		0.000
Total	45.000		0.000

3.0 WASTE STREAM CHARACTERIZATION

3.1 Radiological Characteristics

3.1.1 Mixed waste type: ☐ High-level ☐ Transuranic ☒ Low-level

3.1.2 Handling (as package contents would need to be handled during treatment):

☒ Contact-handled ☐ Remote-handled

3.1.3 Comments on radiological characteristics (e.g., more specific information on content, treatment concerns caused by radiation, confidence level):

The majority of these wastes are contact handled, thus CH is chosen above. Some items may be RH within containers that are packaged to meet CH limits, thus only CH is indicated. The radiological constituents are characterized using methods approved in PNNL's waste stream profiles for the waste currently being stored.

LDR REPORT TREATABILITY GROUP DATA SHEET

3.2 Physical Form

3.2.1 Physical form of the waste:

☒ Solid ☒ Liquid ☒ Semi-solid ☒ Debris

☐ Other (Describe in comments.)

3.2.2 Comments on physical form:

There is high confidence that the subject waste stream will not contain physical matrix characteristics that do not meet the waste stream description.

3.3 Regulated constituents and wastewater/non-wastewater category

3.3.1 Wastewater/non-wastewater under RCRA

☐ Wastewater ☒ Non-wastewater ☐ Unknown

3.3.2 Regulated constituents table including treatment requirements and UHCs, if applicable.

EPA/ State Number	Waste Description	LDR Sub-Category*	Concentration (Typical or Range)**	Basis	LDR Treatment Concentration Standard or Technology Code
D001	Ignitable	High TOC	***	***	RORGS; CMBST; POLYM
D001	Ignitable	Low TOC	***	***	DEACT & meet 268.48; RORGS; or CMBST
D002	Corrosive	Corrosive Charac.	***	***	DEACT & meet 268.48
D003	Reactive	Other Reactives	***	***	DEACT & meet 268.48
D003	Reactive	Water Reactive	***	***	DEACT & meet 268.48
D004	TC-Arsenic	N/A	***	***	5.0 mg/L TCLP & meet 268.48
D005	TC-Barium	N/A	***	***	21 mg/L TCLP & meet 268.48
D006	TC-Cadmium	Cadmium Charac.	***	***	0.11 mg/L TCLP & meet 268.48
D007	TC-Chromium	N/A	***	***	5.0 mg/L TCLP & meet 268.48
D008	TC-Lead	Lead Charac.	***	***	5.0 mg/L TCLP & meet 268.48
D008	TC-Lead	Radioactive Lead Solids	***	***	MACRO
D009	TC-Mercury	Elemental Hg contaminated with radioactivity	***	***	AMLGM
D009	TC-Mercury	Low Mercury	<260 mg/kg	***	0.2 mg/L TCLP & meet 268.48

LDR REPORT TREATABILITY GROUP DATA SHEET

EPA/ State Number	Waste Description	LDR Sub-Category*	Concentration (Typical or Range)**	Basis	LDR Treatment Concentration Standard or Technology Code
D009	TC-Mercury	Radioactively contaminated mercury-containi ng batt	***	***	Macroencapsulation IAW 268.45
D010	TC-Selenium	N/A	***	***	5.7 mg/L TCLP & meet 268.48
D011	TC-Silver	N/A	***	***	0.14 mg/L TCLP & meet 268.48
D011	TC-Silver	Radioactively contaminated silver containing batte	***	***	Macroencapsulation IAW 268.45
D018	Benzene	N/A	***	***	10 mg/kg & meet 268.48
D019	Carbon Tetrachloride	N/A	***	***	6.0 mg/kg & meet 268.48
D021	Chlorobenzene	N/A	***	***	6.0 mg/kg & meet 268.48
D022	Chloroform	N/A	***	***	6.0 mg/kg & meet 268.48
D027	p-Dichlorobenzene	N/A	***	***	6.0 mg/kg & meet 268.48
D028	1,2-Dichloroethane	N/A	***	***	6.0 mg/kg & meet 268.48
D029	1,1-Dichloroethylene	N/A	***	***	6.0 mg/kg & meet 268.48
D030	2,4-Dinitrotoluene	N/A	***	***	140.0 mg/kg & meet 268.48
D033	Hexachlorobutadiene	N/A	***	***	5.6 mg/kg & meet 268.48
D035	Methyl Ethyl Ketone	N/A	***	***	36 mg/kg & meet 268.48
D038	Pyridine	N/A	***	***	16 mg/kg & meet 268.48
D039	Tetrachloroethylene	N/A	***	***	6.0 mg/kg & meet 268.48
D040	Trichloroethylene	N/A	***	***	6.0 mg/kg & meet 268.48
D043	Vinyl Chloride	N/A	***	***	6.0 mg/kg & meet 268.48
F001	1,1,1-Trichloroethane	Spent Solvent	***	***	6.0 mg/kg
F002	Methylene Chloride	Spent Solvent	***	***	30 mg/kg
F003	Acetone	Spent Solvent	***	***	160 mg/kg
F004	o-Cresol & p-Cresol	Spent Solvent	***	***	5.6 mg/kg
F005	Methyl Ethyl Ketone	Spent Solvent	***	***	36 mg/kg
WP01	Persistent, EHW	N/A	***	***	None (1)

LDR REPORT TREATABILITY GROUP DATA SHEET

EPA/ State Number	Waste Description	LDR Sub-Category*	Concentration (Typical or Range)**	Basis	LDR Treatment Concentration Standard or Technology Code
WP02	Persistent, DW	N/A	***	***	N/A
WP03	Persistent, EHW	N/A	***	***	None (1)
WSC2	Solid Corrosive	N/A	***	***	Remove solid-acid characteristic
WT01	Toxic, EHW	N/A	***	***	N/A (1)
WT02	Toxic, DW	N/A	***	***	N/A

* LDR Subcategory marked N/A if no existing subcategory adequately describes this waste, or if there are no defined subcategories for the waste number (40 CFR 268.40).

** If waste is not consistent in concentration, this may not apply. Described in Section 3.3.6.

*** The concentration varies and is based on process knowledge and/or analytical data.

(1) Mixed extremely hazardous wastes may be land disposed in Wahington State in DOE facilities in accordance with RCW 70.105.050(2).

3.3.3 List any waste numbers from Section 3.3.2 for which the waste stream already meets established LDR treatment standards.

☐ List:

☐ No LDR treatment required (e.g. TRUM waste destined for WIPP, exclusion, etc.)

☒ None (i.e. all constituents/waste numbers of this waste stream still require treatment).

3.3.4 Does this waste stream contain PCBs?

☒ Yes ☐ No ☐ Unknown

If no or unknown, skip to Section 3.3.5.

3.3.4.1 Is waste stream subject to TSCA regulations for PCBs?

☒ Yes ☐ No ☐ Unknown

3.3.4.2 Indicate the PCB concentration range.

☒ < 50 ppm ☒ ≥ 50 ppm ☐ Unknown

3.3.5 What is the confidence level for the regulated constituents?

☐ Low ☐ Medium ☒ High

3.3.6 Comments on regulated constituents and wastewater/non-wastewater category:

LDR REPORT TREATABILITY GROUP DATA SHEET

The subject waste has been characterized as prescribed in the waste profiles for the various WSRds listed in Section 1.2 of this data sheet. Some of the waste does contain PCBs subject to TSCA regulation. If a waste package is regulated by TSCA, it is identified as such on the storage records. In Section 3.3.4.2 of this data sheet, the PCB concentration range is marked as both "<50" and ">=50" because concentrations occur below and above 50 ppm in individual waste packages. In Section 3.3.1 of this data sheet, waste may be either wastewater or non-wastewater at the point of generation but is most likely to be non-wastewater at the time of shipment.

4.0 WASTE STREAM TREATMENT

4.1 Is this waste stream currently being treated?

☒ Yes ☐ No

If yes, provide details: Some of the contents of individual waste containers will be treated to meet acceptance criteria for other Hanford Site waste management units and/or to allow for bulking and absorbing larger volumes of waste into each container. Occasionally the results of this treatment produce waste that meets all LDR treatment standards.

4.2 Planned treatment: Check the appropriate box indicating future plans for treating this waste stream to meet applicable regulations, including LDR treatment standards.

☐ No treatment required (skip to Section 5.0)

☒ Treating or plan to treat on site

☒ Treating or plan to treat off site

☐ Treatment options still being assessed

4.3 Planned treatment method, facility, extent of treatment capacity available:

Elements of this waste stream will be managed in one (or more) of three ways. Some LDR-compliant treatment will be performed at the 325 HWTUs. Some waste that can be treated using off-site commercial treatment will be treated at those facilities; facilities planned to be used are PermaFix Northwest in Richland and PermaFix/DSSI in Oak Ridge, Tennessee. For wastes that cannot be treated by either of the above means to meet LDR standards, the waste will be shipped to Central Waste Complex under an exemption to the current requirements to receive only LDR-compliant waste from PNNL.

4.4 Treatment schedule information:

Waste to be treated in the 325 HWTUs or at commercial treatment facilities will generally be treated and/or shipped as soon as practical but may be held over one year for shipping efficiency. Waste shipped to CWC under an exemption will not be treated within one year; such waste will be subject to the schedules for treatment set forth in TPA milestone M-091-42 (for contact-handled waste).

4.5 Applicable Tri-Party Agreement treatment milestone numbers (including permitting):

Milestone Number	Due Date
N/A	N/A

4.6 Proposed new Tri-Party Agreement treatment milestones:

None.

LDR REPORT TREATABILITY GROUP DATA SHEET

4.7 If treating or planning to treat on site, was or will waste minimization be addressed in developing and/or selecting the treatment method?

☒ Yes ☐ No ☐ Unknown

If yes, describe: Waste treatment techniques are sometimes chosen due to external requirements. Where alternate treatment methods are considered, these are evaluated in accordance with PNNL's Waste Minimization and Pollution Prevention management standards to incorporate pollution prevention into daily activities. The standards are based on PNNL's environmental policy and Pollution Prevention Plan, regulatory and contract requirements, and objectives set in PNNL's Environmental Management System.

4.8 List or describe treatability equivalency petitions, rulemaking petitions, and case-by-case exemptions needed for treatment or already in place.

A "Determination of Equivalent Treatment" is needed from EPA pursuant to 40 CFR 268.42 to allow for stored radioactive lead solids to be placed in a HDPE-lined container and heat sealed as a substitute for MACRO prescribed by 268.40. This DET was applied for in late 2008 and is pending.

4.9 Key Assumptions:

None

5.0 WASTE STREAM DISPOSAL

After treatment, how will the waste stream be disposed of (include locations, milestone numbers, variances required, etc. as applicable):

Subject waste will ultimately be compliantly disposed of in waste disposal trenches located on the Hanford Site or at commercial facilities.

LDR REPORT WASTE LOCATION-SPECIFIC DATA SHEET

1.0 WASTE STREAM IDENTIFICATION AND SOURCE

1.1 Unit/Plant name: 325 HWTU **Waste Stream:** 325 HWTU

Treatabilitiy Group Name: 325 HWTU

1.2 Applicable profile number(s) for this waste stream:

PNNL-930-05; PNNL-931-04

1.3 Waste stream source information

1.3.1 General description of the waste (e.g., spill clean-up waste, discarded lab materials, maintenance waste):

Subject waste was generated from PNNL laboratory and facility operations.

1.3.2 History of how and where the waste was/is generated:

Waste is continually generated from routine operations at PNNL.

1.3.3 Source of the regulated constituents:

This waste stream consists of many different inorganic and organic solids and liquids that are contaminated with inorganic and organic regulated dangerous waste constituents, including PCBs. This waste stream also includes hazardous debris.

1.3.4 Source of the information (e.g., analytical data, process knowledge, document number, etc.)

Wastes are characterized as specified in PNNL Waste Stream Profiles.

1.3.5 Additional notes:

The waste profile numbers listed in 1.2 represent all mixed waste profiles that PNNL is approved to ship waste to CWC. Other wastes to be treated in the unit or at commercial TSD facilities may not have approved CWC profile numbers reflected in Section 1.2.

2.0 WASTE STREAM STORAGE, INVENTORY, AND GENERATION INFORMATION

(NOTE: For waste in satellite accumulation areas and 90-day accumulation areas, skip to Section 2.6.)

2.1 Current storage method

- ☐ Container (pad)
- ☒ Container (covered)
- ☐ Container (retrievably buried)
- ☐ Tank
- ☐ DST
- ☐ SST
- ☐ Other (explain):

2.1.1 How was the waste managed prior to storage?

The waste was managed in 90 day or satellite accumulation areas prior to being transferred to this storage facility.

2.1.2 Timeframe when waste was placed to storage?

The waste inventoried below and currently stored at 325 building were placed in storage between 5/19/2005 and 12/8/2009.

LDR REPORT WASTE LOCATION-SPECIFIC DATA SHEET

2.2 Storage inventory locations:

Building/Room Number	Number of Containers/Tanks
325/HWTU	184
325/SAL	2

2.3 Current stored inventory for this stream.

Total volume (cubic meters): 3.411

Date of inventory values: 12/31/2009

Comments on waste inventory:

None.

2.4 Is storage capacity at this location potentially an issue for this waste stream?

☐ Yes ☒ No

If yes, what is the total estimated storage capacity? N/A

When is this capacity expected to be reached? N/A

Bases and assumptions used:

N/A

2.5 Planned storage areas for this waste:

☒ Current Location ☒ CWC ☐ DST

☒ Other Area(s) (list): Commercial TSD facilities storing before or after treatment

☐ None

2.6 Estimated generation projection by calendar year (includes waste in satellite and 90-day accumulation areas):

Year	m^3	and/or	kg
2010	9.000		0.000
2011	9.000		0.000
2012	9.000		0.000
2013	9.000		0.000
2014	9.000		0.000
Total	45.000		0.000

2.7 DOE Storage Compliance Assessment information:

☒ Assessment has been completed.

Document Number	Date
A&E-DWR-02-004	05/31/2002

LDR REPORT WASTE LOCATION-SPECIFIC DATA SHEET

☐ Assessment has been scheduled. Scheduled date:

☐ Other. Explain:

2.8 Applicable Tri-Party Agreement milestones related to storage at this location:

Milestone Number	Due Date
N/A	

2.9 Has there ever been any non-permitted, unauthorized release of this waste stream from this storage unit to the environment?

☐ Yes ☒ No

If yes, summarize releases and quantities and provide date:

N/A

2.10 Are there any plans to submit requests for variances or other exemptions related to storage?

☐ Yes ☒ No

If yes, explain: N/A

2.11 Characterization

2.11.1 Is further characterization needed about the waste prior to acceptance for storage?

☐ Yes ☒ No ☐ Unknown at this time

Milestone Number	Due Date
N/A	N/A

If yes or unknown, comment on characterization for storage.

PNNL Waste Management requests full chemical and radiological characterization from the laboratory generators prior to receiving the waste into the HWTU.

2.11.2 Is further characterization needed about the waste prior to acceptance for treatment?

☐ Yes ☒ No ☐ Unknown at this time

Milestone Number	Due Date
N/A	N/A

If yes or unknown, comment on characterization for treatment.

N/A

2.11.3 Is further characterization needed about the waste prior to acceptance for disposal?

☒ Yes ☐ No ☐ Unknown at this time

Milestone Number	Due Date
N/A	N/A

LDR REPORT WASTE LOCATION-SPECIFIC DATA SHEET

If yes or unknown, comment on characterization for disposal.

To meet concentration based LDR treatment standards applicable for the residues, sampling and analysis is required after treatment (see 40 CFR 268.7(b).)

2.12 Other key assumptions related to storage, inventory, and generation information:

The inventory information is for what is currently in storage in the specified HWTU Location(s).

3.0 WASTE MINIMIZATION

3.1 Has a waste minimization assessment been completed for this stream?

☐ Yes ☒ No

If yes, provide date assessment conducted: N/A

If yes, provide document number or other identification:

N/A

If no, provide date assessment will be completed, or if waste stream is no longer generated, then indicate N/A:

To be determined.

3.2 Provide details of current and proposed methods for minimizing the generation of this stream (e.g., process changes to reduce or eliminate LDR waste, methods to reduce volume through segregation and avoidance of commingling, substitution of less-toxic materials):

Laboratory staff routinely evaluate their processes to determine if less reagent volume or a less hazardous reagent can be used in the process. The Radioactive Waste Operations Group routinely assesses the possibility of bulking and absorbing wastes to minimize the number of containers shipped to CWC. Additionally, some tank waste contaminated debris streams have been compacted to minimize the number of containers shipped to CWC.

3.3 Waste minimization schedule

3.3.1 Reduction achieved during calendar year 2009 (volume or mass)

2.000 m3

3.3.2 Projected future waste volume reductions

Year	m^3	and/or	kg
2010	6.00		0.00
2011	6.00		0.00
2012	6.00		0.00
2013	6.00		0.00
2014	6.00		0.00
Total	30.00		0.00

3.3.3 Bases and assumptions used in above estimates:

Reductions indicated reflect only those achieved through consolidation in the 325 HWTUs, not minimization efforts done in the laboratory prior to packaging. Thus the reduction is in shipping volume, not generation volume. The reductions projected are based upon historical reductions achieved through unit operations.

400 WMU

LDR REPORT TREATABILITY GROUP DATA SHEET

1.0 WASTE STREAM IDENTIFICATION

1.1 Treatability Group Name: 400 Area WMU

1.2 Description of waste (list WSRd numbers for this waste stream, as applicable)

Mixed waste generated from Hanford activities, primarily from the deactivation of the Fast Flux Test Facility (FFTF).

2.0 WASTE INVENTORY AND GENERATION

2.1 Current total inventory for this waste stream (stored waste only, not accumulation areas). [Equals sum of location-specific data sheets for this treatability group.]

Total volume (cubic meters): 1.500

2.2 Estimated generation projection by calendar year: [equals annual sums of location-specfic data sheets for this treatability group].

Year	m^3	and/or	kg
2010	0.000		0.000
2011	0.000		0.000
2012	0.000		0.000
2013	0.000		0.000
2014	0.000		0.000
Total	0.000		0.000

3.0 WASTE STREAM CHARACTERIZATION

3.1 Radiological Characteristics

3.1.1 Mixed waste type: ☐ High-level ☐ Transuranic ☒ Low-level

3.1.2 Handling (as package contents would need to be handled during treatment):

☒ Contact-handled ☐ Remote-handled

3.1.3 Comments on radiological characteristics (e.g., more specific information on content, treatment concerns caused by radiation, confidence level):

Most waste is low-level. Some shielding may be required from time-to-time.

3.2 Physical Form

3.2.1 Physical form of the waste:

☒ Solid ☐ Liquid ☐ Semi-solid ☐ Debris

☐ Other (Describe in comments.)

3.2.2 Comments on physical form:

None

LDR REPORT TREATABILITY GROUP DATA SHEET

3.3 Regulated constituents and wastewater/non-wastewater category

3.3.1 Wastewater/non-wastewater under RCRA

☐ Wastewater ☒ Non-wastewater ☐ Unknown

3.3.2 Regulated constituents table including treatment requirements and UHCs, if applicable.

EPA/ State Number	Waste Description	LDR Sub-Category*	Concentration (Typical or Range)**	Basis	LDR Treatment Concentration Standard or Technology Code
D001	Ignitable	Low TOC	***	Process Knowledge	DEACT and meet 268.48 standards
D002	Corrosive	Corrosive Charac.	***	Process Knowledge	DEACT and meet 268.48 standards
D003	Reactive	Other Reactives	N/A	Process Knowledge	DEACT and meet 268.48 standards
WSC2	Solid Corrosive	N/A	***	Process Knowledge	Remove Solid Acid Charac.

* LDR Subcategory marked N/A if no existing subcategory adequately describes this waste, or if there are no defined subcategories for the waste number (40 CFR 268.40).

** If waste is not consistent in concentration, this may not apply. Described in Section 3.3.6.

3.3.3 List any waste numbers from Section 3.3.2 for which the waste stream already meets established LDR treatment standards.

☐ List:

☐ No LDR treatment required (e.g. TRUM waste destined for WIPP, exclusion, etc.)

☒ None (i.e. all constituents/waste numbers of this waste stream still require treatment).

3.3.4 Does this waste stream contain PCBs?

☐ Yes ☒ No ☐ Unknown

If no or unknown, skip to Section 3.3.5.

3.3.4.1 Is waste stream subject to TSCA regulations for PCBs?

Yes No Unknown

3.3.4.2 Indicate the PCB concentration range.

☐ < 50 ppm ☐ ≥ 50 ppm ☐ Unknown

3.3.5 What is the confidence level for the regulated constituents?

☐ Low ☐ Medium ☒ High

3.3.6 Comments on regulated constituents and wastewater/non-wastewater category:

High purity elemental sodium that was used as a reactor coolant

LDR REPORT TREATABILITY GROUP DATA SHEET

4.0 WASTE STREAM TREATMENT

4.1 Is this waste stream currently being treated?

☐ Yes ☒ No

If yes, provide details: N/A

4.2 Planned treatment: Check the appropriate box indicating future plans for treating this waste stream to meet applicable regulations, including LDR treatment standards.

☐ No treatment required (skip to Section 5.0)

☒ Treating or plan to treat on site

☐ Treating or plan to treat off site

☐ Treatment options still being assessed

4.3 Planned treatment method, facility, extent of treatment capacity available:

Produce sodium hydroxide for use as a product in the Hanford tank waste vitrification process.

4.4 Treatment schedule information:

Beyond the scope of the current contract.

4.5 Applicable Tri-Party Agreement treatment milestone numbers (including permitting):

Milestone Number	Due Date
N/A	N/A

4.6 Proposed new Tri-Party Agreement treatment milestones:

None.

4.7 If treating or planning to treat on site, was or will waste minimization be addressed in developing and/or selecting the treatment method?

☒ Yes ☐ No ☐ Unknown

If yes, describe: Waste minimization will be addressed to the extent practical.

4.8 List or describe treatability equivalency petitions, rulemaking petitions, and case-by-case exemptions needed for treatment or already in place.

None.

4.9 Key Assumptions:

None.

5.0 WASTE STREAM DISPOSAL

After treatment, how will the waste stream be disposed of (include locations, milestone numbers, variances required, etc. as applicable):

Disposal of the matrices is not expected.

LDR REPORT WASTE LOCATION-SPECIFIC DATA SHEET

1.0 WASTE STREAM IDENTIFICATION AND SOURCE

1.1 Unit/Plant name: 400 Area WMU **Waste Stream:** Mixed waste

Treatabilitiy Group Name: 400 Area WMU

1.2 Applicable profile number(s) for this waste stream:

None.

1.3 Waste stream source information

1.3.1 General description of the waste (e.g., spill clean-up waste, discarded lab materials, maintenance waste):

Sodium in Core Component Pots (CCPs) resulting from sodium drain activites at FFTF. Drip cups from refueling machines containing small amounts of sodium. Small pieces of metallic sodium collected during deactivation activities. The volume generated depends on the deactivation actives taking place.

1.3.2 History of how and where the waste was/is generated:

CCP's had to be removed from Interim Decay Storage Vessel to allow vessel drain. The drip cups have been removed from refueling machines to allow machine layup. CCP's and drip cups contain residual sodium. The sodium is generated during activities supporting deactivation of the facility.

1.3.3 Source of the regulated constituents:

High purity sodium used as the reactor coolant at the facility. During the draining process not all of the sodium could be removed from the pots. Small amounts of sodium collected from the systems and components as they are prepared to allow for facility deactivation.

1.3.4 Source of the information (e.g., analytical data, process knowledge, document number, etc.)

Process knowledge.

1.3.5 Additional notes:

None

2.0 WASTE STREAM STORAGE, INVENTORY, AND GENERATION INFORMATION

(NOTE: For waste in satellite accumulation areas and 90-day accumulation areas, skip to Section 2.6.)

2.1 Current storage method

- ☒ Container (pad)
- ☐ Container (covered)
- ☐ Container (retrievably buried)
- ☐ Tank
- ☐ DST
- ☐ SST
- ☐ Other (explain):

2.1.1 How was the waste managed prior to storage?

Waste was managed in an accumulation area and then placed in storage area.

2.1.2 Timeframe when waste was placed to storage?

LDR REPORT WASTE LOCATION-SPECIFIC DATA SHEET

Waste placed in accumulation area with start date of July 19, 2006. Thirty day extension on accumulation granted on October 6, 2006. Temporary Authorization issued to allow storage in 400 WMU on November 16, 2006. A 180 day extension to the Temporary Authorization authorized the storage of waste in the 400 WMU until November 11, 2007. The 400 Area WMU (Building 403 and ISA) was authorized for the storage of waste on November 21, 2007.

2.2 Storage inventory locations:

Building/Room Number	Number of Containers/Tanks
403	2
Interim Storage Area	11

2.3 Current stored inventory for this stream.

Total volume (cubic meters): 1.500

Date of inventory values: 12/31/2009

Comments on waste inventory:

The current inventory consists of solidified sodium.

2.4 Is storage capacity at this location potentially an issue for this waste stream?

☐ Yes ☒ No

If yes, what is the total estimated storage capacity? N/A

When is this capacity expected to be reached? N/A

Bases and assumptions used:

2.5 Planned storage areas for this waste:

☒ Current Location ☐ CWC ☐ DST

☐ Other Area(s) (list):

☐ None

2.6 Estimated generation projection by calendar year (includes waste in satellite and 90-day accumulation areas):

Year	m^3	and/or	kg
2010	0.000		0.000
2011	0.000		0.000
2012	0.000		0.000
2013	0.000		0.000
2014	0.000		0.000
Total	0.000		0.000

LDR REPORT WASTE LOCATION-SPECIFIC DATA SHEET

2.7 DOE Storage Compliance Assessment information:

☐ Assessment has been completed.

Document Number	Date

☐ Assessment has been scheduled. Scheduled date:

☒ Other. Explain: An assessment is not needed. The TSD unit is a new unit managed in compliance with WAC 173-303.

2.8 Applicable Tri-Party Agreement milestones related to storage at this location:

Milestone Number	Due Date
N/A	

2.9 Has there ever been any non-permitted, unauthorized release of this waste stream from this storage unit to the environment?

☐ Yes ☒ No

If yes, summarize releases and quantities and provide date:

N/A

2.10 Are there any plans to submit requests for variances or other exemptions related to storage?

☐ Yes ☒ No

If yes, explain: N/A

2.11 Characterization

2.11.1 Is further characterization needed about the waste prior to acceptance for storage?

☐ Yes ☒ No ☐ Unknown at this time

Milestone Number	Due Date
N/A	N/A

If yes or unknown, comment on characterization for storage.

2.11.2 Is further characterization needed about the waste prior to acceptance for treatment?

☐ Yes ☒ No ☐ Unknown at this time

Milestone Number	Due Date
N/A	N/A

If yes or unknown, comment on characterization for treatment.

N/A

LDR REPORT WASTE LOCATION-SPECIFIC DATA SHEET

2.11.3 Is further characterization needed about the waste prior to acceptance for disposal?

☐ Yes ☐ No ☒ Unknown at this time

Milestone Number	Due Date
N/A	N/A

If yes or unknown, comment on characterization for disposal.

Current disposition plans do not include disposal.

2.12 Other key assumptions related to storage, inventory, and generation information:

None.

3.0 WASTE MINIMIZATION

3.1 Has a waste minimization assessment been completed for this stream?

☐ Yes ☒ No

If yes, provide date assessment conducted: N/A

If yes, provide document number or other identification:

N/A

If no, provide date assessment will be completed, or if waste stream is no longer generated, then indicate N/A:

There are no opportunuities for waste minimazation on this stream.

3.2 Provide details of current and proposed methods for minimizing the generation of this stream (e.g., process changes to reduce or eliminate LDR waste, methods to reduce volume through segregation and avoidance of commingling, substitution of less-toxic materials):

None

3.3 Waste minimization schedule

3.3.1 Reduction achieved during calendar year 2009 (volume or mass)

0.000 m3

3.3.2 Projected future waste volume reductions

Year	m^3	and/or	kg
2010	0.00		0.00
2011	0.00		0.00
2012	0.00		0.00
2013	0.00		0.00
2014	0.00		0.00
Total	0.00		0.00

LDR REPORT WASTE LOCATION-SPECIFIC DATA SHEET

3.3.3 Bases and assumptions used in above estimates:

None.

B Plant Cell 4

LDR REPORT TREATABILITY GROUP DATA SHEET

1.0 WASTE STREAM IDENTIFICATION

1.1 Treatability Group Name: B Plant Cell 4

1.2 Description of waste (list WSRd numbers for this waste stream, as applicable)

Waste resulted from WESF hot cell maintenance waste (i.e. manipulator boots, light bulbs, HEPA filters, misc. debris). B Plant, including Cell 4, was placed in long term surveillance and maintenance in 1998. No additional waste will be stored in this location as B Plant is under long term S&M.

2.0 WASTE INVENTORY AND GENERATION

2.1 Current total inventory for this waste stream (stored waste only, not accumulation areas). [Equals sum of location-specific data sheets for this treatability group.]

Total volume (cubic meters): 1.400

2.2 Estimated generation projection by calendar year: [equals annual sums of location-specfic data sheets for this treatability group].

Year	m^3	and/or	kg
2010	0.000		0.000
2011	0.000		0.000
2012	0.000		0.000
2013	0.000		0.000
2014	0.000		0.000
Total	0.000		0.000

3.0 WASTE STREAM CHARACTERIZATION

3.1 Radiological Characteristics

3.1.1 Mixed waste type: ☐ High-level ☐ Transuranic ☒ Low-level

3.1.2 Handling (as package contents would need to be handled during treatment):

☐ Contact-handled ☒ Remote-handled

3.1.3 Comments on radiological characteristics (e.g., more specific information on content, treatment concerns caused by radiation, confidence level):

High personnel dose potential, remote handled. Range from 200 mR to 500 R at 30 cm. Confidence high. No additional waste will be placed in storage.

3.2 Physical Form

3.2.1 Physical form of the waste:

☒ Solid ☐ Liquid ☐ Semi-solid ☐ Debris

☐ Other (Describe in comments.)

3.2.2 Comments on physical form:

LDR REPORT TREATABILITY GROUP DATA SHEET

Lead component represents <1% of the entire waste matrix as it is mixed with other miscellaneous non-hazardous radioactive materials in the drum due to packaging constraints in WESF. The lead component is lead solder from contaminated light bulbs. However, due to the packaging constraints, if a drum contains lead in any proportions, the entire drum is managed appropriately for the lead component.

3.3 Regulated constituents and wastewater/non-wastewater category

3.3.1 Wastewater/non-wastewater under RCRA

☐ Wastewater ☒ Non-wastewater ☐ Unknown

3.3.2 Regulated constituents table including treatment requirements and UHCs, if applicable.

EPA/ State Number	Waste Description	LDR Sub-Category*	Concentration (Typical or Range)**	Basis	LDR Treatment Concentration Standard or Technology Code
D008	Lead-contaminated	Waste Lead Char	>5 mg/L	Process knowledge	5.0 MG/L

* LDR Subcategory marked N/A if no existing subcategory adequately describes this waste, or if there are no defined subcategories for the waste number (40 CFR 268.40).

** If waste is not consistent in concentration, this may not apply. Described in Section 3.3.6.

3.3.3 List any waste numbers from Section 3.3.2 for which the waste stream already meets established LDR treatment standards.

☐ List:

☐ No LDR treatment required (e.g. TRUM waste destined for WIPP, exclusion, etc.)

☒ None (i.e. all constituents/waste numbers of this waste stream still require treatment).

3.3.4 Does this waste stream contain PCBs?

☐ Yes ☒ No ☐ Unknown

If no or unknown, skip to Section 3.3.5.

3.3.4.1 Is waste stream subject to TSCA regulations for PCBs?

☐ Yes ☐ No ☐ Unknown

3.3.4.2 Indicate the PCB concentration range.

☐ < 50 ppm ☐ ≥ 50 ppm ☐ Unknown

3.3.5 What is the confidence level for the regulated constituents?

☐ Low ☐ Medium ☒ High

3.3.6 Comments on regulated constituents and wastewater/non-wastewater category:

None.

LDR REPORT TREATABILITY GROUP DATA SHEET

4.0 WASTE STREAM TREATMENT

4.1 Is this waste stream currently being treated?

☐ Yes ☒ No

If yes, provide details: N/A

4.2 Planned treatment: Check the appropriate box indicating future plans for treating this waste stream to meet applicable regulations, including LDR treatment standards.

☐ No treatment required (skip to Section 5.0)

☐ Treating or plan to treat on site

☐ Treating or plan to treat off site

☒ Treatment options still being assessed

4.3 Planned treatment method, facility, extent of treatment capacity available:

Disposition of B-Plant waste will be determined after a decision is made on the Canyon Disposition Initiative.

4.4 Treatment schedule information:

Schedule will be determined after a final decision has been made on the Canyon Disposition Initiative.

4.5 Applicable Tri-Party Agreement treatment milestone numbers (including permitting):

Milestone Number	Due Date
N/A	N/A

4.6 Proposed new Tri-Party Agreement treatment milestones:

None.

4.7 If treating or planning to treat on site, was or will waste minimization be addressed in developing and/or selecting the treatment method?

☐ Yes ☐ No ☒ Unknown

If yes, describe: N/A

4.8 List or describe treatability equivalency petitions, rulemaking petitions, and case-by-case exemptions needed for treatment or already in place.

N/A

4.9 Key Assumptions:

B-Plant is under long term surveillance and maintenance in accordance with Section 8.0 of the Tri-Party Agreement Action Plan, Facility Decommissioning Process.

LDR REPORT TREATABILITY GROUP DATA SHEET

5.0 WASTE STREAM DISPOSAL

After treatment, how will the waste stream be disposed of (include locations, milestone numbers, variances required, etc. as applicable):

Disposition of B-Plant Cell 4 waste will be determined after a final decision has been made on the Canyon Disposition Initiative. If waste is not left in place, waste will be dispositioned according to TPA agreements.

LDR REPORT WASTE LOCATION-SPECIFIC DATA SHEET

1.0 WASTE STREAM IDENTIFICATION AND SOURCE

1.1 Unit/Plant name: B Plant Complex **Waste Stream:** Cell 4

Treatabilitiy Group Name: B Plant Cell 4

1.2 Applicable profile number(s) for this waste stream:

N/A

1.3 Waste stream source information

1.3.1 General description of the waste (e.g., spill clean-up waste, discarded lab materials, maintenance waste):

WESF hot cell maintenance waste (i.e., manipulator boots, light bulbs, HEPA filters, misc. debris).

1.3.2 History of how and where the waste was/is generated:

Waste in Cell 4 was generated in the WESF hot cells and packaged into 55 gallon drums. When lights in the hot cells were replaced, the old ones were packaged into the drums along with the other waste. There are 7 drums of mixed waste and 36 drums of highly radioactive LLW. The sole hazardous constituent in the mixed waste drums is lead solder on incandesent lamps from the hot cells.

1.3.3 Source of the regulated constituents:

The sole hazardous constituent in the mixed waste drums is lead solder on incandesent lamps from the WESF hot cells.

1.3.4 Source of the information (e.g., analytical data, process knowledge, document number, etc.)

Based on multiple sample results for waste matrices with lead solder, including similar incandescent bulbs, these bulbs will likely yield an extract containing greater the 5.0 milligrams/liter of lead when exposed to a leachate. The amount of lead solder on the incandescent lamps from the WESF hot cells was provided by the vender who supplies the light bulbs. An inventory of the waste is prepared as the the drum is packed in the hot cell.

1.3.5 Additional notes:

Waste volumes are from past operations. The facility is now under long term surveillance and maintenance in accordance with the Tri-Party Agreement. No additional waste volumes are generated or stored at this location.

2.0 WASTE STREAM STORAGE, INVENTORY, AND GENERATION INFORMATION

(NOTE: For waste in satellite accumulation areas and 90-day accumulation areas, skip to Section 2.6.)

2.1 Current storage method

- ☐ Container (pad)
- ☒ Container (covered)
- ☐ Container (retrievably buried)
- ☐ Tank
- ☐ DST
- ☐ SST
- ☐ Other (explain):

LDR REPORT WASTE LOCATION-SPECIFIC DATA SHEET

2.1.1 How was the waste managed prior to storage?

Waste was located in WESF hot cells.

2.1.2 Timeframe when waste was placed to storage?

Drums placed in storage between 1988 to 1997.

2.2 Storage inventory locations:

Building/Room Number	Number of Containers/Tanks
B-Plant Cell 4	7 drums

2.3 Current stored inventory for this stream.

Total volume (cubic meters): 1.400

Date of inventory values: 01/27/2010

Comments on waste inventory:

No additional waste will be stored at B-Plant, Cell 4.

2.4 Is storage capacity at this location potentially an issue for this waste stream?

☐ Yes ☒ No

If yes, what is the total estimated storage capacity? N/A

When is this capacity expected to be reached? N/A

Bases and assumptions used:

N/A

2.5 Planned storage areas for this waste:

☒ Current Location ☐ CWC ☐ DST

☐ Other Area(s) (list):

☐ None

2.6 Estimated generation projection by calendar year (includes waste in satellite and 90-day accumulation areas):

Year	m^3	and/or	kg
2010	0.000		0.000
2011	0.000		0.000
2012	0.000		0.000
2013	0.000		0.000
2014	0.000		0.000
Total	0.000		0.000

LDR REPORT WASTE LOCATION-SPECIFIC DATA SHEET

2.7 DOE Storage Compliance Assessment information:

☒ Assessment has been completed.

Document Number	Date
12/2000, A&E-00-ASS-075	02/23/2001

☐ Assessment has been scheduled. Scheduled date:

☐ Other. Explain:

2.8 Applicable Tri-Party Agreement milestones related to storage at this location:

Milestone Number	Due Date
N/A	

2.9 Has there ever been any non-permitted, unauthorized release of this waste stream from this storage unit to the environment?

☐ Yes ☒ No

If yes, summarize releases and quantities and provide date:

N/A

2.10 Are there any plans to submit requests for variances or other exemptions related to storage?

☐ Yes ☒ No

If yes, explain: N/A

2.11 Characterization

2.11.1 Is further characterization needed about the waste prior to acceptance for storage?

☐ Yes ☒ No ☐ Unknown at this time

Milestone Number	Due Date
N/A	N/A

If yes or unknown, comment on characterization for storage.

N/A

2.11.2 Is further characterization needed about the waste prior to acceptance for treatment?

☐ Yes ☒ No ☐ Unknown at this time

Milestone Number	Due Date
N/A	N/A

If yes or unknown, comment on characterization for treatment.

N/A

LDR REPORT WASTE LOCATION-SPECIFIC DATA SHEET

2.11.3 Is further characterization needed about the waste prior to acceptance for disposal?

☐ Yes ☒ No ☐ Unknown at this time

Milestone Number	Due Date
N/A	N/A

If yes or unknown, comment on characterization for disposal.

N/A

2.12 Other key assumptions related to storage, inventory, and generation information:

No additional waste will be stored at this location. B-Plant is under long term surveillance and maintenance in accordance with Section 8.0 of the Tri-Party Agreement.

3.0 WASTE MINIMIZATION

3.1 Has a waste minimization assessment been completed for this stream?

☐ Yes ☒ No

If yes, provide date assessment conducted: N/A

If yes, provide document number or other identification:

N/A

If no, provide date assessment will be completed, or if waste stream is no longer generated, then indicate N/A:

N/A - The waste stream is no longer generated.

3.2 Provide details of current and proposed methods for minimizing the generation of this stream (e.g., process changes to reduce or eliminate LDR waste, methods to reduce volume through segregation and avoidance of commingling, substitution of less-toxic materials):

No additional waste is being generated at this location.

3.3 Waste minimization schedule

3.3.1 Reduction achieved during calendar year 2009 (volume or mass)

0.000 m3

3.3.2 Projected future waste volume reductions

Year	m^3	and/or	kg
2010	0.00		0.00
2011	0.00		0.00
2012	0.00		0.00
2013	0.00		0.00
2014	0.00		0.00
Total	0.00		0.00

LDR REPORT WASTE LOCATION-SPECIFIC DATA SHEET

3.3.3 Bases and assumptions used in above estimates:

No additional waste is being placed in Cell 4.

This page intentionally left blank.

B Plant Containment Building

LDR REPORT TREATABILITY GROUP DATA SHEET

1.0 WASTE STREAM IDENTIFICATION

1.1 Treatability Group Name: B Plant Containment Building

1.2 Description of waste (list WSRd numbers for this waste stream, as applicable)

Stream consists of failed equipment (e.g., process jumpers, pumps, etc.) used in the 221-B canyon. Contaminated debris/equipment derived from the processing of "F" listed wastes for the recovery of strontium and cesium. Also contains elemental lead used for counterbalances and shielding. This waste was placed in long term surveillance and maintenance in accordance with Section 8.0 of the Tri-Party Agreement in 1999. No additional waste will be stored at this location. B Plant is under long term S&M.

2.0 WASTE INVENTORY AND GENERATION

2.1 Current total inventory for this waste stream (stored waste only, not accumulation areas). [Equals sum of location-specific data sheets for this treatability group.]

Total volume (cubic meters):

2.2 Estimated generation projection by calendar year: [equals annual sums of location-specfic data sheets for this treatability group].

Year	m^3	and/or	kg
2010	0.000		0.000
2011	0.000		0.000
2012	0.000		0.000
2013	0.000		0.000
2014	0.000		0.000
Total	0.000		0.000

3.0 WASTE STREAM CHARACTERIZATION

3.1 Radiological Characteristics

3.1.1 Mixed waste type: ☐ High-level ☐ Transuranic ☒ Low-level

3.1.2 Handling (as package contents would need to be handled during treatment):

☐ Contact-handled ☒ Remote-handled

3.1.3 Comments on radiological characteristics (e.g., more specific information on content, treatment concerns caused by radiation, confidence level):

Waste requires remote handling due to radioactivity level. Confidence high.

LDR REPORT TREATABILITY GROUP DATA SHEET

3.2 Physical Form

3.2.1 Physical form of the waste:

☒ Solid ☐ Liquid ☐ Semi-solid ☐ Debris

☐ Other (Describe in comments.)

3.2.2 Comments on physical form:

Waste inventories are currently maintained by estimates of mass. A more detailed determination of waste volume would require extensive item identification and specific drawing information. At this time, obtaining this information is cost and schedule prohibitive.

3.3 Regulated constituents and wastewater/non-wastewater category

3.3.1 Wastewater/non-wastewater under RCRA

☐ Wastewater ☒ Non-wastewater ☐ Unknown

3.3.2 Regulated constituents table including treatment requirements and UHCs, if applicable.

EPA/ State Number	Waste Description	LDR Sub-Category*	Concentration (Typical or Range)**	Basis	LDR Treatment Concentration Standard or Technology Code
F001	1,1,1-Trichloroethane	Solvent Wastes	unknown	Process knowledge	DEBRIS STDS IN 40 CFR 268.45
F002	Methylene Chloride	Solvent Wastes	unknown	Process knowledge	DEBRIS STDS IN 40 CFR 268.45
F003	Acetone & Hexone	Solvent Wastes	unknown	Process knowledge	DEBRIS STDS IN 40 CFR 268.45
F004	o-Cresol & p-Cresol	Solvent Wastes	unknown	Process knowledge	DEBRIS STDS IN 40 CFR 268.45
F005	Methyl Ethyl Ketone	Solvent Wastes	unknown	Process knowledge	DEBRIS STDS IN 40 CFR 268.45

* LDR Subcategory marked N/A if no existing subcategory adequately describes this waste, or if there are no defined subcategories for the waste number (40 CFR 268.40).

** If waste is not consistent in concentration, this may not apply. Described in Section 3.3.6.

UHCs are not applicable to this waste.

3.3.3 List any waste numbers from Section 3.3.2 for which the waste stream already meets established LDR treatment standards.

☐ List:

☐ No LDR treatment required (e.g. TRUM waste destined for WIPP, exclusion, etc.)

☒ None (i.e. all constituents/waste numbers of this waste stream still require treatment).

LDR REPORT TREATABILITY GROUP DATA SHEET

3.3.4 Does this waste stream contain PCBs?

☐ Yes ☒ No ☐ Unknown

If no or unknown, skip to Section 3.3.5.

3.3.4.1 Is waste stream subject to TSCA regulations for PCBs?

☐ Yes ☐ No ☐ Unknown

3.3.4.2 Indicate the PCB concentration range.

☐ < 50 ppm ☐ ≥ 50 ppm ☐ Unknown

3.3.5 What is the confidence level for the regulated constituents?

☐ Low ☒ Medium ☐ High

3.3.6 Comments on regulated constituents and wastewater/non-wastewater category:

An assumption has been made that it is unlikely additional waste codes will be required.

4.0 WASTE STREAM TREATMENT

4.1 Is this waste stream currently being treated?

☐ Yes ☒ No

If yes, provide details: N/A

4.2 Planned treatment: Check the appropriate box indicating future plans for treating this waste stream to meet applicable regulations, including LDR treatment standards.

☐ No treatment required (skip to Section 5.0)

☐ Treating or plan to treat on site

☐ Treating or plan to treat off site

☒ Treatment options still being assessed

4.3 Planned treatment method, facility, extent of treatment capacity available:

Until a final decision is made on the Canyon Disposition Initiative, no commitments will be made for waste treatment and disposal.

4.4 Treatment schedule information:

Treatment schedule will be determined after a final decision has been made on the Canyon Disposition Initiative.

4.5 Applicable Tri-Party Agreement treatment milestone numbers (including permitting):

Milestone Number	Due Date
N/A	N/A

LDR REPORT TREATABILITY GROUP DATA SHEET

4.6 Proposed new Tri-Party Agreement treatment milestones:

None.

4.7 If treating or planning to treat on site, was or will waste minimization be addressed in developing and/or selecting the treatment method?

☐ Yes ☐ No ☒ Unknown

If yes, describe: N/A

4.8 List or describe treatability equivalency petitions, rulemaking petitions, and case-by-case exemptions needed for treatment or already in place.

N/A

4.9 Key Assumptions:

B-Plant is under long term surveillance and maintenance in accordance with Section 8.0 of the Tri-Party Agreement Action Plan, Facility Decommissioning Process.

5.0 WASTE STREAM DISPOSAL

After treatment, how will the waste stream be disposed of (include locations, milestone numbers, variances required, etc. as applicable):

Disposition of B-Plant waste will be determined after a final decision has been made on the Canyon Disposition Initiative. If waste is not left in place, waste will be dispositioned according to TPA agreements.

LDR REPORT WASTE LOCATION-SPECIFIC DATA SHEET

1.0 WASTE STREAM IDENTIFICATION AND SOURCE

1.1 Unit/Plant name: B Plant Complex **Waste Stream:** Containment Building Storage

Treatabilitiy Group Name: B Plant Containment Building

1.2 Applicable profile number(s) for this waste stream:

None.

1.3 Waste stream source information

1.3.1 General description of the waste (e.g., spill clean-up waste, discarded lab materials, maintenance waste):

Failed equipment (e.g., process jumpers, pumps, etc.) used in the 221-B canyon.

1.3.2 History of how and where the waste was/is generated:

Waste was generated during B Plant operations and facility deactivation.

1.3.3 Source of the regulated constituents:

B Plant process operations.

1.3.4 Source of the information (e.g., analytical data, process knowledge, document number, etc.)

Process knowledge.

1.3.5 Additional notes:

None.

2.0 WASTE STREAM STORAGE, INVENTORY, AND GENERATION INFORMATION

(NOTE: For waste in satellite accumulation areas and 90-day accumulation areas, skip to Section 2.6.)

2.1 Current storage method

- ☐ Container (pad)
- ☐ Container (covered)
- ☐ Container (retrievably buried)
- ☐ Tank
- ☐ DST
- ☐ SST
- ☒ Other (explain): Containment building.

2.1.1 How was the waste managed prior to storage?

Failed process equipment located in the containment building.

2.1.2 Timeframe when waste was placed to storage?

Waste was generated until September 1998 and stored in the B Plant Canyon.

2.2 Storage inventory locations:

Building/Room Number	Number of Containers/Tanks
221-B	N/A

LDR REPORT WASTE LOCATION-SPECIFIC DATA SHEET

2.3 Current stored inventory for this stream.

Total volume (cubic meters):

Date of inventory values: 01/27/2010

Comments on waste inventory:

Quantity estimated at 294,000 kg. A more detailed determination of waste volume would require extensive item identification and specific drawing information. At this time, obtaining this information is cost and schedule prohibitive.

2.4 Is storage capacity at this location potentially an issue for this waste stream?

☐ Yes ☒ No

If yes, what is the total estimated storage capacity? N/A

When is this capacity expected to be reached? N/A

Bases and assumptions used:

N/A

2.5 Planned storage areas for this waste:

☒ Current Location ☐ CWC ☐ DST

☐ Other Area(s) (list):

☐ None

2.6 Estimated generation projection by calendar year (includes waste in satellite and 90-day accumulation areas):

Year	m^3	and/or	kg
2010	0.000		0.000
2011	0.000		0.000
2012	0.000		0.000
2013	0.000		0.000
2014	0.000		0.000
Total	0.000		0.000

2.7 DOE Storage Compliance Assessment information:

☒ Assessment has been completed.

Document Number	Date
12/2000, A&E-00-ASS-075	02/23/2001

☐ Assessment has been scheduled. Scheduled date:

☐ Other. Explain:

LDR REPORT WASTE LOCATION-SPECIFIC DATA SHEET

2.8 Applicable Tri-Party Agreement milestones related to storage at this location:

Milestone Number	Due Date
N/A	

2.9 Has there ever been any non-permitted, unauthorized release of this waste stream from this storage unit to the environment?

☐ Yes ☒ No

If yes, summarize releases and quantities and provide date:

N/A

2.10 Are there any plans to submit requests for variances or other exemptions related to storage?

☐ Yes ☒ No

If yes, explain: N/A

2.11 Characterization

2.11.1 Is further characterization needed about the waste prior to acceptance for storage?

☐ Yes ☐ No ☒ Unknown at this time

Milestone Number	Due Date
N/A	N/A

If yes or unknown, comment on characterization for storage.

Additional characterization could be required for treatment or disposal of the waste located in the facility. Milestones will be established as necessary in accordance with Section 8.7 of the Tri-Party Agreement Action Plan.

2.11.2 Is further characterization needed about the waste prior to acceptance for treatment?

☐ Yes ☐ No ☒ Unknown at this time

Milestone Number	Due Date
N/A	N/A

If yes or unknown, comment on characterization for treatment.

Additional characterization could be required for treatment or disposal of the waste. Milestones will be established as necessary in accordance with Section 8.7 of the Tri-Party Agreement Action Plan.

2.11.3 Is further characterization needed about the waste prior to acceptance for disposal?

☐ Yes ☐ No ☒ Unknown at this time

Milestone Number	Due Date
N/A	N/A

LDR REPORT WASTE LOCATION-SPECIFIC DATA SHEET

If yes or unknown, comment on characterization for disposal.

Additional characterization could be required for treatment or disposal of the waste. Milestones will be established as necessary in accordance with Section 8.7 of the Tri-Party Agreement Action Plan.

2.12 Other key assumptions related to storage, inventory, and generation information:

No additional waste will be stored at this location. B Plant is under long term surveillance and maintenance in accordance with Section 8.0 of the Tri-Party Agreement.

3.0 WASTE MINIMIZATION

3.1 Has a waste minimization assessment been completed for this stream?

☐ Yes ☒ No

If yes, provide date assessment conducted: N/A

If yes, provide document number or other identification:

N/A

If no, provide date assessment will be completed, or if waste stream is no longer generated, then indicate N/A:

N/A

3.2 Provide details of current and proposed methods for minimizing the generation of this stream (e.g., process changes to reduce or eliminate LDR waste, methods to reduce volume through segregation and avoidance of commingling, substitution of less-toxic materials):

N/A

3.3 Waste minimization schedule

3.3.1 Reduction achieved during calendar year 2009 (volume or mass)

0.000 m3

3.3.2 Projected future waste volume reductions

Year	m^3	and/or	kg
2010	0.00		0.00
2011	0.00		0.00
2012	0.00		0.00
2013	0.00		0.00
2014	0.00		0.00
Total	0.00		0.00

3.3.3 Bases and assumptions used in above estimates:

The facility is inactive. No additional waste will be generated.

Cesium and Strontium Capsules

LDR REPORT TREATABILITY GROUP DATA SHEET

1.0 WASTE STREAM IDENTIFICATION

1.1 Treatability Group Name: Cesium and Strontium Capsules

1.2 Description of waste (list WSRd numbers for this waste stream, as applicable)

Cesium and strontium were reclaimed from Tank Farms waste as a product, separated and purified at B Plant, and converted to dry salt for storage in capsules at WESF. The cesium and strontium capsules were declared waste in 1997 and a Part A permit application was subsequently submitted to Ecology. The subject waste consists of 1,335 cesium capsules and 601 strontium capsules. The capsules are stored in pool cells at WESF.

2.0 WASTE INVENTORY AND GENERATION

2.1 Current total inventory for this waste stream (stored waste only, not accumulation areas). [Equals sum of location-specific data sheets for this treatability group.]

Total volume (cubic meters): 2.000

2.2 Estimated generation projection by calendar year: [equals annual sums of location-specfic data sheets for this treatability group].

Year	m^3	and/or	kg
2010	0.000		0.000
2011	0.000		0.000
2012	0.000		0.000
2013	0.000		0.000
2014	0.000		0.000
Total	0.000		0.000

3.0 WASTE STREAM CHARACTERIZATION

3.1 Radiological Characteristics

3.1.1 Mixed waste type: ☐ High-level ☐ Transuranic ☒ Low-level

3.1.2 Handling (as package contents would need to be handled during treatment):

☐ Contact-handled ☒ Remote-handled

3.1.3 Comments on radiological characteristics (e.g., more specific information on content, treatment concerns caused by radiation, confidence level):

The contents consist of purified cesium and strontium salts in the form of cesium chloride and strontium fluoride. The curie content of each capsule varies depending on when it was reclaimed and the amount of impurities it contains. With the daughter products included, it is estimated that there are 88.6 mega curies of cesium and 38.7 mega curies of strontium as of 12/31/2002.

LDR REPORT TREATABILITY GROUP DATA SHEET

3.2 Physical Form

3.2.1 Physical form of the waste:

☒ Solid ☐ Liquid ☐ Semi-solid ☐ Debris

☐ Other (Describe in comments.)

3.2.2 Comments on physical form:

None.

3.3 Regulated constituents and wastewater/non-wastewater category

3.3.1 Wastewater/non-wastewater under RCRA

☐ Wastewater ☒ Non-wastewater ☐ Unknown

3.3.2 Regulated constituents table including treatment requirements and UHCs, if applicable.

EPA/ State Number	Waste Description	LDR Sub-Category*	Concentration (Typical or Range)**	Basis	LDR Treatment Concentration Standard or Technology Code
D005	TC-Barium	Radioactive	0.55-0.94%	(1), (2)	HLVIT
D005	TC-Barium	Radioactive	0.1-2%	(2), (3)	HLVIT
D006	TC-Cadmium	Radioactive	<0.1%	(2), (3)	HLVIT
D006	TC-Cadmium	Radioactive	0.02%	(1), (2)	HLVIT
D007	TC-Chromium	Radioactive	0.02-1.4%	(1), (2)	HLVIT
D007	TC-Chromium	Radioactive	<0.2%	(2), (3)	HLVIT
D008	TC-Lead	Radioactive	<0.2%	(2), (3)	HLVIT
D008	TC-Lead	Radioactive	0.14-1.4%	(1), (2)	HLVIT
D011	TC-Silver	Radioactive	N/A	(1), (2)	HLVIT
D011	TC-Silver	Radioactive	Unknown	(2), (3)	HLVIT
WT02	Toxic, DW	N/A		(3)	N/A
WT02	Toxic, DW	N/A		(1)	N/A

* LDR Subcategory marked N/A if no existing subcategory adequately describes this waste, or if there are no defined subcategories for the waste number (40 CFR 268.40).

** If waste is not consistent in concentration, this may not apply. Described in Section 3.3.6.

(1) Cesium capsules
(2) Process knowledge (flowsheets and history)
(3) Strontium capsules

3.3.3 List any waste numbers from Section 3.3.2 for which the waste stream already meets established LDR treatment standards.

☐ List:

LDR REPORT TREATABILITY GROUP DATA SHEET

☐ No LDR treatment required (e.g. TRUM waste destined for WIPP, exclusion, etc.)

☒ None (i.e. all constituents/waste numbers of this waste stream still require treatment).

3.3.4 Does this waste stream contain PCBs?

☐ Yes ☒ No ☐ Unknown

If no or unknown, skip to Section 3.3.5.

3.3.4.1 Is waste stream subject to TSCA regulations for PCBs?

☐ Yes ☐ No ☐ Unknown

3.3.4.2 Indicate the PCB concentration range.

☐ < 50 ppm ☐ ≥ 50 ppm ☐ Unknown

3.3.5 What is the confidence level for the regulated constituents?

☐ Low ☐ Medium ☒ High

3.3.6 Comments on regulated constituents and wastewater/non-wastewater category:

None.

4.0 WASTE STREAM TREATMENT

4.1 Is this waste stream currently being treated?

☐ Yes ☒ No

If yes, provide details: N/A

4.2 Planned treatment: Check the appropriate box indicating future plans for treating this waste stream to meet applicable regulations, including LDR treatment standards.

☐ No treatment required (skip to Section 5.0)

☐ Treating or plan to treat on site

☐ Treating or plan to treat off site

☒ Treatment options still being assessed

4.3 Planned treatment method, facility, extent of treatment capacity available:

Treatment options are still being assessed because of the uncertainty accosicated with the waste acceptance criteria at a national geologic repository.

4.4 Treatment schedule information:

The treatment schedule is tied to the resolution of M-092-05.

4.5 Applicable Tri-Party Agreement treatment milestone numbers (including permitting):

LDR REPORT TREATABILITY GROUP DATA SHEET

Milestone Number	Due Date
N/A	N/A

4.6 Proposed new Tri-Party Agreement treatment milestones:

None. See response to 4.4.

4.7 If treating or planning to treat on site, was or will waste minimization be addressed in developing and/or selecting the treatment method?

☐ Yes ☐ No ☒ Unknown

If yes, describe: N/A

4.8 List or describe treatability equivalency petitions, rulemaking petitions, and case-by-case exemptions needed for treatment or already in place.

To be determined based on review of national geologic repository waste acceptance criteria.

4.9 Key Assumptions:

Discussions with Ecology have been initiated and will address existing milestones.

5.0 WASTE STREAM DISPOSAL

After treatment, how will the waste stream be disposed of (include locations, milestone numbers, variances required, etc. as applicable):

Disposal in a national geologic repository.

LDR REPORT WASTE LOCATION-SPECIFIC DATA SHEET

1.0 WASTE STREAM IDENTIFICATION AND SOURCE

1.1 Unit/Plant name: WESF **Waste Stream:** Cs and Sr Capsules

Treatabilitiy Group Name: Cesium and Strontium Capsules

1.2 Applicable profile number(s) for this waste stream:

N/A

1.3 Waste stream source information

1.3.1 General description of the waste (e.g., spill clean-up waste, discarded lab materials, maintenance waste):

The capsules contain cesium chloride and strontium fluoride salts that are contaminated with barium, cadmium, chromium, lead, and silver from process impurities. The maximum outer container height is approximately 53 centimeters (~21 inches) and a maximum diameter of 8 centimeters (~3 inches).

1.3.2 History of how and where the waste was/is generated:

Cesium and strontium were separated from Tank Farms waste, converted to solid cesium chloride and strontium fluoride salts, and encapsulated for storage at WESF. The capsules were declared waste on 7/14/1997.

1.3.3 Source of the regulated constituents:

Process impurities and decay products from reclamation of DST and SST wastes.

1.3.4 Source of the information (e.g., analytical data, process knowledge, document number, etc.)

HNF-7342 "Waste Encapsulation and Storage Facility Waste Analysis Plan", Process knowledge

1.3.5 Additional notes:

None.

2.0 WASTE STREAM STORAGE, INVENTORY, AND GENERATION INFORMATION

(NOTE: For waste in satellite accumulation areas and 90-day accumulation areas, skip to Section 2.6.)

2.1 Current storage method

- ☐ Container (pad)
- ☐ Container (covered)
- ☐ Container (retrievably buried)
- ☐ Tank
- ☐ DST
- ☐ SST
- ☒ Other (explain): Underwater capsule storage in indoor pool cells until 2018 where they will be transferred for treatment or shipped to a national repository.

2.1.1 How was the waste managed prior to storage?

The salts were considered a product and used as irradiation sources.

2.1.2 Timeframe when waste was placed to storage?

The capsules were declared waste June 14, 1997.

LDR REPORT WASTE LOCATION-SPECIFIC DATA SHEET

2.2 Storage inventory locations:

Building/Room Number	Number of Containers/Tanks
225B/Pool cells	1936 Capsules

2.3 Current stored inventory for this stream.

Total volume (cubic meters): 2.000

Date of inventory values: 12/31/2009

Comments on waste inventory:

There are 1,335 cesium capsules and 601 strontium capsules stored in the pool cells.

2.4 Is storage capacity at this location potentially an issue for this waste stream?

☐ Yes ☒ No

If yes, what is the total estimated storage capacity? N/A

When is this capacity expected to be reached? N/A

Bases and assumptions used:

N/A

2.5 Planned storage areas for this waste:

☒ Current Location ☐ CWC ☐ DST

☒ Other Area(s) (list): The waste will be stored at their current location until 2018 when they will be shipped for treatment or transferred to a national repository.

☐ None

2.6 Estimated generation projection by calendar year (includes waste in satellite and 90-day accumulation areas):

Year	m^3	and/or	kg
2010	0.000		0.000
2011	0.000		0.000
2012	0.000		0.000
2013	0.000		0.000
2014	0.000		0.000
Total	0.000		0.000

2.7 DOE Storage Compliance Assessment information:

☒ Assessment has been completed.

Document Number	Date
A&E-SEC-02-002, ltr# 02-A&E-0043	03/14/2002

LDR REPORT WASTE LOCATION-SPECIFIC DATA SHEET

☐ Assessment has been scheduled. Scheduled date:

☐ Other. Explain:

2.8 Applicable Tri-Party Agreement milestones related to storage at this location:

Milestone Number	Due Date
N/A	

2.9 Has there ever been any non-permitted, unauthorized release of this waste stream from this storage unit to the environment?

☐ Yes ☒ No

If yes, summarize releases and quantities and provide date:

N/A

2.10 Are there any plans to submit requests for variances or other exemptions related to storage?

☐ Yes ☒ No

If yes, explain: N/A

2.11 Characterization

2.11.1 Is further characterization needed about the waste prior to acceptance for storage?

☐ Yes ☒ No ☐ Unknown at this time

Milestone Number	Due Date
N/A	N/A

If yes or unknown, comment on characterization for storage.

N/A

2.11.2 Is further characterization needed about the waste prior to acceptance for treatment?

☐ Yes ☒ No ☐ Unknown at this time

Milestone Number	Due Date
N/A	N/A

If yes or unknown, comment on characterization for treatment.

N/A

2.11.3 Is further characterization needed about the waste prior to acceptance for disposal?

☐ Yes ☒ No ☐ Unknown at this time

Milestone Number	Due Date
N/A	N/A

LDR REPORT WASTE LOCATION-SPECIFIC DATA SHEET

If yes or unknown, comment on characterization for disposal.

N/A

2.12 Other key assumptions related to storage, inventory, and generation information:

Yucca mountain waste acceptance criteria will be reviewed to determine the management pathway for the capsules.

3.0 WASTE MINIMIZATION

3.1 Has a waste minimization assessment been completed for this stream?

☐ Yes ☒ No

If yes, provide date assessment conducted: N/A

If yes, provide document number or other identification:

N/A

If no, provide date assessment will be completed, or if waste stream is no longer generated, then indicate N/A:

N/A

3.2 Provide details of current and proposed methods for minimizing the generation of this stream (e.g., process changes to reduce or eliminate LDR waste, methods to reduce volume through segregation and avoidance of commingling, substitution of less-toxic materials):

N/A

3.3 Waste minimization schedule

3.3.1 Reduction achieved during calendar year 2009 (volume or mass)

0.000 m3

3.3.2 Projected future waste volume reductions

Year	m^3	and/or	kg
2010	0.00		0.00
2011	0.00		0.00
2012	0.00		0.00
2013	0.00		0.00
2014	0.00		0.00
Total	0.00		0.00

3.3.3 Bases and assumptions used in above estimates:

None.

LDR REPORT TREATABILITY GROUP DATA SHEET

1.0 WASTE STREAM IDENTIFICATION

1.1 Treatability Group Name: DST Waste

1.2 Description of waste (list WSRd numbers for this waste stream, as applicable)

Basic aqueous solution that may contain suspended material and/or settled solids (sludge and saltcake). Waste streams are treated with sodium hydroxide and sodium nitrite to minimize tank corrosion and to address compatibility issues. Wastes have been stored in the DST System from 1971 to the present.

2.0 WASTE INVENTORY AND GENERATION

2.1 Current total inventory for this waste stream (stored waste only, not accumulation areas). [Equals sum of location-specific data sheets for this treatability group.]

Total volume (cubic meters): 98,009.043

2.2 Estimated generation projection by calendar year: [equals annual sums of location-specfic data sheets for this treatability group].

Year	m^3	and/or	kg
2010	38.000		0.000
2011	38.000		0.000
2012	38.000		0.000
2013	38.000		0.000
2014	38.000		0.000
Total	190.000		0.000

3.0 WASTE STREAM CHARACTERIZATION

3.1 Radiological Characteristics

3.1.1 Mixed waste type: ☐ High-level ☐ Transuranic ☒ Low-level

3.1.2 Handling (as package contents would need to be handled during treatment):

☐ Contact-handled ☒ Remote-handled

3.1.3 Comments on radiological characteristics (e.g., more specific information on content, treatment concerns caused by radiation, confidence level):

The DST system waste contains radionuclides including the following: 3H, 14C, 59Ni, 60Co, 63Ni, 79Se, 90Sr, 90Y, 93Zr, 93mNb, 99Tc, 106Ru, 113mCd, 125Sb, 126Sn, 129I, 134Cs, 137Cs, 137mBa, 151Sm, 152Eu, 154Eu, 155Eu, 226Ra, 227Ac, 228Ra, 229Th, 231Pa, 232Th, 232U, 233U, 234U, 235U, 236U, 237Np, 238Pu, 238U, 239Pu, 240Pu, 241Am, 241Pu, 242Cm, 242Pu, 243Am, 243Cm, 244Cm.
As a whole, the DST wastes are managed as remote-handled, high level waste. However, some tanks may contain potential TRU mixed waste, pending a waste determination.

LDR REPORT TREATABILITY GROUP DATA SHEET

3.2 Physical Form

3.2.1 Physical form of the waste:

☐ Solid ☐ Liquid ☐ Semi-solid ☐ Debris

☒ Other (Describe in comments.)

3.2.2 Comments on physical form:

The major constituents of DST System waste are water and sodium salts of aluminates, nitrate, nitrite, phosphate, hydroxide, carbonate, and sulfate. Some calcium and potassium salts are also present. Chemically complexed waste in the DSTs contain sodium salts of chelating agents ethylenediamine-tetraacetic acid and n-hydroxyethylenediamine-tetraacetic acid. There may also be detectable concentrations of halogenated and nonhalogenated organic compounds and heavy metals such as lead, chromium and cadmium.

3.3 Regulated constituents and wastewater/non-wastewater category

3.3.1 Wastewater/non-wastewater under RCRA

☐ Wastewater ☒ Non-wastewater ☐ Unknown

3.3.2 Regulated constituents table including treatment requirements and UHCs, if applicable.

EPA/ State Number	Waste Description	LDR Sub-Category*	Concentration (Typical or Range)**	Basis	LDR Treatment Concentration Standard or Technology Code
D001	Ignitability	Low TOC Ignitable char liquid	(5)	(5)	DEACT(2); RORGS; COMBST
D002	Corrosivity	(1)	(5)	(5)	HLVIT
D003	Reactivity	Reactive Cyanides	(5)	(5)	590/30 mg/kg
D004	Arsenic	(1)	(5)	(5)	HLVIT
D005	Barium	(1)	(5)	(5)	HLVIT
D006	Cadmium	(1)	(5)	(5)	HLVIT
D007	Chromium	(1)	(5)	(5)	HLVIT
D008	Lead	(1)	(5)	(5)	HLVIT
D009	Mercury	(1)	(5)	(5)	HLVIT
D010	Selenium	(1)	(5)	(5)	HLVIT
D011	Silver	(1)	(5)	(5)	HLVIT
D018	Benzene	N/A	(5)	(5)	10 mg/kg (2)
D019	Carbon Tetrachloride	N/A	(5)	(5)	6.0 mg/kg (2)
D022	Chloroform	N/A	(5)	(5)	6.0 mg/kg (2)
D028	1,2-Dichloroethane	N/A	(5)	(5)	6.0 mg/kg (2)
D029	1,1-Dichloroethylene	N/A	(5)	(5)	6.0 mg/kg (2)

LDR REPORT TREATABILITY GROUP DATA SHEET

EPA/ State Number	Waste Description	LDR Sub-Category*	Concentration (Typical or Range)**	Basis	LDR Treatment Concentration Standard or Technology Code
D030	2,4-Dinitrotoluene	N/A	(5)	(5)	140 mg/kg (2)
D033	Hexachlorobutadiene	N/A	(5)	(5)	5.6 mg/kg (2)
D034	Hexachloroethane	N/A	(5)	(5)	30 mg/kg (2)
D035	Methyl Ethyl Ketone	N/A	(5)	(5)	36 mg/kg (2)
D036	Nitrobenzene	N/A	(5)	(5)	14 mg/kg (2)
D038	Pyridine	N/A	(5)	(5)	16 mg/kg (2)
D039	Tetrachloroethylene	N/A	(5)	(5)	6.0 mg/kg (2)
D040	Trichloroethylene	N/A	(5)	(5)	6.0 mg/kg (2)
D041	2,4,5-trichlorophenol	N/A	(5)	(5)	7.4 mg/kg (2)
D043	Vinyl Chloride	N/A	(5)	(5)	6.0 mg/kg (2)
F001	1,1,1-Trichloroethane	Spent Solvent	(5)	(5)	6.0 mg/kg
F002	Methylene Chloride	Spent Solvent	(5)	(5)	30 mg/kg
F003	Acetone	Spent Solvent	(5)	(5)	160 mg/kg
F003	Methyl Isobutyl Ketone	Spent Solvent	(5)	(5)	33 mg/kg
F004	Cresols	Spent Solvent	(5)	(5)	5.6 mg/kg (o, m & p); 11.2 mg/kg (mixed)
F005	Methyl Ethyl Ketone	Spent Solvent	(5)	(5)	36 mg/kg
UHC(4)	Antimony	N/A	(5)	(5)	1.15 mg/l (6)
UHC(4)	Beryllium	N/A	(5)	(5)	1.22 mg/l (6)
UHC(4)	Cyanide (total)	N/A	(5)	(5)	590 mg/l (6)
UHC(4)	Nickel	N/A	(5)	(5)	11 mg/l (6)
UHC(4)	PCBs (sum of Aroclors)	N/A	(5)	(5)	10 mg/l (6)
UHC(4)	Selenium	N/A	(5)	(5)	5.7 mg/l (6)
UHC(4)	Thallium	N/A	(5)	(5)	0.2 mg/l (6)
WP01	Persistent, EHW & DW	N/A	(5)	(5)	NONE (3)
WP02	Persistent, DW	N/A	(5)	(5)	N/A
WT01	Toxic, EHW & DW	N/A	(5)	(5)	NONE (3)
WT02	Toxic, DW	N/A	(5)	(5)	N/A

* LDR Subcategory marked N/A if no existing subcategory adequately describes this waste, or if there are no defined subcategories for the waste number (40 CFR 268.40).

** If waste is not consistent in concentration, this may not apply. Described in Section 3.3.6.

LDR REPORT TREATABILITY GROUP DATA SHEET

1) Radioactive high-level wastes generated during the reprocessing of fuel rods.
2) and meet 40 CFR 268.48.
3) Mixed extremely hazardous wastes can be land-disposed in Washington State in DOE facilities in accordance with RCW 70.105.050(2).
4) UHCs which have been identified in waste entering the DST system since 1995. For more information see comments in 3.3.6.
(5) See Section 3.3.6.
(6) TCLP

Although F039 was added to the DST Part A permit application in 1994, a review of the tank transfer summary data compiled to support preparation of the Waste Tank Summary Report, HNF-EP-0182, verifies that no F039 leachate from the burial grounds was transferred to the DSTs.

Tank Farm waste is subject to non-wastewater treatment standards.

3.3.3 List any waste numbers from Section 3.3.2 for which the waste stream already meets established LDR treatment standards.

☐ List:

☐ No LDR treatment required (e.g. TRUM waste destined for WIPP, exclusion, etc.)

☒ None (i.e. all constituents/waste numbers of this waste stream still require treatment).

3.3.4 Does this waste stream contain PCBs?

☒ Yes ☐ No ☐ Unknown

If no or unknown, skip to Section 3.3.5.

3.3.4.1 Is waste stream subject to TSCA regulations for PCBs?

☒ Yes ☐ No ☐ Unknown

3.3.4.2 Indicate the PCB concentration range.

☒ < 50 ppm ☐ ≥ 50 ppm ☐ Unknown

3.3.5 What is the confidence level for the regulated constituents?

☐ Low ☐ Medium ☒ High

3.3.6 Comments on regulated constituents and wastewater/non-wastewater category:

LDR REPORT TREATABILITY GROUP DATA SHEET

The waste codes assigned to DST system waste are based on process knowledge and analysis. Dangerous waste constituents in individual tanks will vary based upon process knowledge. Since 1995, LDR requirements have been documented on waste profile sheets for waste sent to the DST System. On September 25, 1995, waste acceptance criteria for waste entering the DST System specifically required the identification of UHCs. There is no documentation of LDR requirements for waste placed in the SST System and for waste sent to the DST System prior to 1995. A list is kept of the UHCs that have been documented since 1995. At this time, UHCs relevant to DOE activities at Hanford are considered or can reasonably be expected to be present in the waste per references PNNL-11927, PNNL-11943, and PNNL-12039. It has been determined per the "Framework Agreement for Management of Polychlorinate Biphenyls (PCBs) in Hanford Tank Waste," dated August 31, 2000 that some DSTs contain PCB remediation waste. The risk-based disposal approval process will address the disposal of PCB remediation waste through the waste treatment plant where it is being addressed as a constituent of concern.

4.0 WASTE STREAM TREATMENT

4.1 Is this waste stream currently being treated?

☐ Yes ☒ No

If yes, provide details: N/A

4.2 Planned treatment: Check the appropriate box indicating future plans for treating this waste stream to meet applicable regulations, including LDR treatment standards.

☐ No treatment required (skip to Section 5.0)

☒ Treating or plan to treat on site

☐ Treating or plan to treat off site

☐ Treatment options still being assessed

4.3 Planned treatment method, facility, extent of treatment capacity available:

DST System wastes will be retrieved, pretreated, and solidified for disposal. The waste will be vitrified in a process that will destroy or extract organic and cyanide constituents to below treatment standards, neutralize or deactivate dangerous waste and extremely hazardous waste, and immobilize toxic metals.

4.4 Treatment schedule information:

The DST waste will be transferred to the WTP system and eventually be treated and disposed of as WTP waste per TPA milestones.

4.5 Applicable Tri-Party Agreement treatment milestone numbers (including permitting):

Milestone Number	Due Date
M-062-00	12/31/2028
M-062-00A	02/28/2018

4.6 Proposed new Tri-Party Agreement treatment milestones:

None.

LDR REPORT TREATABILITY GROUP DATA SHEET

4.7 If treating or planning to treat on site, was or will waste minimization be addressed in developing and/or selecting the treatment method?

☒ Yes ☐ No ☐ Unknown

If yes, describe: Waste generation will be minimized to the extent practical during the retrieval process via the use of available supernate from other tanks as the motivating medium as opposed to the addition of excess water.
The treatment method, high-level vitrification was chosen on the basis of the "Final Environmental Impact Statement for the Tank Waste Remediation System," (DOE/EIS-0189) and the subsequent ROD, as a matter of necessity for compliance with the regulations for this waste. Waste minimization will be considered during the design and development of the vitrification plant in accordance with federal and state laws and regulations, and DOE orders.
In addition, tank waste will be blended when possible to maximize glass loading, and minimize the amount of waste (glass logs) generated at the vitrification facility.

4.8 List or describe treatability equivalency petitions, rulemaking petitions, and case-by-case exemptions needed for treatment or already in place.

None.

4.9 Key Assumptions:

None.

5.0 WASTE STREAM DISPOSAL

After treatment, how will the waste stream be disposed of (include locations, milestone numbers, variances required, etc. as applicable):

In accordance with current plans, the vitrified low-activity waste fraction will be disposed onsite in a retrievable form. The vitrified HLW fraction will be stored on site until a permanent repository is available to receive wastes for disposal.

A decision for disposal at the Waste Isolation Pilot Plant (WIPP) will not be made until (1) the waste meets the WIPP Waste Acceptance Criteria, with special emphasis on waste determination; and (2) it meets the regulatory eligibility requirements for disposal as described in the WIPP Hazardous Waste Facility Permit.

LDR REPORT WASTE LOCATION-SPECIFIC DATA SHEET

1.0 WASTE STREAM IDENTIFICATION AND SOURCE

1.1 Unit/Plant name: 222-S Laboratory Complex/219-S Waste Handling Facility **Waste Stream:** Bulk Aqueous Liquids

Treatabilitiy Group Name: DST Waste

1.2 Applicable profile number(s) for this waste stream:

None.

1.3 Waste stream source information

1.3.1 General description of the waste (e.g., spill clean-up waste, discarded lab materials, maintenance waste):

Aqueous liquid waste is generated from analytical procedure operations, unused or expired standards and reagents, unused samples from Tank Farms and other customer locations, maintenance and operations activities at the 222S Laboratory.

1.3.2 History of how and where the waste was/is generated:

This waste stream is generated from analytical procedure operations, unused samples, unused or expired standards and reagents, analytical testing, and the maintenance and operation of the 222S Laboratory. The facility will generate this waste throughout the 222-S Laboratory Complex (analytical procedures, hot cell, 219-S Waste Handling Facility operations).

1.3.3 Source of the regulated constituents:

Unused samples from Hanford Site generating locations (e.g. LLBG, PFP, Tank Farms, K-Basins, ETF, etc.). Analytical procedures standards and reagents.

1.3.4 Source of the information (e.g., analytical data, process knowledge, document number, etc.)

Waste Stream Fact Sheets (WSFS), Container Disposal Request (CDR), Inventory sheets, MSDSs, and Request for Sample Analysis, Generator Knowlege of Samples.

1.3.5 Additional notes:

219S WHF only accepts radioactively contaminated aqueous waste.

2.0 WASTE STREAM STORAGE, INVENTORY, AND GENERATION INFORMATION

(NOTE: For waste in satellite accumulation areas and 90-day accumulation areas, skip to Section 2.6.)

2.1 Current storage method

- ☐ Container (pad)
- ☐ Container (covered)
- ☐ Container (retrievably buried)
- ☒ Tank
- ☐ DST
- ☐ SST
- ☐ Other (explain):

2.1.1 How was the waste managed prior to storage?

LDR REPORT WASTE LOCATION-SPECIFIC DATA SHEET

Per the Hanford Facility Dangerous Waste Permit Application, 222-S Laboratory Complex (DOE/RL-91-27 Revision 2).

2.1.2 Timeframe when waste was placed to storage?

Placed into storage between transfers to the DST system.

2.2 Storage inventory locations:

Building/Room Number	Number of Containers/Tanks
219S WHF	3

2.3 Current stored inventory for this stream.

Total volume (cubic meters): 9.043

Date of inventory values: 12/31/2009

Comments on waste inventory:

The waste volume was based on actual tank readings. Tank 103 is inactive and has been pumped, rinsed, disconnected, blanked and is out of service. Tank 103 does not contribute to this volume. Volume is based on Tanks 101, 102 and 104 of the 219-S system.

2.4 Is storage capacity at this location potentially an issue for this waste stream?

☐ Yes ☒ No

If yes, what is the total estimated storage capacity? N/A

When is this capacity expected to be reached? N/A

Bases and assumptions used:

N/A

2.5 Planned storage areas for this waste:

☒ Current Location ☐ CWC ☒ DST

☐ Other Area(s) (list):

☐ None

2.6 Estimated generation projection by calendar year (includes waste in satellite and 90-day accumulation areas):

Year	m^3	and/or	kg
2010	38.000		0.000
2011	38.000		0.000
2012	38.000		0.000
2013	38.000		0.000
2014	38.000		0.000
Total	190.000		0.000

LDR REPORT WASTE LOCATION-SPECIFIC DATA SHEET

2.7 DOE Storage Compliance Assessment information:

☒ Assessment has been completed.

Document Number	Date
A&E-SEC-01-018	12/03/2001

☐ Assessment has been scheduled. Scheduled date:

☒ Other. Explain: A&E-SEC-01-018 is attached to DOE letter numbered 02-A&E-002.

2.8 Applicable Tri-Party Agreement milestones related to storage at this location:

Milestone Number	Due Date
N/A	

2.9 Has there ever been any non-permitted, unauthorized release of this waste stream from this storage unit to the environment?

☐ Yes ☒ No

If yes, summarize releases and quantities and provide date:

N/A

2.10 Are there any plans to submit requests for variances or other exemptions related to storage?

☐ Yes ☒ No

If yes, explain: N/A

2.11 Characterization

2.11.1 Is further characterization needed about the waste prior to acceptance for storage?

☐ Yes ☒ No ☐ Unknown at this time

Milestone Number	Due Date
N/A	N/A

If yes or unknown, comment on characterization for storage.

Characterization is performed as necessary to facilitate batch transfer of the waste to the DST System. A commitment is not necessary for this characterization.

2.11.2 Is further characterization needed about the waste prior to acceptance for treatment?

☒ Yes ☐ No ☐ Unknown at this time

Milestone Number	Due Date
N/A	N/A

If yes or unknown, comment on characterization for treatment.

See DST Waste LSDS.

LDR REPORT WASTE LOCATION-SPECIFIC DATA SHEET

2.11.3 Is further characterization needed about the waste prior to acceptance for disposal?

☐ Yes ☐ No ☒ Unknown at this time

Milestone Number	Due Date
N/A	N/A

If yes or unknown, comment on characterization for disposal.

See DST Waste LSDS.

2.12 Other key assumptions related to storage, inventory, and generation information:

Tank 103 has been emptied, rinsed, disconnected, blanked, and is out of service. Tank 103 will be left in place and addressed during the closure of the 219-S tank system. The 222-S Laboratory Complex Part B Permit Application and resolution of NOD comments reflects Ecology agreement with this strategy. Tank 103 contents were sampled before tank was emptied per Ecology agreement.

3.0 WASTE MINIMIZATION

3.1 Has a waste minimization assessment been completed for this stream?

☒ Yes ☐ No

If yes, provide date assessment conducted: 9/2000

If yes, provide document number or other identification:

Operating and analytical procedures at the 222-S Laboratory Complex.

If no, provide date assessment will be completed, or if waste stream is no longer generated, then indicate N/A:

3.2 Provide details of current and proposed methods for minimizing the generation of this stream (e.g., process changes to reduce or eliminate LDR waste, methods to reduce volume through segregation and avoidance of commingling, substitution of less-toxic materials):

Currently, the Laboratory optimizes the use of labware for the work performed. Proper planning is used prior to waste generation through work planning process, and consistent review of routine operations minimizes waste generation where possible. Also, the Laboratory constantly seeks innovative opportunities to reduce waste by being aware of current waste minimizing technology. New analytical equipment is also procured that generate less waste than prior versions.

3.3 Waste minimization schedule

3.3.1 Reduction achieved during calendar year 2009 (volume or mass)

0.000 m3

LDR REPORT WASTE LOCATION-SPECIFIC DATA SHEET

3.3.2 Projected future waste volume reductions

Year	m^3	and/or	kg
2010	0.00		0.00
2011	0.00		0.00
2012	0.00		0.00
2013	0.00		0.00
2014	0.00		0.00
Total	0.00		0.00

3.3.3 Bases and assumptions used in above estimates:

The analytical processes generating this stream is continuously evaluated for waste minimization opportunities.

LDR REPORT WASTE LOCATION-SPECIFIC DATA SHEET

1.0 WASTE STREAM IDENTIFICATION AND SOURCE

1.1 Unit/Plant name: DST System **Waste Stream:** DST System

Treatabilitiy Group Name: DST Waste

1.2 Applicable profile number(s) for this waste stream:

N/A

1.3 Waste stream source information

1.3.1 General description of the waste (e.g., spill clean-up waste, discarded lab materials, maintenance waste):

The DST System contains wastes such as: concentrated phosphate waste, double-shell slurry feed, concentrated complexant waste, dilute complexed and non-complexed wastes, double-shell slurry, and PUREX decladding wastes. The tanks contain mixed wastes which are liquid, layered over solids, such as saltcake and sludge.

1.3.2 History of how and where the waste was/is generated:

The majority of these wastes are from past chemical separation processes (legacy wastes). The major contributors to the wastes stored here are PUREX, B Plant, the PFP and retrievals from the SST System. Smaller amounts of other miscellaneous wastes such as laboratory wastes and wastes from the clean out of facilities in the 100, 200, 300, 400 and 600 areas are stored in the DST System. Waste streams are treated with sodium hydroxide and sodium nitrite to minimize tank corrosion and to address compatibility issues.

1.3.3 Source of the regulated constituents:

Hazardous constituents in the DST are from maintenance and operation of the DST as well as waste transfers into the DST system from SSTs, 222-S, 242-A, and miscellaneous sources along with historical waste transfers. These may include chemicals used during operations and maintenance, newly generated laboratory analysis waste, excess tank samples, R&D work, SST waste retrieval, treatment of DST waste within the DST System and at 242-A Evaporator. The waste could also contain some remediation and D&D wastes.

1.3.4 Source of the information (e.g., analytical data, process knowledge, document number, etc.)

Process knowledge, Tank Waste Information System (TWINS) Best Basis Inventory, and analytical data from Waste Stream Profile Sheets.

1.3.5 Additional notes:

None.

LDR REPORT WASTE LOCATION-SPECIFIC DATA SHEET

2.0 WASTE STREAM STORAGE, INVENTORY, AND GENERATION INFORMATION

(NOTE: For waste in satellite accumulation areas and 90-day accumulation areas, skip to Section 2.6.)

2.1 Current storage method

☐ Container (pad) ☐ Container (covered) ☐ Container (retrievably buried)

☐ Tank ☒ DST ☐ SST

☐ Other (explain):

2.1.1 How was the waste managed prior to storage?

Waste was managed at the specific contributing operating facility or in the SST System.

2.1.2 Timeframe when waste was placed to storage?

From April 1971 to the present.

2.2 Storage inventory locations:

Building/Room Number	Number of Containers/Tanks
241-AN	7 Tanks
241-AP	8 Tanks
204-AR	1 Catch Tank
241-AW	6 Tanks
241-AY	2 Tanks
241-AZ	2 Tanks
241-SY	3 Tanks
DST System	Diversion Boxes
N/A	Valve Pits
N/A	Catch Tanks
N/A	Vent Station

2.3 Current stored inventory for this stream.

Total volume (cubic meters): 98,000.000

Date of inventory values: 01/04/2010

Comments on waste inventory:

The volume is rounded to the nearest 1,000 cubic meter. Tank volumes are determined by waste level measurements, which are then converted to volumes. Actual tank volumes at any given time may differ from the reported values due to factors such as instrumentation errors, uneven surfaces, and calculation rounding errors.

Source: Washington River Protection Solutions, Tank Waste Information System (TWINS), Best Basis Inventory, query 01/04/10.

LDR REPORT WASTE LOCATION-SPECIFIC DATA SHEET

2.4 Is storage capacity at this location potentially an issue for this waste stream?

☒ Yes ☐ No

If yes, what is the total estimated storage capacity? 127,000

When is this capacity expected to be reached? See Bases and Assumptions

Bases and assumptions used:

The volume is rounded to the nearest 1,000 cubic meter. The total estimated storage capacity is based on volumes listed on the DST RCRA part A permit. The date at which the capacity is reached is dependent upon the additional capacity gained through increasing the fill levels, operation of the 242-A Evaporator or other treatment processes, the order and schedule for retrieval of SST wastes, and the schedule for operation of the Waste Treatment Plant.

2.5 Planned storage areas for this waste:

☐ Current Location ☐ CWC ☒ DST

☐ Other Area(s) (list):

☐ None

2.6 Estimated generation projection by calendar year (includes waste in satellite and 90-day accumulation areas):

Year	m^3	and/or	kg
2010	0.000		0.000
2011	0.000		0.000
2012	0.000		0.000
2013	0.000		0.000
2014	0.000		0.000
Total	0.000		0.000

2.7 DOE Storage Compliance Assessment information:

☒ Assessment has been completed.

Document Number	Date
A-01-EMD-TF-09	12/31/2001

☐ Assessment has been scheduled. Scheduled date:

☐ Other. Explain:

2.8 Applicable Tri-Party Agreement milestones related to storage at this location:

Milestone Number	Due Date
N/A	

LDR REPORT WASTE LOCATION-SPECIFIC DATA SHEET

2.9 Has there ever been any non-permitted, unauthorized release of this waste stream from this storage unit to the environment?

☐ Yes ☒ No

If yes, summarize releases and quantities and provide date:

N/A

2.10 Are there any plans to submit requests for variances or other exemptions related to storage?

☐ Yes ☒ No

If yes, explain: N/A

2.11 Characterization

2.11.1 Is further characterization needed about the waste prior to acceptance for storage?

☐ Yes ☒ No ☐ Unknown at this time

Milestone Number	Due Date
N/A	N/A

If yes or unknown, comment on characterization for storage.

N/A

2.11.2 Is further characterization needed about the waste prior to acceptance for treatment?

☒ Yes ☐ No ☐ Unknown at this time

Milestone Number	Due Date
N/A	N/A

If yes or unknown, comment on characterization for treatment.

The DST waste will be characterized as required to meet the waste acceptance criteria of the treatment facility.

2.11.3 Is further characterization needed about the waste prior to acceptance for disposal?

☒ Yes ☐ No ☐ Unknown at this time

Milestone Number	Due Date
N/A	N/A

If yes or unknown, comment on characterization for disposal.

It is anticipated that further information will be needed for disposal. Awaiting waste acceptance criteria for the disposal location or a waste determination for potential TRU waste.

2.12 Other key assumptions related to storage, inventory, and generation information:

Waste will be sampled and characterized per applicable Data Quality Objectives.
As a whole, the DST wastes are managed as remote-handled, high level waste. However, some tanks may contain potential TRU mixed waste, pending a waste determination.

LDR REPORT WASTE LOCATION-SPECIFIC DATA SHEET

3.0 WASTE MINIMIZATION

3.1 Has a waste minimization assessment been completed for this stream?

☒ Yes ☐ No

If yes, provide date assessment conducted: 9/1995

If yes, provide document number or other identification:

P20A ID Code 95-0007

If no, provide date assessment will be completed, or if waste stream is no longer generated, then indicate N/A:

3.2 Provide details of current and proposed methods for minimizing the generation of this stream (e.g., process changes to reduce or eliminate LDR waste, methods to reduce volume through segregation and avoidance of commingling, substitution of less-toxic materials):

Some of the waste sent to the DST System is reduced at the generating location through pretreatment and recycling of streams. Waste is also minimized by treatment at the 242-A Evaporator. The frequency and volumes of flush solutions have also been minimized and tank waste supernate used in lieu of raw water to minimize waste generation.

3.3 Waste minimization schedule

3.3.1 Reduction achieved during calendar year 2009 (volume or mass)

0.000 m3

3.3.2 Projected future waste volume reductions

Year	m^3	and/or	kg
2010	0.00		0.00
2011	0.00		0.00
2012	0.00		0.00
2013	0.00		0.00
2014	0.00		0.00
Total	0.00		0.00

3.3.3 Bases and assumptions used in above estimates:

Since DSTs are utilized to store waste retrieved from the SSTs until such time as the waste treatment facility (vitrification plant - WTP) has been constructed and brought on line, no reduction in DST waste will be realized until the WTP begins processing waste and all SSTs have been retrieved. In general, any waste addition resulting from the use of raw water for retrieval activities is eliminated via processing through the 242-A Evaporator.

ERDF - Treatment

LDR REPORT TREATABILITY GROUP DATA SHEET

1.0 WASTE STREAM IDENTIFICATION

1.1 Treatability Group Name: ERDF -- Treatment

1.2 Description of waste (list WSRd numbers for this waste stream, as applicable)

This waste stream reflects mixed waste that requires treatment prior to disposal at ERDF. The waste is stored at the operable unit, and is shipped to ERDF where waste treatment and/or disposal occurs.

2.0 WASTE INVENTORY AND GENERATION

2.1 Current total inventory for this waste stream (stored waste only, not accumulation areas). [Equals sum of location-specific data sheets for this treatability group.]

Total volume (cubic meters): 0.000

2.2 Estimated generation projection by calendar year: [equals annual sums of location-specfic data sheets for this treatability group].

Year	m^3	and/or	kg
2010	4,506.000		0.000
2011	4,970.000		0.000
2012	43,227.000		0.000
2013	177.000		0.000
2014	1.000		0.000
Total	52,881.000		0.000

3.0 WASTE STREAM CHARACTERIZATION

3.1 Radiological Characteristics

3.1.1 Mixed waste type: ☐ High-level ☐ Transuranic ☒ Low-level

3.1.2 Handling (as package contents would need to be handled during treatment):

☒ Contact-handled ☐ Remote-handled

3.1.3 Comments on radiological characteristics (e.g., more specific information on content, treatment concerns caused by radiation, confidence level):

ERDF accepts waste from CERCLA clean up actions performed across the Hanford Site. The waste disposed at ERDF meets the ERDF Waste Acceptance Criteria, WCH-191, Rev. 1 (or current revision).

3.2 Physical Form

3.2.1 Physical form of the waste:

☒ Solid ☐ Liquid ☐ Semi-solid ☒ Debris

☐ Other (Describe in comments.)

3.2.2 Comments on physical form:

Waste is stabilized in place at time of disposal.

LDR REPORT TREATABILITY GROUP DATA SHEET

3.3 Regulated constituents and wastewater/non-wastewater category

3.3.1 Wastewater/non-wastewater under RCRA

☐ Wastewater ☒ Non-wastewater ☐ Unknown

3.3.2 Regulated constituents table including treatment requirements and UHCs, if applicable.

EPA/ State Number	Waste Description	LDR Sub-Category*	Concentration (Typical or Range)**	Basis	LDR Treatment Concentration Standard or Technology Code
D006	Cadmium	cadmium debris & soils	**	process knowledge and analytical data	stabilization & macroencapsulation
D007	Chromium	debris & soils	**	process knowledge and analytical data	stabilization & macroencapsulation
D008	Lead	lead debris & soils	**	process knowledge and analytical data	stabilization & macroencapsulation
D009	Mercury	mercury debris & soils	**	process knowledge and analytical data	stabilization & macroencapsulation

* LDR Subcategory marked N/A if no existing subcategory adequately describes this waste, or if there are no defined subcategories for the waste number (40 CFR 268.40).

** If waste is not consistent in concentration, this may not apply. Described in Section 3.3.6.

3.3.3 List any waste numbers from Section 3.3.2 for which the waste stream already meets established LDR treatment standards.

☐ List:

☐ No LDR treatment required (e.g. TRUM waste destined for WIPP, exclusion, etc.)

☒ None (i.e. all constituents/waste numbers of this waste stream still require treatment).

LDR REPORT TREATABILITY GROUP DATA SHEET

3.3.4 Does this waste stream contain PCBs?

☒ Yes ☐ No ☐ Unknown

If no or unknown, skip to Section 3.3.5.

3.3.4.1 Is waste stream subject to TSCA regulations for PCBs?

☒ Yes ☐ No ☐ Unknown

3.3.4.2 Indicate the PCB concentration range.

☒ < 50 ppm ☒ ≥ 50 ppm ☐ Unknown

3.3.5 What is the confidence level for the regulated constituents?

☐ Low ☒ Medium ☐ High

3.3.6 Comments on regulated constituents and wastewater/non-wastewater category:

Spent resins have been sampled and are of high confidence. Contaminated remediation waste may or may not contain PCBs. Section 4.3.4 of the ERDF acceptance criteria addresses disposal of PCB contaminated waste.

4.0 WASTE STREAM TREATMENT

4.1 Is this waste stream currently being treated?

☒ Yes ☐ No

If yes, provide details: Waste is stabilized or macroencapsulated, as appropriate, when disposed of at ERDF.

4.2 Planned treatment: Check the appropriate box indicating future plans for treating this waste stream to meet applicable regulations, including LDR treatment standards.

☐ No treatment required (skip to Section 5.0)

☒ Treating or plan to treat on site

☐ Treating or plan to treat off site

☐ Treatment options still being assessed

4.3 Planned treatment method, facility, extent of treatment capacity available:

Stabilization and macroencapsulation capacity is available for treatment within the ERDF on an as needed basis.

4.4 Treatment schedule information:

ERDF acceptance of waste requiring treatment is coordinated so treatment and disposal can occur within a short time of receipt of the waste.

4.5 Applicable Tri-Party Agreement treatment milestone numbers (including permitting):

Milestone Number	Due Date
N/A	N/A

LDR REPORT TREATABILITY GROUP DATA SHEET

4.6 Proposed new Tri-Party Agreement treatment milestones:

None.

4.7 If treating or planning to treat on site, was or will waste minimization be addressed in developing and/or selecting the treatment method?

☐ Yes ☒ No ☐ Unknown

If yes, describe: N/A

4.8 List or describe treatability equivalency petitions, rulemaking petitions, and case-by-case exemptions needed for treatment or already in place.

None planned at this time.

4.9 Key Assumptions:

Volume projections are based on the volume of contaminated soil and debris encountered during calendar year 2002 and 2003. Waste projected to be sent to ERDF for treatment and disposal, from MLLW-02 through MLLW-10 (excluding MLLW-07), is reported within the MLLW treatability groups.

5.0 WASTE STREAM DISPOSAL

After treatment, how will the waste stream be disposed of (include locations, milestone numbers, variances required, etc. as applicable):

Waste stream is disposed of at ERDF.

LDR REPORT WASTE LOCATION-SPECIFIC DATA SHEET

1.0 WASTE STREAM IDENTIFICATION AND SOURCE

1.1 Unit/Plant name: CERCLA Waste **Waste Stream:** CERCLA Waste

Treatabilitiy Group Name: ERDF -- Treatment

1.2 Applicable profile number(s) for this waste stream:

N/A

1.3 Waste stream source information

1.3.1 General description of the waste (e.g., spill clean-up waste, discarded lab materials, maintenance waste):

Contaminated remediation waste generated in the 100, 200, 300, and 600 Areas of the Hanford Site from excavation of waste sites and decommissioning of the Hanford Site Reactors. Waste stream is generated pursuant to a ROD, or other CERCLA authorization documents, and disposed pursuant to the ERDF ROD.

1.3.2 History of how and where the waste was/is generated:

The majority of waste is contaminated soil and debris resulting from past Hanford Site operations in which reactor coolant liquids were discharged to cribs, ponds, ditches, and trenches. Lead was used in the reactors for shielding.

1.3.3 Source of the regulated constituents:

Generated as a result of past Hanford Site operations, see Section 1.3.2 of this data sheet.

1.3.4 Source of the information (e.g., analytical data, process knowledge, document number, etc.)

Process knowledge and analytical data.

1.3.5 Additional notes:

The amount of waste generated and treated from waste site remediation, facility decommissioning, and other projects may vary from year-to-year. The generation projection is based volumes treated in previous years.

2.0 WASTE STREAM STORAGE, INVENTORY, AND GENERATION INFORMATION

(NOTE: For waste in satellite accumulation areas and 90-day accumulation areas, skip to Section 2.6.)

2.1 Current storage method

- ☐ Container (pad)
- ☐ Container (covered)
- ☐ Container (retrievably buried)
- ☐ Tank
- ☐ DST
- ☐ SST
- ☒ Other (explain): Waste may be stockpiled in a designated staging area prior to treatment.

2.1.1 How was the waste managed prior to storage?

Soil and debris is excavated or demolished, placed in containers, and transported to ERDF for treatment and disposal.

LDR REPORT WASTE LOCATION-SPECIFIC DATA SHEET

2.1.2 Timeframe when waste was placed to storage?

N/A

2.2 Storage inventory locations:

Building/Room Number	Number of Containers/Tanks
ERDF	0

2.3 Current stored inventory for this stream.

Total volume (cubic meters): 0.000

Date of inventory values: 12/31/2009

Comments on waste inventory:

N/A

2.4 Is storage capacity at this location potentially an issue for this waste stream?

☐ Yes ☒ No

If yes, what is the total estimated storage capacity? N/A

When is this capacity expected to be reached? N/A

Bases and assumptions used:

N/A

2.5 Planned storage areas for this waste:

☐ Current Location ☐ CWC ☐ DST

☒ Other Area(s) (list): Waste may be stockpiled within a designated staging area prior to treatment and disposal.

☐ None

2.6 Estimated generation projection by calendar year (includes waste in satellite and 90-day accumulation areas):

Year	m^3	and/or	kg
2010	4,105.000		0.000
2011	4,569.000		0.000
2012	42,826.000		0.000
2013	126.000		0.000
2014	0.000		0.000
Total	51,626.000		0.000

2.7 DOE Storage Compliance Assessment information:

☐ Assessment has been completed.

LDR REPORT WASTE LOCATION-SPECIFIC DATA SHEET

Document Number	Date

☐ Assessment has been scheduled. Scheduled date:

☒ Other. Explain: Storage assessment not required.

2.8 Applicable Tri-Party Agreement milestones related to storage at this location:

Milestone Number	Due Date
N/A	

2.9 Has there ever been any non-permitted, unauthorized release of this waste stream from this storage unit to the environment?

☐ Yes ☒ No

If yes, summarize releases and quantities and provide date:

N/A

2.10 Are there any plans to submit requests for variances or other exemptions related to storage?

☐ Yes ☒ No

If yes, explain: N/A

2.11 Characterization

2.11.1 Is further characterization needed about the waste prior to acceptance for storage?

☐ Yes ☒ No ☐ Unknown at this time

Milestone Number	Due Date
N/A	N/A

If yes or unknown, comment on characterization for storage.

N/A

2.11.2 Is further characterization needed about the waste prior to acceptance for treatment?

☐ Yes ☒ No ☐ Unknown at this time

Milestone Number	Due Date
N/A	N/A

If yes or unknown, comment on characterization for treatment.

N/A

2.11.3 Is further characterization needed about the waste prior to acceptance for disposal?

☐ Yes ☒ No ☐ Unknown at this time

LDR REPORT WASTE LOCATION-SPECIFIC DATA SHEET

Milestone Number	Due Date
N/A	N/A

If yes or unknown, comment on characterization for disposal.

N/A

2.12 Other key assumptions related to storage, inventory, and generation information:

Future burial ground remediation has the potential to generate large volumes of contaminated soil and debris, but the actual volumes cannot be predicted until site remediation is performed.

3.0 WASTE MINIMIZATION

3.1 Has a waste minimization assessment been completed for this stream?

☐ Yes ☒ No

If yes, provide date assessment conducted: N/A

If yes, provide document number or other identification:

N/A

If no, provide date assessment will be completed, or if waste stream is no longer generated, then indicate N/A:

Waste minimization assessments are identified by the generating facility

3.2 Provide details of current and proposed methods for minimizing the generation of this stream (e.g., process changes to reduce or eliminate LDR waste, methods to reduce volume through segregation and avoidance of commingling, substitution of less-toxic materials):

3.3 Waste minimization schedule

3.3.1 Reduction achieved during calendar year 2009 (volume or mass)

0.000 m3

3.3.2 Projected future waste volume reductions

Year	m^3	and/or	kg
2010	0.00		0.00
2011	0.00		0.00
2012	0.00		0.00
2013	0.00		0.00
2014	0.00		0.00
Total	0.00		0.00

3.3.3 Bases and assumptions used in above estimates:

None.

LDR REPORT WASTE LOCATION-SPECIFIC DATA SHEET

1.0 WASTE STREAM IDENTIFICATION AND SOURCE

1.1 Unit/Plant name: PFP **Waste Stream:** D&D Hazardous Debris to ERDF

Treatabilitiy Group Name: ERDF -- Treatment

1.2 Applicable profile number(s) for this waste stream:

To Be Determined

1.3 Waste stream source information

1.3.1 General description of the waste (e.g., spill clean-up waste, discarded lab materials, maintenance waste):

Operations and D&D waste. Other debris.

1.3.2 History of how and where the waste was/is generated:

Waste generated from D&D activities.

1.3.3 Source of the regulated constituents:

Materials/debris contaminated with hazardous constituents from construction and D&D activities.

1.3.4 Source of the information (e.g., analytical data, process knowledge, document number, etc.)

Analytical data, process knowledge

1.3.5 Additional notes:

None.

2.0 WASTE STREAM STORAGE, INVENTORY, AND GENERATION INFORMATION

(NOTE: For waste in satellite accumulation areas and 90-day accumulation areas, skip to Section 2.6.)

2.1 Current storage method

☐ Container (pad) ☐ Container (covered) ☐ Container (retrievably buried)

☐ Tank ☐ DST ☐ SST

☐ Other (explain):

2.1.1 How was the waste managed prior to storage?

N/A

2.1.2 Timeframe when waste was placed to storage?

N/A

2.2 Storage inventory locations:

Building/Room Number	Number of Containers/Tanks
N/A	N/A

LDR REPORT WASTE LOCATION-SPECIFIC DATA SHEET

2.3 Current stored inventory for this stream.

Total volume (cubic meters): 0.000

Date of inventory values: 12/31/2009

Comments on waste inventory:

Waste is placed directly into CERCLA storage area upon generation.

2.4 Is storage capacity at this location potentially an issue for this waste stream?

☐ Yes ☒ No

If yes, what is the total estimated storage capacity? N/A

When is this capacity expected to be reached? N/A

Bases and assumptions used:

None.

2.5 Planned storage areas for this waste:

☐ Current Location ☐ CWC ☐ DST

☐ Other Area(s) (list):

☒ None

2.6 Estimated generation projection by calendar year (includes waste in satellite and 90-day accumulation areas):

Year	m^3	and/or	kg
2010	400.000		0.000
2011	400.000		0.000
2012	400.000		0.000
2013	50.000		0.000
2014	0.000		0.000
Total	1,250.000		0.000

2.7 DOE Storage Compliance Assessment information:

☒ Assessment has been completed.

Document Number	Date
PFP Env. Compliance Assess.; Ltr. #01-A&E-129	09/13/2001

☐ Assessment has been scheduled. Scheduled date:

☐ Other. Explain:

LDR REPORT WASTE LOCATION-SPECIFIC DATA SHEET

2.8 Applicable Tri-Party Agreement milestones related to storage at this location:

Milestone Number	Due Date
N/A	

2.9 Has there ever been any non-permitted, unauthorized release of this waste stream from this storage unit to the environment?

☐ Yes ☒ No

If yes, summarize releases and quantities and provide date:

N/A

2.10 Are there any plans to submit requests for variances or other exemptions related to storage?

☐ Yes ☒ No

If yes, explain: N/A

2.11 Characterization

2.11.1 Is further characterization needed about the waste prior to acceptance for storage?

☐ Yes ☒ No ☐ Unknown at this time

Milestone Number	Due Date
N/A	N/A

If yes or unknown, comment on characterization for storage.

2.11.2 Is further characterization needed about the waste prior to acceptance for treatment?

☐ Yes ☒ No ☐ Unknown at this time

Milestone Number	Due Date
N/A	N/A

If yes or unknown, comment on characterization for treatment.

N/A

2.11.3 Is further characterization needed about the waste prior to acceptance for disposal?

☒ Yes ☐ No ☐ Unknown at this time

Milestone Number	Due Date
N/A	N/A

If yes or unknown, comment on characterization for disposal.

Radiological characterization required prior to disposal.

LDR REPORT WASTE LOCATION-SPECIFIC DATA SHEET

2.12 Other key assumptions related to storage, inventory, and generation information:

None.

3.0 WASTE MINIMIZATION

3.1 Has a waste minimization assessment been completed for this stream?

☒ Yes ☐ No

If yes, provide date assessment conducted: CY 2001

If yes, provide document number or other identification:

PFP 2001 Waste Minimization Evaluation for LDR Report Waste Streams, Letter# M2100-02-016

If no, provide date assessment will be completed, or if waste stream is no longer generated, then indicate N/A:

3.2 Provide details of current and proposed methods for minimizing the generation of this stream (e.g., process changes to reduce or eliminate LDR waste, methods to reduce volume through segregation and avoidance of commingling, substitution of less-toxic materials):

PFP has a waste minimization program. A hierarchical approach to environmental management is applied to all types of pollution and waste generating activities. Pollution prevention and waste minimization, through source reduction, is the preferred option, followed by environmentally safe recycling. Treatment to reduce the quantity, toxicity, and/or mobility will be considered only when prevention or recycling is not possible or practical. Environmentally safe disposal is the last option. Segregation is applicable in all of these activities.

3.3 Waste minimization schedule

3.3.1 Reduction achieved during calendar year 2009 (volume or mass)

0.000 m3

3.3.2 Projected future waste volume reductions

Year	m^3	and/or	kg
2010	0.00		0.00
2011	0.00		0.00
2012	0.00		0.00
2013	0.00		0.00
2014	0.00		0.00
Total	0.00		0.00

3.3.3 Bases and assumptions used in above estimates:

LDR REPORT WASTE LOCATION-SPECIFIC DATA SHEET

1.0 WASTE STREAM IDENTIFICATION AND SOURCE

1.1 Unit/Plant name: WSCF **Waste Stream:** Laboratory E-Waste

Treatabilitiy Group Name: ERDF -- Treatment

1.2 Applicable profile number(s) for this waste stream:

WSCF002 / ERDF

1.3 Waste stream source information

1.3.1 General description of the waste (e.g., spill clean-up waste, discarded lab materials, maintenance waste):

This waste stream is generated from used laboratory equipment and tools with electronic circuit boards/soldered components that cannot be free-released from the radiological area where they were in use. Electronic waste carries a D008 with two exceptions; B&W Cathode Ray Tube Computer Moitors & Comptuer Processing Units (CPU).

1.3.2 History of how and where the waste was/is generated:

The waste is generated as a result of replacement and upgrades to existing equipment

1.3.3 Source of the regulated constituents:

The hazardous constituents are derived from lead based solder connections/cirucit boards

1.3.4 Source of the information (e.g., analytical data, process knowledge, document number, etc.)

Information to characterize this waste stream is obtained from process knowledge and analytical data & FLUOR Memorandum F9000-EP-06-0, "Waste Designation of Electronic Waste (E-Waste)

1.3.5 Additional notes:

WSCF waste is managed in a SAA or a 90-day accumulation area. WSCF has no TSD unit.

2.0 WASTE STREAM STORAGE, INVENTORY, AND GENERATION INFORMATION

(NOTE: For waste in satellite accumulation areas and 90-day accumulation areas, skip to Section 2.6.)

2.1 Current storage method

- ☐ Container (pad)
- ☐ Container (covered)
- ☐ Container (retrievably buried)
- ☐ Tank
- ☐ DST
- ☐ SST
- ☐ Other (explain): N/A

2.1.1 How was the waste managed prior to storage?

WSCF waste is managed in a SAA or 90-day accumulation area. WSCF has no TSD unit.

2.1.2 Timeframe when waste was placed to storage?

N/A

LDR REPORT WASTE LOCATION-SPECIFIC DATA SHEET

2.2 Storage inventory locations:

Building/Room Number	Number of Containers/Tanks
N/A	N/A

2.3 Current stored inventory for this stream.

Total volume (cubic meters): 0.000

Date of inventory values: 12/31/2009

Comments on waste inventory:

See section 2.1.1 of this data sheet.

2.4 Is storage capacity at this location potentially an issue for this waste stream?

☐ Yes ☒ No

If yes, what is the total estimated storage capacity? N/A

When is this capacity expected to be reached? N/A

Bases and assumptions used:

N/A; WSCF does not store waste, as it has no TSD.

2.5 Planned storage areas for this waste:

☐ Current Location ☐ CWC ☐ DST

☐ Other Area(s) (list):

☐ None

2.6 Estimated generation projection by calendar year (includes waste in satellite and 90-day accumulation areas):

Year	m^3	and/or	kg
2010	1.000		0.000
2011	1.000		0.000
2012	1.000		0.000
2013	1.000		0.000
2014	1.000		0.000
Total	5.000		0.000

2.7 DOE Storage Compliance Assessment information:

☐ Assessment has been completed.

Document Number	Date

☐ Assessment has been scheduled. Scheduled date:

☒ Other. Explain: Storage assessment not required.

LDR REPORT WASTE LOCATION-SPECIFIC DATA SHEET

2.8 Applicable Tri-Party Agreement milestones related to storage at this location:

Milestone Number	Due Date
N/A	

2.9 Has there ever been any non-permitted, unauthorized release of this waste stream from this storage unit to the environment?

☐ Yes ☒ No

If yes, summarize releases and quantities and provide date:

N/A

2.10 Are there any plans to submit requests for variances or other exemptions related to storage?

☐ Yes ☒ No

If yes, explain: N/A

2.11 Characterization

2.11.1 Is further characterization needed about the waste prior to acceptance for storage?

☐ Yes ☒ No ☐ Unknown at this time

Milestone Number	Due Date
N/A	N/A

If yes or unknown, comment on characterization for storage.

Characterization is performed as necessary to meet LERF/ETF waste acceptance criteria. A commitment is not necessary to complete characterization because a cradle-to-grave process is being implemented.

2.11.2 Is further characterization needed about the waste prior to acceptance for treatment?

☐ Yes ☒ No ☐ Unknown at this time

Milestone Number	Due Date
N/A	N/A

If yes or unknown, comment on characterization for treatment.

N/A

2.11.3 Is further characterization needed about the waste prior to acceptance for disposal?

☒ Yes ☐ No ☐ Unknown at this time

Milestone Number	Due Date
N/A	N/A

If yes or unknown, comment on characterization for disposal.

ERDF performs stabilization to the burial boxes filled with this waste stream to meet all LDR requirements prior to disposal.

LDR REPORT WASTE LOCATION-SPECIFIC DATA SHEET

2.12 Other key assumptions related to storage, inventory, and generation information:

None.

3.0 WASTE MINIMIZATION

3.1 Has a waste minimization assessment been completed for this stream?

☐ Yes ☒ No

If yes, provide date assessment conducted: N/A

If yes, provide document number or other identification:

N/A

If no, provide date assessment will be completed, or if waste stream is no longer generated, then indicate N/A:

N/A

3.2 Provide details of current and proposed methods for minimizing the generation of this stream (e.g., process changes to reduce or eliminate LDR waste, methods to reduce volume through segregation and avoidance of commingling, substitution of less-toxic materials):

This Laboratory E-Waste Stream results form equipment coming out of Radiation Control Zones. There is no current approved method for decomtaination and free release of said equipment.

3.3 Waste minimization schedule

3.3.1 Reduction achieved during calendar year 2009 (volume or mass)

0.000 m3

3.3.2 Projected future waste volume reductions

Year	m^3	and/or	kg
2010	0.00		0.00
2011	0.00		0.00
2012	0.00		0.00
2013	0.00		0.00
2014	0.00		0.00
Total	0.00		0.00

3.3.3 Bases and assumptions used in above estimates:

Lab equipment present in this waste stream cannot be reduced in volume as it is replaced or generated due to failure of equipment over time or upgrades.

HSTF

LDR REPORT TREATABILITY GROUP DATA SHEET

1.0 WASTE STREAM IDENTIFICATION

1.1 Treatability Group Name: HSTF

1.2 Description of waste (list WSRd numbers for this waste stream, as applicable)

Residual heel content remaining from Reduction/Oxidation (REDOX) Process.

2.0 WASTE INVENTORY AND GENERATION

2.1 Current total inventory for this waste stream (stored waste only, not accumulation areas). [Equals sum of location-specific data sheets for this treatability group.]

Total volume (cubic meters): 2.100

2.2 Estimated generation projection by calendar year: [equals annual sums of location-specfic data sheets for this treatability group].

Year	m^3	and/or	kg
2010	0.000		0.000
2011	0.000		0.000
2012	0.000		0.000
2013	0.000		0.000
2014	0.000		0.000
Total	0.000		0.000

3.0 WASTE STREAM CHARACTERIZATION

3.1 Radiological Characteristics

3.1.1 Mixed waste type: ☐ High-level ☐ Transuranic ☒ Low-level

3.1.2 Handling (as package contents would need to be handled during treatment):

☒ Contact-handled ☐ Remote-handled

3.1.3 Comments on radiological characteristics (e.g., more specific information on content, treatment concerns caused by radiation, confidence level):

None.

3.2 Physical Form

3.2.1 Physical form of the waste:

☐ Solid ☐ Liquid ☐ Semi-solid ☐ Debris

☒ Other (Describe in comments.)

3.2.2 Comments on physical form:

Samples were taken from the tanks containing the process waste. The waste consists of about 12.7 centimeters (5 inches) of a tar-like substance. A sand/cement mixture was placed on top of the waste to stabilize and fill the tanks.

LDR REPORT TREATABILITY GROUP DATA SHEET

3.3 Regulated constituents and wastewater/non-wastewater category

3.3.1 Wastewater/non-wastewater under RCRA

☐ Wastewater ☒ Non-wastewater ☐ Unknown

3.3.2 Regulated constituents table including treatment requirements and UHCs, if applicable.

EPA/ State Number	Waste Description	LDR Sub-Category*	Concentration (Typical or Range)**	Basis	LDR Treatment Concentration Standard or Technology Code
D001	Ignitable	High TOC Ignitable char liquids		process knowledge	RORGS; CMBS; or POLYM
D018	benzene	N/A	3.55	TCLP	10 mg/kg, meet 268.48
D019	carbon tetrachloride	N/A	2.08	TCLP	6.0 mg/kg, meet 268.48
D023	o-Cresol	N/A	89000	TCLP	5.6 mg/kg, meet 268.48
D024	m-Cresol	N/A	180000	TCLP	5.6 mg/kg, meet 268.48
D025	p-Cresol	N/A	180000	TCLP	5.6 mg/kg, meet 268.48
D027	p-Dichlorobenzene	N/A	89000	TCLP	6.0 mg/kg, meet 268.48
D028	1,2-Dichloroethane	N/A	2.85	TCLP	6.0 mg/kg, meet 268.48
D029	1,1-Dichlorotheylene	N/A	3.38	TCLP	6.0 mg/kg, meet 268.48
D030	2,4-Dinitrotoluene	N/A	89000	TCLP	140 mg/kg, meet 268.48
D032	Hexachlorobenzene	N/A	89000	TCLP	10 mg/kg, meet 268.48
D033	Hexachlorobutadine	N/A	89000	TCLP	5.6 mg/kg, meet 268.48
D034	Hexachloroethane	N/A	89000	TCLP	30 mg/kg, meet 268.48
D036	Nitrobenzene	N/A	89000	TCLP	14 mg/kg, meet 268.48
D037	Pentachlorophenol	N/A	180000	TCLP	7.4 mg/kg, meet 268.48
D039	Tetrachlorethylene	N/A	1	TCLP	6.0 mg/kg, meet 268.48
D040	Trichloroethylene	N/A	3.17	TCLP	6.0 mg/kg, meet 268.48
D041	2,4,5-Trichlorophenol	N/A	89000	TCLP	7.4 mg/kg, meet 268.48
D042	2,4,6-Trichlorophenol	N/A	89000	TCLP	7.4 mg/kg, meet 268.48

LDR REPORT TREATABILITY GROUP DATA SHEET

EPA/ State Number	Waste Description	LDR Sub-Category*	Concentration (Typical or Range)**	Basis	LDR Treatment Concentration Standard or Technology Code
D043	Vinyl Chloride	N/A	2.65	TCLP	6.0 mg/kg, meet 268.48
F003	Methyl isobutyl ketone	Spent Solvent	28000	lab data	33 mg/kg
UHC	1,1,2,2-tetrachloroethan e	N/A	54.5	analytical data	6 mg/kg
UHC	1,1,2-trichloroethane	N/A	82.5	analytical data	6 mg/kg
UHC	1,2,4-Trichlorobenzene	N/A	89000	analytical data	19 mg/kg
UHC	1,2-Dichlorobenzene	N/A	89000	analytical data	6 mg/kg
UHC	1,3-Dichlorobenzene	N/A	89000	analytical data	6 mg/kg
UHC	2,4-Dichlorophenol	N/A	89000	analytical data	14 mg/kg
UHC	2,4-Dimethylphenol	N/A	89000	analytical data	14 mg/kg
UHC	2,4-Dinitrophenol	N/A	89000	analytical data	160 mg/kg
UHC	2,6-Dinitortoluene	N/A	89000	analytical data	28 mg/kg
UHC	2-Chloronaphthalene	N/A	89000	analytical data	5.6 mg/kg
UHC	2-Chlorophenol	N/A	89000	analytical data	5.7 mg/kg
UHC	2-Nitroaniline	N/A	89000	analytical data	14 mg/kg
UHC	2-Nitrophenol	N/A	89000	analytical data	13 mg/kg
UHC	4,6-Dinitro-2-cresol	N/A	180000	analytical data	160 mg/kg
UHC	4-Bromophenyl phenylether	N/A	89000	analytical data	15 mg/kg
UHC	4-Chloro-3-methylphen ol	N/A	89000	analytical data	14 mg/kg
UHC	4-Chloroaniline	N/A	89000	analytical data	16 mg/kg
UHC	4-Nitroaniline	N/A	89000	analytical data	28 mg/kg
UHC	4-Nitrophenol	N/A	89000	analytical data	29 mg/kg
UHC	Acenapthene	N/A	89000	analytical data	3.4 mg/kg
UHC	Acenapthylene	N/A	89000	analytical data	3.4 mg/kg
UHC	Anthracene	N/A	89000	analytical data	3.4 mg/kg

LDR REPORT TREATABILITY GROUP DATA SHEET

EPA/ State Number	Waste Description	LDR Sub-Category*	Concentration (Typical or Range)**	Basis	LDR Treatment Concentration Standard or Technology Code
UHC	Benzo(a)anthracene	N/A	89000	analytical data	3.4 mg/kg
UHC	Benzo(a)pyrene	N/A	89000	analytical data	3.4 mg/kg
UHC	Benzo(b)fluoranthene	N/A	89000	analytical data	6.8 mg/kg
UHC	Benzo(g,h,i)perylene	N/A	89000	analytical data	1.8 mg/kg
UHC	Benzo(k)fluoranthene	N/A	89000	analytical data	6.8 mg/kg
UHC	bis(2-chloroethoxy)methane	N/A	89000	analytical data	7.2 mg/kg
UHC	bis(2-chloroethyl)ether	N/A	89000	analytical data	6 mg/kg
UHC	bis(2-ethylexyl)phthalate	N/A	89000	analytical data	28 mg/kg
UHC	Butylbenzylphthalate	N/A	89000	analytical data	28 mg/kg
UHC	Chrysene	N/A	89000	analytical data	3.4 mg/kg
UHC	Di-n-butylphthalate	N/A	89000	analytical data	28 mg/kg
UHC	Di-n-octylphthalate	N/A	89000	analytical data	28 mg/kg
UHC	Dibenzo(a,h)anthracene	N/A	89000	analytical data	8.2 mg/kg
UHC	Diethylphthalate	N/A	89000	analytical data	28 mg/kg
UHC	Dimethylphthalate	N/A	89000	analytical data	28 mg/kg
UHC	Fluoranthene	N/A	89000	analytical data	3.4 mg/kg
UHC	Fluorene	N/A	89000	analytical data	3.4 mg/kg
UHC	Hexachlorocyclopentadiene	N/A	180000	analytical data	2.4 mg/kg
UHC	Indeno(1,2,3,-c,d)pyrene	N/A	89000	analytical data	3.4 mg/kg
UHC	Lead	N/A	0.995	analytical data	0.75 mg/kg
UHC	Napthalene	N/A	89000	analytical data	5 mg/kg
UHC	PCB	N/A	12.19	analytical data	10 mg/kg
UHC	Phenanthrene	N/A	89000	analytical data	5.6 mg/kg

LDR REPORT TREATABILITY GROUP DATA SHEET

EPA/ State Number	Waste Description	LDR Sub-Category*	Concentration (Typical or Range)**	Basis	LDR Treatment Concentration Standard or Technology Code
UHC	Phenol	N/A	89000	analytical data	6.2 mg/kg
UHC	Pyrene	N/A	89000	analytical data	8.2 mg/kg

* LDR Subcategory marked N/A if no existing subcategory adequately describes this waste, or if there are no defined subcategories for the waste number (40 CFR 268.40).

** If waste is not consistent in concentration, this may not apply. Described in Section 3.3.6.

*** All concentrations are in parts per million.

3.3.3 List any waste numbers from Section 3.3.2 for which the waste stream already meets established LDR treatment standards.

☒ List: benzene; carbon tetrachloride; 1,2-Dichloroethane; 1,1-Dichloroethylene; Tetrachloroethylene; Trichloroethylene; Vinyl Chloride

☐ No LDR treatment required (e.g. TRUM waste destined for WIPP, exclusion, etc.)

☐ None (i.e. all constituents/waste numbers of this waste stream still require treatment).

3.3.4 Does this waste stream contain PCBs?

☒ Yes ☐ No ☐ Unknown

If no or unknown, skip to Section 3.3.5.

3.3.4.1 Is waste stream subject to TSCA regulations for PCBs?

☐ Yes ☒ No ☐ Unknown

3.3.4.2 Indicate the PCB concentration range.

☒ < 50 ppm ☐ ≥ 50 ppm ☐ Unknown

3.3.5 What is the confidence level for the regulated constituents?

☐ Low ☐ Medium ☒ High

3.3.6 Comments on regulated constituents and wastewater/non-wastewater category:

Tank waste was sampled in support of the interim stabilization effort.

4.0 WASTE STREAM TREATMENT

4.1 Is this waste stream currently being treated?

☐ Yes ☒ No

If yes, provide details: N/A

LDR REPORT TREATABILITY GROUP DATA SHEET

4.2 Planned treatment: Check the appropriate box indicating future plans for treating this waste stream to meet applicable regulations, including LDR treatment standards.

- ☐ No treatment required (skip to Section 5.0)
- ☐ Treating or plan to treat on site
- ☐ Treating or plan to treat off site
- ☒ Treatment options still being assessed

4.3 Planned treatment method, facility, extent of treatment capacity available:

Waste has been interim stabilized.

4.4 Treatment schedule information:

Interim stabilization was completed in FY 2002. Waste will be dispositioned with the TSD unit closure.

4.5 Applicable Tri-Party Agreement treatment milestone numbers (including permitting):

Milestone Number	Due Date
N/A	N/A

4.6 Proposed new Tri-Party Agreement treatment milestones:

N/A

4.7 If treating or planning to treat on site, was or will waste minimization be addressed in developing and/or selecting the treatment method?

☐ Yes ☐ No ☒ Unknown

If yes, describe: N/A

4.8 List or describe treatability equivalency petitions, rulemaking petitions, and case-by-case exemptions needed for treatment or already in place.

None.

4.9 Key Assumptions:

TSD closure will be corrdinated with the OU remediation in accordance with M-15 milestones for 200-IS-1 Operable Unit.

5.0 WASTE STREAM DISPOSAL

After treatment, how will the waste stream be disposed of (include locations, milestone numbers, variances required, etc. as applicable):

Closure of this TSD will be coordinated with the 200-IS-1 Operable Unit remediation.

LDR REPORT WASTE LOCATION-SPECIFIC DATA SHEET

1.0 WASTE STREAM IDENTIFICATION AND SOURCE

1.1 Unit/Plant name: HSTF **Waste Stream:** HSTF 276-S-141/142

Treatabilitiy Group Name: HSTF

1.2 Applicable profile number(s) for this waste stream:

909, 647.

1.3 Waste stream source information

1.3.1 General description of the waste (e.g., spill clean-up waste, discarded lab materials, maintenance waste):

Tank and heel content.

1.3.2 History of how and where the waste was/is generated:

The HSTF received liquid mixed waste from the Reduction/Oxidation (REDOX) Plant and possibly the Hot Semiworks Plant at shutdown of 202-S in 1967. In 1991 and 1992, the liquids were pumped from the tanks, distilled to reduce the volume, and transferred. The heels were all that remained in the tanks until the cement mixture was added to fill and stabalize the tanks.

1.3.3 Source of the regulated constituents:

The tanks were used to receive and store reagent-grade hexone used in the REDOX process. When the REDOX Plant was deactivated in 1967, the final cycle-recovered hexone from the plant was placed in the hexone storage tanks for storage. Tank 276-S-142 also contained kerosene and TBP from a one-time campaign to separate americium, curium, and promethium from Shippingport reactor blanket fuel in 1966. In 2002, the tank heel waste was stabilized in the interim by adding a cement material to the tanks according to Ecology approval.

1.3.4 Source of the information (e.g., analytical data, process knowledge, document number, etc.)

Process knowledge and sampling data.

1.3.5 Additional notes:

Further information about the history of the TSD unit can be found in the Part A, Form 3, permit application.

2.0 WASTE STREAM STORAGE, INVENTORY, AND GENERATION INFORMATION

(NOTE: For waste in satellite accumulation areas and 90-day accumulation areas, skip to Section 2.6.)

2.1 Current storage method

- ☐ Container (pad)
- ☐ Container (covered)
- ☐ Container (retrievably buried)
- ☒ Tank
- ☐ DST
- ☐ SST
- ☐ Other (explain):

2.1.1 How was the waste managed prior to storage?

Waste was stored in the tanks after being used in the REDOX Plant.

LDR REPORT WASTE LOCATION-SPECIFIC DATA SHEET

2.1.2 Timeframe when waste was placed to storage?

Waste in the tanks was distilled in 1990-1992. The residual heel is a tar-like material and has been stored in the tanks since the distillation process was completed in 1992.

2.2 Storage inventory locations:

Building/Room Number	Number of Containers/Tanks
276-S-141	1 Tank
276-S-142	1 Tank

2.3 Current stored inventory for this stream.

Total volume (cubic meters): 2.100

Date of inventory values: 01/27/2010

Comments on waste inventory:

Waste is no longer generated. Volume is based on the quanitity of waste identified on the Part A, Form 3, Permit Application without the volume of the cement-like layer.

2.4 Is storage capacity at this location potentially an issue for this waste stream?

☐ Yes ☒ No

If yes, what is the total estimated storage capacity? N/A

When is this capacity expected to be reached? N/A

Bases and assumptions used:

N/A

2.5 Planned storage areas for this waste:

☒ Current Location ☐ CWC ☐ DST

☐ Other Area(s) (list):

☐ None

2.6 Estimated generation projection by calendar year (includes waste in satellite and 90-day accumulation areas):

Year	m^3	and/or	kg
2010	0.000		0.000
2011	0.000		0.000
2012	0.000		0.000
2013	0.000		0.000
2014	0.000		0.000
Total	0.000		0.000

LDR REPORT WASTE LOCATION-SPECIFIC DATA SHEET

2.7 DOE Storage Compliance Assessment information:

☐ Assessment has been completed.

Document Number	Date

☐ Assessment has been scheduled. Scheduled date:

☒ Other. Explain: Storage assessment not required.

2.8 Applicable Tri-Party Agreement milestones related to storage at this location:

Milestone Number	Due Date
N/A	

2.9 Has there ever been any non-permitted, unauthorized release of this waste stream from this storage unit to the environment?

☐ Yes ☒ No

If yes, summarize releases and quantities and provide date:

N/A

2.10 Are there any plans to submit requests for variances or other exemptions related to storage?

☐ Yes ☒ No

If yes, explain: N/A

2.11 Characterization

2.11.1 Is further characterization needed about the waste prior to acceptance for storage?

☐ Yes ☒ No ☐ Unknown at this time

Milestone Number	Due Date
N/A	N/A

If yes or unknown, comment on characterization for storage.

N/A

2.11.2 Is further characterization needed about the waste prior to acceptance for treatment?

☐ Yes ☐ No ☒ Unknown at this time

Milestone Number	Due Date
N/A	N/A

If yes or unknown, comment on characterization for treatment.

Treatment will be determined as part of remediation of the 200-IS-1 operable unit.

LDR REPORT WASTE LOCATION-SPECIFIC DATA SHEET

2.11.3 Is further characterization needed about the waste prior to acceptance for disposal?

☒ Yes ☐ No ☐ Unknown at this time

Milestone Number	Due Date
N/A	N/A

If yes or unknown, comment on characterization for disposal.

To meet concentration based treatment standards applicable for the residues, sampling will be required after treatment.

2.12 Other key assumptions related to storage, inventory, and generation information:

Tank waste was interim stabilized in place in accordance with Ecology approval. TSD closure will be coordinated with M-015 milestone for remediation of the 200-IS-1 Operable Unit.

3.0 WASTE MINIMIZATION

3.1 Has a waste minimization assessment been completed for this stream?

☐ Yes ☒ No

If yes, provide date assessment conducted: N/A

If yes, provide document number or other identification:

N/A

If no, provide date assessment will be completed, or if waste stream is no longer generated, then indicate N/A:

N/A. Waste stream is no longer generated.

3.2 Provide details of current and proposed methods for minimizing the generation of this stream (e.g., process changes to reduce or eliminate LDR waste, methods to reduce volume through segregation and avoidance of commingling, substitution of less-toxic materials):

None.

3.3 Waste minimization schedule

3.3.1 Reduction achieved during calendar year 2009 (volume or mass)

0.000 m3

3.3.2 Projected future waste volume reductions

Year	m^3	and/or	kg
2010	0.00		0.00
2011	0.00		0.00
2012	0.00		0.00
2013	0.00		0.00
2014	0.00		0.00
Total	0.00		0.00

LDR REPORT WASTE LOCATION-SPECIFIC DATA SHEET

3.3.3 Bases and assumptions used in above estimates:

The tanks are inactive. No waste is being generated.

This page intentionally left blank.

LERF/ETF Liquid Waste

LDR REPORT TREATABILITY GROUP DATA SHEET

1.0 WASTE STREAM IDENTIFICATION

1.1 Treatability Group Name: LERF/ETF Liquid Waste

1.2 Description of waste (list WSRd numbers for this waste stream, as applicable)

CERCLA and RCRA wastewaters are sent to the LERF/ETF for treatment and disposal.

2.0 WASTE INVENTORY AND GENERATION

2.1 Current total inventory for this waste stream (stored waste only, not accumulation areas). [Equals sum of location-specific data sheets for this treatability group.]

Total volume (cubic meters): 64,226.225

2.2 Estimated generation projection by calendar year: [equals annual sums of location-specfic data sheets for this treatability group].

Year	m^3	and/or	kg
2010	16,317.300		0.000
2011	15,491.400		0.000
2012	15,491.400		0.000
2013	15,491.400		0.000
2014	3,491.400		0.000
Total	66,282.900		0.000

3.0 WASTE STREAM CHARACTERIZATION

3.1 Radiological Characteristics

3.1.1 Mixed waste type: ☐ High-level ☐ Transuranic ☒ Low-level

3.1.2 Handling (as package contents would need to be handled during treatment):

☒ Contact-handled ☐ Remote-handled

3.1.3 Comments on radiological characteristics (e.g., more specific information on content, treatment concerns caused by radiation, confidence level):

None.

3.2 Physical Form

3.2.1 Physical form of the waste:

☐ Solid ☒ Liquid ☐ Semi-solid ☐ Debris

☐ Other (Describe in comments.)

3.2.2 Comments on physical form:

N/A

LDR REPORT TREATABILITY GROUP DATA SHEET

3.3 Regulated constituents and wastewater/non-wastewater category

3.3.1 Wastewater/non-wastewater under RCRA

☒ Wastewater ☐ Non-wastewater ☐ Unknown

3.3.2 Regulated constituents table including treatment requirements and UHCs, if applicable.

EPA/ State Number	Waste Description	LDR Sub-Category*	Concentration (Typical or Range)**	Basis	LDR Treatment Concentration Standard or Technology Code
D004	Arsenic	N/A	> 5.0 mg/L	knowledge/ analysis	1.4 mg/L (1)
D008	Lead	lead	> 5.0 mg/L	knowledge/ analysis	0.69 mg/L (1)
D009	Mercury	D009 wastewaters	>0.2 mg/L	knowledge/ analysis	0.15 mg/L (1)
D019	carbontetrachloride	N/A	>0.5 mg/L	knowledge/ analysis	0.057 mg/L (1)
F001	1,1,1-trichloroethane, carbon tetrachloride	F001-F005	***	knowledge/ analysis	multiple
F002	methylene chloride	F001-F005	***	knowledge/ analysis	0.089 mg/L
F003	acetone, methyl isobutyl ketone	F001-F005	***	knowledge/ analysis	multiple
F004	cresols	F001-F005	***	knowledge/ analysis	0.11 mg/L
F005	methyl ethyl ketone	F001-F005	***	knowledge/ analysis	0.28 mg/L
F039	multi-source leachate	N/A	***	knowledge/ analysis	multiple
WT01	Toxic EHW	N/A	***	knowledge/ analysis	none(2)
WT02	Toxic DW	N/A	***	knowledge/ analysis	none

* LDR Subcategory marked N/A if no existing subcategory adequately describes this waste, or if there are no defined subcategories for the waste number (40 CFR 268.40).

** If waste is not consistent in concentration, this may not apply. Described in Section 3.3.6.

*** The concentration varies.
1) UHC's determinations do not apply based on LERF/ETF Waste Analysis Plan.
(2) Mixed extremely hazardous wastes can be land disposed in Washington State in DOE facilities in accordance with RCW 70.105.050(2). The LERF/ETF receives many different liquid waste types from many different generators. The generators are required to thoroughly characterize the waste per the ETF/LERF waste analysis plan. Information on actual constituent concentrations and ranges can be found in the regulatory file for each of the generator wastes located at the ETF.

3.3.3 List any waste numbers from Section 3.3.2 for which the waste stream already meets established LDR treatment standards.

☒ List: Some wastewaters meet treatment standards for F001-F005 and F039 on receipt.

LDR REPORT TREATABILITY GROUP DATA SHEET

☐ No LDR treatment required (e.g. TRUM waste destined for WIPP, exclusion, etc.)

☐ None (i.e. all constituents/waste numbers of this waste stream still require treatment).

3.3.4 Does this waste stream contain PCBs?

☒ Yes ☐ No ☐ Unknown

If no or unknown, skip to Section 3.3.5.

3.3.4.1 Is waste stream subject to TSCA regulations for PCBs?

☒ Yes ☐ No ☐ Unknown

3.3.4.2 Indicate the PCB concentration range.

☒ < 50 ppm ☐ ≥ 50 ppm ☐ Unknown

3.3.5 What is the confidence level for the regulated constituents?

☐ Low ☐ Medium ☒ High

3.3.6 Comments on regulated constituents and wastewater/non-wastewater category:

None.

4.0 WASTE STREAM TREATMENT

4.1 Is this waste stream currently being treated?

☒ Yes ☐ No

If yes, provide details: The 200 Area ETF is a final status RCRA TSD unit and treats RCRA and CERCLA aqueous wastewaters generated from various locations on the Hanford Site. The contaminants are destroyed or removed from the wastewaters and dried to a powder.

4.2 Planned treatment: Check the appropriate box indicating future plans for treating this waste stream to meet applicable regulations, including LDR treatment standards.

☐ No treatment required (skip to Section 5.0)

☒ Treating or plan to treat on site

☐ Treating or plan to treat off site

☐ Treatment options still being assessed

4.3 Planned treatment method, facility, extent of treatment capacity available:

The ETF has pH adjustment, ultraviolet/oxidation, filtration, reverse osmosis, degasification, and ion exchange unit operations to remove the contaminants from the wastewaters.

4.4 Treatment schedule information:

Continuous based on LERF campaigns.

LDR REPORT TREATABILITY GROUP DATA SHEET

4.5 Applicable Tri-Party Agreement treatment milestone numbers (including permitting):

Milestone Number	Due Date
N/A	N/A

4.6 Proposed new Tri-Party Agreement treatment milestones:

N/A

4.7 If treating or planning to treat on site, was or will waste minimization be addressed in developing and/or selecting the treatment method?

☒ Yes ☐ No ☐ Unknown

If yes, describe: The LERF/ETF does not generate liquid waste. However, the wastewaters are segregated and processed to minimize the generation of waste requiring further treatment.

4.8 List or describe treatability equivalency petitions, rulemaking petitions, and case-by-case exemptions needed for treatment or already in place.

N/A

4.9 Key Assumptions:

None.

5.0 WASTE STREAM DISPOSAL

After treatment, how will the waste stream be disposed of (include locations, milestone numbers, variances required, etc. as applicable):

The delisted wastewater is disposed to a State Approved Land Disposal Site under a WAC 173-216 permit.

LDR REPORT WASTE LOCATION-SPECIFIC DATA SHEET

1.0 WASTE STREAM IDENTIFICATION AND SOURCE

1.1 Unit/Plant name: 200-UP-1 **Waste Stream:** 200-UP-1

Treatabilitiy Group Name: LERF/ETF Liquid Waste

1.2 Applicable profile number(s) for this waste stream:

Profile transmitted to the LERF/ETF via BHI letter dated 1/31/01; CCN #086036.

1.3 Waste stream source information

1.3.1 General description of the waste (e.g., spill clean-up waste, discarded lab materials, maintenance waste):

Groundwater contaminated with uranium, technetium, carbon tetrachloride, and nitrates from the UO3 Plant operations.

1.3.2 History of how and where the waste was/is generated:

It is estimated that 4,000 kg of process waste from the UO3 Plant, consisting primarily of dilute nitric acid containing uranium, technetium-99, and small quantities of fission products, were discharged to the soil via the 261-U-1 and 216-U-2 Cribs. The mobile uranium was transported from the soil into the groundwater when large volumes of cooling water were discharged to the adjacent 216-U-16 Crib in 1984. In 1997, the 200-UP-1 Interim Record of Decision required the contaminated groundwater be extracted and transferred to LERF/ETF for treatment.

1.3.3 Source of the regulated constituents:

Resulted from liquid discharges to the soil from past Hanford Site operations.

1.3.4 Source of the information (e.g., analytical data, process knowledge, document number, etc.)

Analytical data and process knowledge.

1.3.5 Additional notes:

Water is being treated at ETF pursuant to the 200-UP-1 Record of Decision.

2.0 WASTE STREAM STORAGE, INVENTORY, AND GENERATION INFORMATION

(NOTE: For waste in satellite accumulation areas and 90-day accumulation areas, skip to Section 2.6.)

2.1 Current storage method

- ☐ Container (pad)
- ☐ Container (covered)
- ☐ Container (retrievably buried)
- ☐ Tank
- ☐ DST
- ☐ SST
- ☒ Other (explain): Transferred to LERF via underground pipeline.

2.1.1 How was the waste managed prior to storage?

Groundwater is transferred to LERF as it is being extracted.

2.1.2 Timeframe when waste was placed to storage?

N/A

LDR REPORT WASTE LOCATION-SPECIFIC DATA SHEET

2.2 Storage inventory locations:

Building/Room Number	Number of Containers/Tanks
N/A	N/A

2.3 Current stored inventory for this stream.

Total volume (cubic meters): 0.000

Date of inventory values: 12/31/2009

Comments on waste inventory:

Water is transferred to LERF/ETF for treatment.

2.4 Is storage capacity at this location potentially an issue for this waste stream?

☐ Yes ☒ No

If yes, what is the total estimated storage capacity? N/A

When is this capacity expected to be reached? N/A

Bases and assumptions used:

N/A

2.5 Planned storage areas for this waste:

☐ Current Location ☐ CWC ☐ DST

☒ Other Area(s) (list): Groundwater is stored at LERF, treated at ETF, and discharged in accordance with the SALDS operating permit.

☐ None

2.6 Estimated generation projection by calendar year (includes waste in satellite and 90-day accumulation areas):

Year	m^3	and/or	kg
2010	13,000.000		0.000
2011	12,000.000		0.000
2012	12,000.000		0.000
2013	12,000.000		0.000
2014	0.000		0.000
Total	49,000.000		0.000

2.7 DOE Storage Compliance Assessment information:

☐ Assessment has been completed.

Document Number	Date

LDR REPORT WASTE LOCATION-SPECIFIC DATA SHEET

☐ Assessment has been scheduled. Scheduled date:

☒ Other. Explain: Storage assessment not required.

2.8 Applicable Tri-Party Agreement milestones related to storage at this location:

Milestone Number	Due Date
N/A	

2.9 Has there ever been any non-permitted, unauthorized release of this waste stream from this storage unit to the environment?

☐ Yes ☒ No

If yes, summarize releases and quantities and provide date:

N/A

2.10 Are there any plans to submit requests for variances or other exemptions related to storage?

☐ Yes ☒ No

If yes, explain: N/A

2.11 Characterization

2.11.1 Is further characterization needed about the waste prior to acceptance for storage?

☐ Yes ☒ No ☐ Unknown at this time

Milestone Number	Due Date
N/A	N/A

If yes or unknown, comment on characterization for storage.

Waste stream was fully characterized to support development of the 200-UP-1 Record of Decision. Quarterly sampling of groundwater is performed to assess the performance of the remedial action.

2.11.2 Is further characterization needed about the waste prior to acceptance for treatment?

☐ Yes ☒ No ☐ Unknown at this time

Milestone Number	Due Date
N/A	N/A

If yes or unknown, comment on characterization for treatment.

N/A

2.11.3 Is further characterization needed about the waste prior to acceptance for disposal?

☐ Yes ☒ No ☐ Unknown at this time

Milestone Number	Due Date
N/A	N/A

LDR REPORT WASTE LOCATION-SPECIFIC DATA SHEET

If yes or unknown, comment on characterization for disposal.

N/A

2.12 Other key assumptions related to storage, inventory, and generation information:

Forecast assumes no changes to the 200-UP-1 Record of Decision. Groundwater remediation is being performed under the 200-UP-1 Interim Record of Decision.

3.0 WASTE MINIMIZATION

3.1 Has a waste minimization assessment been completed for this stream?

☐ Yes ☒ No

If yes, provide date assessment conducted: N/A

If yes, provide document number or other identification:

N/A

If no, provide date assessment will be completed, or if waste stream is no longer generated, then indicate N/A:

Assessment not warranted. See 3.2 below.

3.2 Provide details of current and proposed methods for minimizing the generation of this stream (e.g., process changes to reduce or eliminate LDR waste, methods to reduce volume through segregation and avoidance of commingling, substitution of less-toxic materials):

None. Generation of this waste stream occurs due to requirements in the 200-UP-1 Record of Decision to remove contaminated groundwater from the aquifer as mandated under the 200-UP-1 Interim Record of Decision.

3.3 Waste minimization schedule

3.3.1 Reduction achieved during calendar year 2009 (volume or mass)

0.000 m3

3.3.2 Projected future waste volume reductions

Year	m^3	and/or	kg
2010	0.00		0.00
2011	0.00		0.00
2012	0.00		0.00
2013	0.00		0.00
2014	0.00		0.00
Total	0.00		0.00

3.3.3 Bases and assumptions used in above estimates:

N/A

LDR REPORT WASTE LOCATION-SPECIFIC DATA SHEET

1.0 WASTE STREAM IDENTIFICATION AND SOURCE

1.1 Unit/Plant name: 242-A Evaporator **Waste Stream:** Evaporator Process Condensate

Treatabilitiy Group Name: LERF/ETF Liquid Waste

1.2 Applicable profile number(s) for this waste stream:

N/A

1.3 Waste stream source information

1.3.1 General description of the waste (e.g., spill clean-up waste, discarded lab materials, maintenance waste):

Process condensate from treatment of DST Waste in 242-A Evaporator.

1.3.2 History of how and where the waste was/is generated:

Waste is generated during evaporator campaigns that begin with waste staging and characterization activities in the tank farms.

1.3.3 Source of the regulated constituents:

DST waste.

1.3.4 Source of the information (e.g., analytical data, process knowledge, document number, etc.)

Analytical data is used to characterize feed to the 242-A Evaporator before it is treated. The RCRA waste analysis plans for 242-A and LERF/ETF govern characterization requirements.

1.3.5 Additional notes:

Most process condensate is sent to LERF/ETF for storage and treatment. Some process condensate is stored in condensate tank C-100 at 242-A between campaigns for use in priming the evaporator treatment system at the beginning of the next campaign (waste minimization effort).

2.0 WASTE STREAM STORAGE, INVENTORY, AND GENERATION INFORMATION

(NOTE: For waste in satellite accumulation areas and 90-day accumulation areas, skip to Section 2.6.)

2.1 Current storage method

- ☐ Container (pad)
- ☐ Container (covered)
- ☐ Container (retrievably buried)
- ☒ Tank
- ☐ DST
- ☐ SST
- ☐ Other (explain):

2.1.1 How was the waste managed prior to storage?

Prior to treatment and storage at the 242-A Evaporator, feed stream waste is stored in the DST System.

2.1.2 Timeframe when waste was placed to storage?

During the 242-A Evaporator 09-01/09-02 campaign between March 20, 2009 and June 23, 2009.

LDR REPORT WASTE LOCATION-SPECIFIC DATA SHEET

2.2 Storage inventory locations:

Building/Room Number	Number of Containers/Tanks
242-A/TK C-100	1
N/A	N/A

2.3 Current stored inventory for this stream.

Total volume (cubic meters): 25.600

Date of inventory values: 12/04/2008

Comments on waste inventory:

This volume was verfied through 242-A Evaporator control room.

2.4 Is storage capacity at this location potentially an issue for this waste stream?

☐ Yes ☒ No

If yes, what is the total estimated storage capacity? N/A

When is this capacity expected to be reached? N/A

Bases and assumptions used:

2.5 Planned storage areas for this waste:

☒ Current Location ☐ CWC ☐ DST

☒ Other Area(s) (list): Adequate storage and treatment capacity is available through LERF/ETF.

☐ None

2.6 Estimated generation projection by calendar year (includes waste in satellite and 90-day accumulation areas):

Year	m^3	and/or	kg
2010	2,475.700		0.000
2011	2,649.800		0.000
2012	2,649.800		0.000
2013	2,649.800		0.000
2014	2,649.800		0.000
Total	13,074.900		0.000

2.7 DOE Storage Compliance Assessment information:

☒ Assessment has been completed.

Document Number	Date
A&E-00-ASS-073	01/17/2001

LDR REPORT WASTE LOCATION-SPECIFIC DATA SHEET

☐ Assessment has been scheduled. Scheduled date:

☐ Other. Explain:

2.8 Applicable Tri-Party Agreement milestones related to storage at this location:

Milestone Number	Due Date
N/A	

2.9 Has there ever been any non-permitted, unauthorized release of this waste stream from this storage unit to the environment?

☐ Yes ☒ No

If yes, summarize releases and quantities and provide date:

N/A

2.10 Are there any plans to submit requests for variances or other exemptions related to storage?

☐ Yes ☒ No

If yes, explain: N/A

2.11 Characterization

2.11.1 Is further characterization needed about the waste prior to acceptance for storage?

☐ Yes ☒ No ☐ Unknown at this time

Milestone Number	Due Date
N/A	N/A

If yes or unknown, comment on characterization for storage.

N/A

2.11.2 Is further characterization needed about the waste prior to acceptance for treatment?

☒ Yes ☐ No ☐ Unknown at this time

Milestone Number	Due Date
N/A	N/A

If yes or unknown, comment on characterization for treatment.

Condensate must meet LERF waste acceptance criteria.

2.11.3 Is further characterization needed about the waste prior to acceptance for disposal?

☒ Yes ☐ No ☐ Unknown at this time

Milestone Number	Due Date
N/A	N/A

LDR REPORT WASTE LOCATION-SPECIFIC DATA SHEET

If yes or unknown, comment on characterization for disposal.

Condensate must meet LERF waste acceptance criteria.

2.12 Other key assumptions related to storage, inventory, and generation information:

242-A Evaporator campaigns are planned and conducted based on DST System needs.

3.0 WASTE MINIMIZATION

3.1 Has a waste minimization assessment been completed for this stream?

☐ Yes ☒ No

If yes, provide date assessment conducted: N/A

If yes, provide document number or other identification:

N/A

If no, provide date assessment will be completed, or if waste stream is no longer generated, then indicate N/A:

Evaporator treatment process is waste reduction for the DST waste. Process condensate is less toxic

3.2 Provide details of current and proposed methods for minimizing the generation of this stream (e.g., process changes to reduce or eliminate LDR waste, methods to reduce volume through segregation and avoidance of commingling, substitution of less-toxic materials):

It is desirable to increase the volume of this waste stream, provided it reflects an overall decrease in DST waste treatability group volume.

3.3 Waste minimization schedule

3.3.1 Reduction achieved during calendar year 2009 (volume or mass)

0.000 m3

3.3.2 Projected future waste volume reductions

Year	m^3	and/or	kg
2010	0.00		0.00
2011	0.00		0.00
2012	0.00		0.00
2013	0.00		0.00
2014	0.00		0.00
Total	0.00		0.00

3.3.3 Bases and assumptions used in above estimates:

The evaporator process itself is a waste reduction/minimization process for DST system waste. A minor amount of liquid is retained from each run to prime the system for the subsequent run as a waste minimization effort. Evaporator process condensate volume reductions are not anticipated until the tanks have been fully retrieved and all aqueous retrieval liquids have been processed through the evaporator.

LDR REPORT WASTE LOCATION-SPECIFIC DATA SHEET

1.0 WASTE STREAM IDENTIFICATION AND SOURCE

1.1 Unit/Plant name: LERF **Waste Stream:** Wastewater

Treatabilitiy Group Name: LERF/ETF Liquid Waste

1.2 Applicable profile number(s) for this waste stream:

NF-KW-02-1, NF-PW-06-1, NF-MWBP-00-1,NF-200W-96-1, NF-ZP1-07-1, NF-200W-97-1, NF-WSCF-98-1

1.3 Waste stream source information

1.3.1 General description of the waste (e.g., spill clean-up waste, discarded lab materials, maintenance waste):

Wastewaters generated during RCRA and CERCLA cleanup activities on the Hanford Site are transferred to LERF for interim storage prior to treatment through the ETF. Drummed wastewater generated during RCRA and CERCLA cleanup activities on the Hanford Site are received at the ETF for interim storage prior to treatment through the ETF.

1.3.2 History of how and where the waste was/is generated:

Wastewaters generated under the RCRA and CERCLA programs on the Hanford Site. Refer to specific generator source wastewater information.

1.3.3 Source of the regulated constituents:

Refer to specific generator information.

1.3.4 Source of the information (e.g., analytical data, process knowledge, document number, etc.)

Process knowledge and analytical information - per the RCRA waste analysis plan for LERF/ETF.

1.3.5 Additional notes:

None.

2.0 WASTE STREAM STORAGE, INVENTORY, AND GENERATION INFORMATION

(NOTE: For waste in satellite accumulation areas and 90-day accumulation areas, skip to Section 2.6.)

2.1 Current storage method

- ☐ Container (pad)
- ☒ Container (covered)
- ☐ Container (retrievably buried)
- ☐ Tank
- ☐ DST
- ☐ SST
- ☒ Other (explain): Three surface impoundments (LERF Basins 42, 43, 44).

2.1.1 How was the waste managed prior to storage?

At the generator site.

2.1.2 Timeframe when waste was placed to storage?

Wastewater maybe received at any time depending on generator needs.

LDR REPORT WASTE LOCATION-SPECIFIC DATA SHEET

2.2 Storage inventory locations:

Building/Room Number	Number of Containers/Tanks
LERF Basins	3

2.3 Current stored inventory for this stream.

Total volume (cubic meters): 64,200.000

Date of inventory values: 12/31/2009

Comments on waste inventory:

None.

2.4 Is storage capacity at this location potentially an issue for this waste stream?

☐ Yes ☒ No

If yes, what is the total estimated storage capacity? N/A

When is this capacity expected to be reached? N/A

Bases and assumptions used:

2.5 Planned storage areas for this waste:

☒ Current Location ☐ CWC ☐ DST

☒ Other Area(s) (list): Wastewater will be treated through the ETF.

☐ None

2.6 Estimated generation projection by calendar year (includes waste in satellite and 90-day accumulation areas):

Year	m^3	and/or	kg
2010	0.000		0.000
2011	0.000		0.000
2012	0.000		0.000
2013	0.000		0.000
2014	0.000		0.000
Total	0.000		0.000

2.7 DOE Storage Compliance Assessment information:

☒ Assessment has been completed.

Document Number	Date
01-A&E-004	10/17/2001
A&E-00-ASS-071	11/15/2000

LDR REPORT WASTE LOCATION-SPECIFIC DATA SHEET

☐ Assessment has been scheduled. Scheduled date:

☐ Other. Explain:

2.8 Applicable Tri-Party Agreement milestones related to storage at this location:

Milestone Number	Due Date
N/A	

2.9 Has there ever been any non-permitted, unauthorized release of this waste stream from this storage unit to the environment?

☐ Yes ☒ No

If yes, summarize releases and quantities and provide date:

N/A

2.10 Are there any plans to submit requests for variances or other exemptions related to storage?

☐ Yes ☒ No

If yes, explain: N/A

2.11 Characterization

2.11.1 Is further characterization needed about the waste prior to acceptance for storage?

☐ Yes ☒ No ☐ Unknown at this time

Milestone Number	Due Date
N/A	N/A

If yes or unknown, comment on characterization for storage.

N/A

2.11.2 Is further characterization needed about the waste prior to acceptance for treatment?

☒ Yes ☐ No ☐ Unknown at this time

Milestone Number	Due Date
N/A	N/A

If yes or unknown, comment on characterization for treatment.

Waste is sampled in accordance with the waste analysis plan to prior to transfer into 200 ETF.

2.11.3 Is further characterization needed about the waste prior to acceptance for disposal?

☒ Yes ☐ No ☐ Unknown at this time

Milestone Number	Due Date
N/A	N/A

LDR REPORT WASTE LOCATION-SPECIFIC DATA SHEET

If yes or unknown, comment on characterization for disposal.

Waste is sampled after treatment in the 200 ETF verification tanks according to Ecology approved documents prior to discharge to the soil columnn.

2.12 Other key assumptions related to storage, inventory, and generation information:

None.

3.0 WASTE MINIMIZATION

3.1 Has a waste minimization assessment been completed for this stream?

☐ Yes ☒ No

If yes, provide date assessment conducted: N/A

If yes, provide document number or other identification:

N/A

If no, provide date assessment will be completed, or if waste stream is no longer generated, then indicate N/A:

N/A

3.2 Provide details of current and proposed methods for minimizing the generation of this stream (e.g., process changes to reduce or eliminate LDR waste, methods to reduce volume through segregation and avoidance of commingling, substitution of less-toxic materials):

Generators will address waste minimization for their particular waste streams.

3.3 Waste minimization schedule

3.3.1 Reduction achieved during calendar year 2009 (volume or mass)

0.000 m3

3.3.2 Projected future waste volume reductions

Year	m^3	and/or	kg
2010	0.00		0.00
2011	0.00		0.00
2012	0.00		0.00
2013	0.00		0.00
2014	0.00		0.00
Total	0.00		0.00

3.3.3 Bases and assumptions used in above estimates:

None.

LDR REPORT WASTE LOCATION-SPECIFIC DATA SHEET

1.0 WASTE STREAM IDENTIFICATION AND SOURCE

1.1 Unit/Plant name: LLBG/MW Trench **Waste Stream:** TR34 and TR31 Leachate

Treatabilitiy Group Name: LERF/ETF Liquid Waste

1.2 Applicable profile number(s) for this waste stream:

NF-MWBT-00-1

1.3 Waste stream source information

1.3.1 General description of the waste (e.g., spill clean-up waste, discarded lab materials, maintenance waste):

This waste is leachate from mixed waste disposal (Trenches 31 and 34) in the 218-W-5 low-level burial ground.

1.3.2 History of how and where the waste was/is generated:

Trench 34 has been accepting mixed waste for disposal since 1999 and trench 31 has been accepting mixed waste for disposal since 2004 and the leachate has been generated since then.

1.3.3 Source of the regulated constituents:

Wastes with waste numbers derived from listed waste numbers F001-F005 are disposed in Trenches 31 and 34 so the leachate is regulated as F039.

1.3.4 Source of the information (e.g., analytical data, process knowledge, document number, etc.)

Analytical data and process knowledge.

1.3.5 Additional notes:

Trenches 31 and 34 leachate is managed in a 90-day accumulation tank prior to transfer to LERF/ETF.

2.0 WASTE STREAM STORAGE, INVENTORY, AND GENERATION INFORMATION

(NOTE: For waste in satellite accumulation areas and 90-day accumulation areas, skip to Section 2.6.)

2.1 Current storage method

- ☐ Container (pad)
- ☐ Container (covered)
- ☐ Container (retrievably buried)
- ☐ Tank
- ☐ DST
- ☐ SST
- ☐ Other (explain):

2.1.1 How was the waste managed prior to storage?

N/A

2.1.2 Timeframe when waste was placed to storage?

N/A

LDR REPORT WASTE LOCATION-SPECIFIC DATA SHEET

2.2 Storage inventory locations:

Building/Room Number	Number of Containers/Tanks
N/A	N/A

2.3 Current stored inventory for this stream.

Total volume (cubic meters): 0.000

Date of inventory values: 12/31/2009

Comments on waste inventory:

Trenches 31 and 34 leachate is managed in a 90 day accumulation tank prior to transfer to LERF/ETF. There is no waste stored.

2.4 Is storage capacity at this location potentially an issue for this waste stream?

Yes No

If yes, what is the total estimated storage capacity?

When is this capacity expected to be reached?

Bases and assumptions used:

2.5 Planned storage areas for this waste:

☐ Current Location ☐ CWC ☐ DST

☒ Other Area(s) (list): LERF Basins.

☐ None

2.6 Estimated generation projection by calendar year (includes waste in satellite and 90-day accumulation areas):

Year	m^3	and/or	kg
2010	800.000		0.000
2011	800.000		0.000
2012	800.000		0.000
2013	800.000		0.000
2014	800.000		0.000
Total	4,000.000		0.000

2.7 DOE Storage Compliance Assessment information:

☒ Assessment has been completed.

Document Number	Date
A&E-SEC-02-003	03/28/2002

LDR REPORT WASTE LOCATION-SPECIFIC DATA SHEET

☐ Assessment has been scheduled. Scheduled date:

☐ Other. Explain:

2.8 Applicable Tri-Party Agreement milestones related to storage at this location:

Milestone Number	Due Date
N/A	

2.9 Has there ever been any non-permitted, unauthorized release of this waste stream from this storage unit to the environment?

☐ Yes ☒ No

If yes, summarize releases and quantities and provide date:

N/A

2.10 Are there any plans to submit requests for variances or other exemptions related to storage?

☐ Yes ☒ No

If yes, explain: N/A

2.11 Characterization

2.11.1 Is further characterization needed about the waste prior to acceptance for storage?

☐ Yes ☒ No ☐ Unknown at this time

Milestone Number	Due Date
N/A	N/A

If yes or unknown, comment on characterization for storage.

N/A

2.11.2 Is further characterization needed about the waste prior to acceptance for treatment?

☐ Yes ☒ No ☐ Unknown at this time

Milestone Number	Due Date
N/A	N/A

If yes or unknown, comment on characterization for treatment.

N/A

2.11.3 Is further characterization needed about the waste prior to acceptance for disposal?

☐ Yes ☒ No ☐ Unknown at this time

Milestone Number	Due Date
N/A	N/A

LDR REPORT WASTE LOCATION-SPECIFIC DATA SHEET

If yes or unknown, comment on characterization for disposal.

N/A

2.12 Other key assumptions related to storage, inventory, and generation information:

Actual generation is dependent upon the amount of precipitation received each year.

3.0 WASTE MINIMIZATION

3.1 Has a waste minimization assessment been completed for this stream?

☒ Yes ☐ No

If yes, provide date assessment conducted: 1997

If yes, provide document number or other identification:

Return on Investment: RMW Rain Curtain

If no, provide date assessment will be completed, or if waste stream is no longer generated, then indicate N/A:

3.2 Provide details of current and proposed methods for minimizing the generation of this stream (e.g., process changes to reduce or eliminate LDR waste, methods to reduce volume through segregation and avoidance of commingling, substitution of less-toxic materials):

None - generation is based on amount of precipitation received.

3.3 Waste minimization schedule

3.3.1 Reduction achieved during calendar year 2009 (volume or mass)

1,200.000 m3

3.3.2 Projected future waste volume reduc' ons

Year	m^3	and/or	kg
2010	0.00		0.00
2011	0.00		0.00
2012	0.00		0.00
2013	0.00		0.00
2014	0.00		0.00
Total	0.00		0.00

3.3.3 Bases and assumptions used in above estimates:

No feasible waste reduction.

LDR REPORT WASTE LOCATION-SPECIFIC DATA SHEET

1.0 WASTE STREAM IDENTIFICATION AND SOURCE

1.1 Unit/Plant name: PFP **Waste Stream:** Aqueous Waste

Treatabilitiy Group Name: LERF/ETF Liquid Waste

1.2 Applicable profile number(s) for this waste stream:

N/A

1.3 Waste stream source information

1.3.1 General description of the waste (e.g., spill clean-up waste, discarded lab materials, maintenance waste):

Wastewaters generated CERCLA D&D activities at PFP are transferred to LERF for interim storage prior to treatment or directly to ETF.

1.3.2 History of how and where the waste was/is generated:

Wastewaters generated CERCLA D&D activities at PFP

1.3.3 Source of the regulated constituents:

Refer to specific generator information.

1.3.4 Source of the information (e.g., analytical data, process knowledge, document number, etc.)

Process knowledge and analytical information - per the RCRA waste analysis plan for LERF/ETF.

1.3.5 Additional notes:

None.

2.0 WASTE STREAM STORAGE, INVENTORY, AND GENERATION INFORMATION

(NOTE: For waste in satellite accumulation areas and 90-day accumulation areas, skip to Section 2.6.)

2.1 Current storage method

- ☐ Container (pad)
- ☐ Container (covered)
- ☐ Container (retrievably buried)
- ☐ Tank
- ☐ DST
- ☐ SST
- ☐ Other (explain):

2.1.1 How was the waste managed prior to storage?

At the generator site.

2.1.2 Timeframe when waste was placed to storage?

N/A

2.2 Storage inventory locations:

Building/Room Number	Number of Containers/Tanks
N/A	N/A

LDR REPORT WASTE LOCATION-SPECIFIC DATA SHEET

2.3 Current stored inventory for this stream.

Total volume (cubic meters): 0.000

Date of inventory values: 12/31/2009

Comments on waste inventory:

None.

2.4 Is storage capacity at this location potentially an issue for this waste stream?

☐ Yes ☒ No

If yes, what is the total estimated storage capacity? N/A

When is this capacity expected to be reached? N/A

Bases and assumptions used:

None

2.5 Planned storage areas for this waste:

☐ Current Location ☐ CWC ☐ DST

☒ Other Area(s) (list): Wastewater will be treated through the ETF.

☐ None

2.6 Estimated generation projection by calendar year (includes waste in satellite and 90-day accumulation areas):

Year	m^3	and/or	kg
2010	0.000		0.000
2011	0.000		0.000
2012	0.000		0.000
2013	0.000		0.000
2014	0.000		0.000
Total	0.000		0.000

2.7 DOE Storage Compliance Assessment information:

☐ Assessment has been completed.

Document Number	Date

☐ Assessment has been scheduled. Scheduled date:

☒ Other. Explain: Not Applicable

LDR REPORT WASTE LOCATION-SPECIFIC DATA SHEET

2.8 Applicable Tri-Party Agreement milestones related to storage at this location:

Milestone Number	Due Date
N/A	

2.9 Has there ever been any non-permitted, unauthorized release of this waste stream from this storage unit to the environment?

☐ Yes ☒ No

If yes, summarize releases and quantities and provide date:

N/A

2.10 Are there any plans to submit requests for variances or other exemptions related to storage?

☐ Yes ☒ No

If yes, explain: N/A

2.11 Characterization

2.11.1 Is further characterization needed about the waste prior to acceptance for storage?

☐ Yes ☐ No ☒ Unknown at this time

Milestone Number	Due Date
N/A	N/A

If yes or unknown, comment on characterization for storage.

Waste is sampled in accordance with the waste analysis plan prior to transfer into 200 ETF.

2.11.2 Is further characterization needed about the waste prior to acceptance for treatment?

☐ Yes ☐ No ☒ Unknown at this time

Milestone Number	Due Date
N/A	N/A

If yes or unknown, comment on characterization for treatment.

Waste is sampled in accordance with the waste analysis plan prior to transfer into 200 ETF.

2.11.3 Is further characterization needed about the waste prior to acceptance for disposal?

☐ Yes ☒ No ☐ Unknown at this time

Milestone Number	Due Date
N/A	N/A

If yes or unknown, comment on characterization for disposal.

Waste is sampled in accordance with the waste analysis plan to prior to transfer into 200 ETF.

LDR REPORT WASTE LOCATION-SPECIFIC DATA SHEET

2.12 Other key assumptions related to storage, inventory, and generation information:

None.

3.0 WASTE MINIMIZATION

3.1 Has a waste minimization assessment been completed for this stream?

☐ Yes ☒ No

If yes, provide date assessment conducted: N/A

If yes, provide document number or other identification:

N/A

If no, provide date assessment will be completed, or if waste stream is no longer generated, then indicate N/A:

Waste minimiztion assessemnt may be performed on case by case basis.

3.2 Provide details of current and proposed methods for minimizing the generation of this stream (e.g., process changes to reduce or eliminate LDR waste, methods to reduce volume through segregation and avoidance of commingling, substitution of less-toxic materials):

Possible waste minimiztion method would be pretreatment.

3.3 Waste minimization schedule

3.3.1 Reduction achieved during calendar year 2009 (volume or mass)

0.000 m3

3.3.2 Projected future waste volume reductions

Year	m^3	and/or	kg
2010	0.00		0.00
2011	0.00		0.00
2012	0.00		0.00
2013	0.00		0.00
2014	0.00		0.00
Total	0.00		0.00

3.3.3 Bases and assumptions used in above estimates:

None.

LDR REPORT WASTE LOCATION-SPECIFIC DATA SHEET

1.0 WASTE STREAM IDENTIFICATION AND SOURCE

1.1 Unit/Plant name: T Plant Complex/2706-T Tank System **Waste Stream:** 2706-T Tank System

Treatabilitiy Group Name: LERF/ETF Liquid Waste

1.2 Applicable profile number(s) for this waste stream:

None.

1.3 Waste stream source information

1.3.1 General description of the waste (e.g., spill clean-up waste, discarded lab materials, maintenance waste):

Liquid waste generated as a result of decontamination, treatment activities, and potentially radiologically contaminated precipitation.

1.3.2 History of how and where the waste was/is generated:

Waste resulting from decontamination and treatment activities in the 2706-T and 2706-TA Buildings and various other sources (e.g., potentially contaminated rainwater, etc.).

1.3.3 Source of the regulated constituents:

See Section 1.3.1 and 1.3.2.

1.3.4 Source of the information (e.g., analytical data, process knowledge, document number, etc.)

Analytical and process knowledge.

1.3.5 Additional notes:

None.

2.0 WASTE STREAM STORAGE, INVENTORY, AND GENERATION INFORMATION

(NOTE: For waste in satellite accumulation areas and 90-day accumulation areas, skip to Section 2.6.)

2.1 Current storage method

- ☐ Container (pad)
- ☐ Container (covered)
- ☐ Container (retrievably buried)
- ☒ Tank
- ☐ DST
- ☐ SST
- ☐ Other (explain): N/A

2.1.1 How was the waste managed prior to storage?

Generated as part of decontamination and treatment activities.

2.1.2 Timeframe when waste was placed to storage?

1999 to present.

LDR REPORT WASTE LOCATION-SPECIFIC DATA SHEET

2.2 Storage inventory locations:

Building/Room Number	Number of Containers/Tanks
T Plant Complex	2

2.3 Current stored inventory for this stream.

Total volume (cubic meters): 0.625

Date of inventory values: 12/31/2009

Comments on waste inventory:

Inventory subject to fluctuation from decontamination, treatment, and other waste management activities and subsequent transfer to ETF or to another approved location.

2.4 Is storage capacity at this location potentially an issue for this waste stream?

☐ Yes ☒ No

If yes, what is the total estimated storage capacity? N/A

When is this capacity expected to be reached? N/A

Bases and assumptions used:

N/A

2.5 Planned storage areas for this waste:

☒ Current Location ☐ CWC ☐ DST

☒ Other Area(s) (list): ETF or other approved location.

☐ None

2.6 Estimated generation projection by calendar year (includes waste in satellite and 90-day accumulation areas):

Year	m^3	and/or	kg
2010	0.000		0.000
2011	0.000		0.000
2012	0.000		0.000
2013	0.000		0.000
2014	0.000		0.000
Total	0.000		0.000

2.7 DOE Storage Compliance Assessment information:

☒ Assessment has been completed.

Document Number	Date
01-A&E-0-12	11/28/2000

LDR REPORT WASTE LOCATION-SPECIFIC DATA SHEET

☒ Assessment has been scheduled. Scheduled date: 3rd quarter CY2005

☐ Other. Explain:

2.8 Applicable Tri-Party Agreement milestones related to storage at this location:

Milestone Number	Due Date
N/A	

2.9 Has there ever been any non-permitted, unauthorized release of this waste stream from this storage unit to the environment?

☐ Yes ☒ No

If yes, summarize releases and quantities and provide date:

N/A

2.10 Are there any plans to submit requests for variances or other exemptions related to storage?

☐ Yes ☒ No

If yes, explain: N/A

2.11 Characterization

2.11.1 Is further characterization needed about the waste prior to acceptance for storage?

☐ Yes ☒ No ☐ Unknown at this time

Milestone Number	Due Date
N/A	N/A

If yes or unknown, comment on characterization for storage.

N/A

2.11.2 Is further characterization needed about the waste prior to acceptance for treatment?

☒ Yes ☐ No ☐ Unknown at this time

Milestone Number	Due Date
N/A	N/A

If yes or unknown, comment on characterization for treatment.

See LERF wastewater LSDS.

2.11.3 Is further characterization needed about the waste prior to acceptance for disposal?

☒ Yes ☐ No ☐ Unknown at this time

Milestone Number	Due Date
N/A	N/A

LDR REPORT WASTE LOCATION-SPECIFIC DATA SHEET

If yes or unknown, comment on characterization for disposal.

See LERF wastewater LSDS.

2.12 Other key assumptions related to storage, inventory, and generation information:

Efforts are underway to prepare the 2706-T and TA to begin liquid decontamination/treatment efforts. NOTE: Tank 220 has been place in a "Out of Service" mode and will remain that way pending potential future need for this tank. As more information becomes available on types, quantities of equipment/material to be decontaminated, waste forecasts will be developed. Acceptance criteria for the ETF is the preferred target; the DST System remains a backup TSD unit for this waste, or another approved location.

3.0 WASTE MINIMIZATION

3.1 Has a waste minimization assessment been completed for this stream?

☐ Yes ☒ No

If yes, provide date assessment conducted: N/A

If yes, provide document number or other identification:

N/A

If no, provide date assessment will be completed, or if waste stream is no longer generated, then indicate N/A:

N/A

3.2 Provide details of current and proposed methods for minimizing the generation of this stream (e.g., process changes to reduce or eliminate LDR waste, methods to reduce volume through segregation and avoidance of commingling, substitution of less-toxic materials):

It is extremely difficult to determine how much waste will be generated for this particular waste stream. Will fluctuate greatly depending upon how much equipment needs decontaminating, treatment activities, and other waste management operations.

3.3 Waste minimization schedule

3.3.1 Reduction achieved during calendar year 2009 (volume or mass)

0.000 m3

3.3.2 Projected future waste volume reductions

Year	m^3	and/or	kg
2010	0.00		0.00
2011	0.00		0.00
2012	0.00		0.00
2013	0.00		0.00
2014	0.00		0.00
Total	0.00		0.00

3.3.3 Bases and assumptions used in above estimates:

LDR REPORT WASTE LOCATION-SPECIFIC DATA SHEET

The T Plant Complex, where possible, will use non-regulated decontamination solutions, as well as limiting the amount of liquid waste generated as a result of decontamination/treatment activities to the extent practical. This waste stream volume will fluctuate greatly depending upon decontamination and treatment activities.

LDR REPORT WASTE LOCATION-SPECIFIC DATA SHEET

1.0 WASTE STREAM IDENTIFICATION AND SOURCE

1.1 Unit/Plant name: WSCF **Waste Stream:** LERF/ETF

Treatabilitiy Group Name: LERF/ETF Liquid Waste

1.2 Applicable profile number(s) for this waste stream:

WSCF/ETF

1.3 Waste stream source information

1.3.1 General description of the waste (e.g., spill clean-up waste, discarded lab materials, maintenance waste):

This waste stream is generated from analytical processes within the laboratory. The aqueous based wastes are generally comprised of acids, bases, and other toxic constituents. The resulting liquids are neutralized for D002 by WSCF -the 55 gal. drums are shipped to 200ETF for further treatment.

1.3.2 History of how and where the waste was/is generated:

WSCF has been sending waste to the ETF since approximately 1999, for treatment and disposal. The waste is generated as a result of laboratory operations. The waste is treated by the generator for D002 (neutralization) before being shipped to ETF.

1.3.3 Source of the regulated constituents:

The hazardous constituents are derived from listed waste sample contribution and/or the addition of reagents during the analytical process.

1.3.4 Source of the information (e.g., analytical data, process knowledge, document number, etc.)

Information to characterize this waste stream is obtained from both process knowledge and analytical data.

1.3.5 Additional notes:

WSCF waste is managed in a SAA or a 90-day accumulation area. WSCF has no TSD unit.

2.0 WASTE STREAM STORAGE, INVENTORY, AND GENERATION INFORMATION

(NOTE: For waste in satellite accumulation areas and 90-day accumulation areas, skip to Section 2.6.)

2.1 Current storage method

- ☐ Container (pad)
- ☐ Container (covered)
- ☐ Container (retrievably buried)
- ☐ Tank
- ☐ DST
- ☐ SST
- ☐ Other (explain): N/A

2.1.1 How was the waste managed prior to storage?

WSCF waste is managed in a SAA or 90-day accumulation area. WSCF has no TSD unit.

2.1.2 Timeframe when waste was placed to storage?

N/A

LDR REPORT WASTE LOCATION-SPECIFIC DATA SHEET

2.2 Storage inventory locations:

Building/Room Number	Number of Containers/Tanks
N/A	N/A

2.3 Current stored inventory for this stream.

Total volume (cubic meters): 0.000

Date of inventory values: 12/31/2009

Comments on waste inventory:

See section 2.1.1 of this data sheet.

2.4 Is storage capacity at this location potentially an issue for this waste stream?

☐ Yes ☒ No

If yes, what is the total estimated storage capacity? N/A

When is this capacity expected to be reached? N/A

Bases and assumptions used:

N/A; WSCF does not store waste, as it has no TSD.

2.5 Planned storage areas for this waste:

☐ Current Location ☐ CWC ☐ DST

☒ Other Area(s) (list): 200ETF (2025E) waste managed in drums, until treated.

☐ None

2.6 Estimated generation projection by calendar year (includes waste in satellite and 90-day accumulation areas):

Year	m^3	and/or	kg
2010	41.600		0.000
2011	41.600		0.000
2012	41.600		0.000
2013	41.600		0.000
2014	41.600		0.000
Total	208.000		0.000

2.7 DOE Storage Compliance Assessment information:

☐ Assessment has been completed.

Document Number	Date

☐ Assessment has been scheduled. Scheduled date:

☒ Other. Explain: Storage assessment not required.

LDR REPORT WASTE LOCATION-SPECIFIC DATA SHEET

2.8 Applicable Tri-Party Agreement milestones related to storage at this location:

Milestone Number	Due Date
N/A	

2.9 Has there ever been any non-permitted, unauthorized release of this waste stream from this storage unit to the environment?

☐ Yes ☒ No

If yes, summarize releases and quantities and provide date:

N/A

2.10 Are there any plans to submit requests for variances or other exemptions related to storage?

☐ Yes ☒ No

If yes, explain: N/A

2.11 Characterization

2.11.1 Is further characterization needed about the waste prior to acceptance for storage?

☐ Yes ☒ No ☐ Unknown at this time

Milestone Number	Due Date
N/A	N/A

If yes or unknown, comment on characterization for storage.

Characterization is performed as necessary to meet LERF/ETF waste acceptance criteria. A commitment is not necessary to complete characterization because a cradle-to-grave process is being implemented.

2.11.2 Is further characterization needed about the waste prior to acceptance for treatment?

☐ Yes ☒ No ☐ Unknown at this time

Milestone Number	Due Date
N/A	N/A

If yes or unknown, comment on characterization for treatment.

N/A

2.11.3 Is further characterization needed about the waste prior to acceptance for disposal?

☒ Yes ☐ No ☐ Unknown at this time

Milestone Number	Due Date
N/A	N/A

If yes or unknown, comment on characterization for disposal.

200ETF treats WSCF waste drums. Once the waste is treated. 200ETF characterizes the residues from their treatment process for disposal.

LDR REPORT WASTE LOCATION-SPECIFIC DATA SHEET

2.12 Other key assumptions related to storage, inventory, and generation information:

None.

3.0 WASTE MINIMIZATION

3.1 Has a waste minimization assessment been completed for this stream?

☒ Yes ☐ No

If yes, provide date assessment conducted: 1996

If yes, provide document number or other identification:

Return on Investment. Waste Water Feed Reduced by Removal of Chloride. Tracking Code Number YP219

If no, provide date assessment will be completed, or if waste stream is no longer generated, then indicate N/A:

3.2 Provide details of current and proposed methods for minimizing the generation of this stream (e.g., process changes to reduce or eliminate LDR waste, methods to reduce volume through segregation and avoidance of commingling, substitution of less-toxic materials):

ETF has changed its acceptance criteria and this waste stream is now acceptable as is without removing chlorides. Liquids with a D002 are neutralized (TBG). After neutralization, analysis is done. D002 is reported on the LDR as meeting treatment standards. In most case "other" waste codes will be further treated at 200ETF. In a few cases no other waste codes are applicable.

3.3 Waste minimization schedule

3.3.1 Reduction achieved during calendar year 2009 (volume or mass)

1.000 m3

3.3.2 Projected future waste volume reductions

Year	m^3	and/or	kg
2010	0.00		0.00
2011	0.00		0.00
2012	0.00		0.00
2013	0.80		0.00
2014	0.00		0.00
Total	0.80		0.00

3.3.3 Bases and assumptions used in above estimates:

The return on investment for reverse osmosis is no longer in effect as ETF changed its acceptance criteria and now accepts the wastes with higher chloride content. Liquids sent to 200ETF with a D002 are neutralized in some cases there are no other waste codes for further treatment. Waste with no additional waste codes is LLW only.

This page intentionally left blank.

LERF/ETF Solid Waste

LDR REPORT TREATABILITY GROUP DATA SHEET

1.0 WASTE STREAM IDENTIFICATION

LERF/ETF Solid Waste

1.1 Treatability Group Name:

1.2 Description of waste (list WSRd numbers for this waste stream, as applicable)

CERCLA and RCRA wastewaters are sent to the LERF/ETF for treatment and disposal. Both dried powder and operational solid waste are generated and stored at 2025E prior to shipment to on-site disposal facility or to an off-site facility if treatment is required.

2.0 WASTE INVENTORY AND GENERATION

2.1 Current total inventory for this waste stream (stored waste only, not accumulation areas). [Equals sum of location-specific data sheets for this treatability group.]

Total volume (cubic meters): 45.280

2.2 Estimated generation projection by calendar year: [equals annual sums of location-specfic data sheets for this treatability group].

Year	m^3	and/or	kg
2010	240.000		0.000
2011	240.000		0.000
2012	240.000		0.000
2013	240.000		0.000
2014	240.000		0.000
Total	1,200.000		0.000

3.0 WASTE STREAM CHARACTERIZATION

3.1 Radiological Characteristics

3.1.1 Mixed waste type: ☐ High-level ☐ Transuranic ☒ Low-level

3.1.2 Handling (as package contents would need to be handled during treatment):

☒ Contact-handled ☐ Remote-handled

3.1.3 Comments on radiological characteristics (e.g., more specific information on content, treatment concerns caused by radiation, confidence level):

None.

3.2 Physical Form

3.2.1 Physical form of the waste:

☒ Solid ☐ Liquid ☐ Semi-solid ☒ Debris

☒ Other (Describe in comments.)

3.2.2 Comments on physical form:

Solid process powder, resin beads, process filters, RO membranes and other unit operations and maintenance waste.

LDR REPORT TREATABILITY GROUP DATA SHEET

3.3 Regulated constituents and wastewater/non-wastewater category

3.3.1 Wastewater/non-wastewater under RCRA

☐ Wastewater ☒ Non-wastewater ☐ Unknown

3.3.2 Regulated constituents table including treatment requirements and UHCs, if applicable.

EPA/ State Number	Waste Description	LDR Sub-Category*	Concentration (Typical or Range)**	Basis	LDR Treatment Concentration Standard or Technology Code
F001	1,1,1-trichloroethane, carbon tetrachloride carbon	F001-F005	***	knowledge/ analysis	multiple
F002	methylene chloride	F001-F005	***	knowledge/ analysis	0.089 mg/L
F003	acetone, methyl isobutyl ketone	F001-F005	***	knowledge/ analysis	multiple
F004	cresols	F001-F005	***	knowledge/ analysis	0.11 mg/L
F005	methyl ethyl ketone	F001-F005	***	knowledge/ analysis	0.28 mg/L
F039	multi-source leachate	N/A	***	knowledge/ analysis	multiple
WSC2	solid corrosive	N/A	pH<=2	knowledge/ analysis	deactivation

* LDR Subcategory marked N/A if no existing subcategory adequately describes this waste, or if there are no defined subcategories for the waste number (40 CFR 268.40).

** If waste is not consistent in concentration, this may not apply. Described in Section 3.3.6.

*** The concentration varies.

3.3.3 List any waste numbers from Section 3.3.2 for which the waste stream already meets established LDR treatment standards.

☒ List: Most all wastes meet treatment standards for F001-F005 upon generation.

☐ No LDR treatment required (e.g. TRUM waste destined for WIPP, exclusion, etc.)

☐ None (i.e. all constituents/waste numbers of this waste stream still require treatment).

LDR REPORT TREATABILITY GROUP DATA SHEET

3.3.4 Does this waste stream contain PCBs?

☐ Yes ☒ No ☐ Unknown

If no or unknown, skip to Section 3.3.5.

3.3.4.1 Is waste stream subject to TSCA regulations for PCBs?

☐ Yes ☐ No ☐ Unknown

3.3.4.2 Indicate the PCB concentration range.

☐ < 50 ppm ☐ ≥ 50 ppm ☐ Unknown

3.3.5 What is the confidence level for the regulated constituents?

☐ Low ☐ Medium ☒ High

3.3.6 Comments on regulated constituents and wastewater/non-wastewater category:

None.

4.0 WASTE STREAM TREATMENT

4.1 Is this waste stream currently being treated?

☐ Yes ☒ No

If yes, provide details: N/A

4.2 Planned treatment: Check the appropriate box indicating future plans for treating this waste stream to meet applicable regulations, including LDR treatment standards.

☒ No treatment required (skip to Section 5.0)

☐ Treating or plan to treat on site

☐ Treating or plan to treat off site

☐ Treatment options still being assessed

4.3 Planned treatment method, facility, extent of treatment capacity available:

N/A

4.4 Treatment schedule information:

N/A

4.5 Applicable Tri-Party Agreement treatment milestone numbers (including permitting):

Milestone Number	Due Date
N/A	N/A

4.6 Proposed new Tri-Party Agreement treatment milestones:

N/A

LDR REPORT TREATABILITY GROUP DATA SHEET

4.7 If treating or planning to treat on site, was or will waste minimization be addressed in developing and/or selecting the treatment method?

☐ Yes ☐ No ☒ Unknown

If yes, describe:

4.8 List or describe treatability equivalency petitions, rulemaking petitions, and case-by-case exemptions needed for treatment or already in place.

N/A

4.9 Key Assumptions:

None.

5.0 WASTE STREAM DISPOSAL

After treatment, how will the waste stream be disposed of (include locations, milestone numbers, variances required, etc. as applicable):

Secondary process waste (dry powder) generated from the treatment of wastewaters from the ETF as well as water polisher resin beads, filters, RO membranes and other unit and operations and maintenance waste is disposed at ERDF. In the event treatment is necessary, mixed waste is sent to an off-site treatment facility prior to disposal at ERDF.

LDR REPORT WASTE LOCATION-SPECIFIC DATA SHEET

1.0 WASTE STREAM IDENTIFICATION AND SOURCE

1.1 Unit/Plant name: ETF **Waste Stream:** Powder Drums

Treatabilitiy Group Name: LERF/ETF Solid Waste

1.2 Applicable profile number(s) for this waste stream:

ETF001

1.3 Waste stream source information

1.3.1 General description of the waste (e.g., spill clean-up waste, discarded lab materials, maintenance waste):

Process contacted solid wasted from wastewater treatment activities.

1.3.2 History of how and where the waste was/is generated:

Generated during operation activities at the ETF.

1.3.3 Source of the regulated constituents:

Hanford Site generated wastewaters that are treated through the ETF.

1.3.4 Source of the information (e.g., analytical data, process knowledge, document number, etc.)

Analytical data, process knowledge, MSDS's.

1.3.5 Additional notes:

None.

2.0 WASTE STREAM STORAGE, INVENTORY, AND GENERATION INFORMATION

(NOTE: For waste in satellite accumulation areas and 90-day accumulation areas, skip to Section 2.6.)

2.1 Current storage method

- ☐ Container (pad)
- ☒ Container (covered)
- ☐ Container (retrievably buried)
- ☐ Tank
- ☐ DST
- ☐ SST
- ☐ Other (explain):

2.1.1 How was the waste managed prior to storage?

Waste was in the process of generation.

2.1.2 Timeframe when waste was placed to storage?

Ongoing.

2.2 Storage inventory locations:

Building/Room Number	Number of Containers/Tanks
2025E	22 (55 gallon) drums

LDR REPORT WASTE LOCATION-SPECIFIC DATA SHEET

2.3 Current stored inventory for this stream.

Total volume (cubic meters): 5.280

Date of inventory values: 12/31/2009

Comments on waste inventory:

None.

2.4 Is storage capacity at this location potentially an issue for this waste stream?

☐ Yes ☒ No

If yes, what is the total estimated storage capacity? N/A

When is this capacity expected to be reached? N/A

Bases and assumptions used:

2.5 Planned storage areas for this waste:

☒ Current Location ☒ CWC ☐ DST

☐ Other Area(s) (list):

☐ None

2.6 Estimated generation projection by calendar year (includes waste in satellite and 90-day accumulation areas):

Year	m^3	and/or	kg
2010	200.000		0.000
2011	200.000		0.000
2012	200.000		0.000
2013	200.000		0.000
2014	200.000		0.000
Total	1,000.000		0.000

2.7 DOE Storage Compliance Assessment information:

☐ Assessment has been completed.

Document Number	Date

☐ Assessment has been scheduled. Scheduled date:

☒ Other. Explain: Assessment Not Applicable.

2.8 Applicable Tri-Party Agreement milestones related to storage at this location:

Milestone Number	Due Date
N/A	

LDR REPORT WASTE LOCATION-SPECIFIC DATA SHEET

2.9 Has there ever been any non-permitted, unauthorized release of this waste stream from this storage unit to the environment?

☐ Yes ☒ No

If yes, summarize releases and quantities and provide date:

N/A

2.10 Are there any plans to submit requests for variances or other exemptions related to storage?

☐ Yes ☒ No

If yes, explain: N/A

2.11 Characterization

2.11.1 Is further characterization needed about the waste prior to acceptance for storage?

☐ Yes ☒ No ☐ Unknown at this time

Milestone Number	Due Date
N/A	N/A

If yes or unknown, comment on characterization for storage.

N/A

2.11.2 Is further characterization needed about the waste prior to acceptance for treatment?

☐ Yes ☒ No ☐ Unknown at this time

Milestone Number	Due Date
N/A	N/A

If yes or unknown, comment on characterization for treatment.

N/A

2.11.3 Is further characterization needed about the waste prior to acceptance for disposal?

☐ Yes ☒ No ☐ Unknown at this time

Milestone Number	Due Date
N/A	N/A

If yes or unknown, comment on characterization for disposal.

N/A

2.12 Other key assumptions related to storage, inventory, and generation information:

None.

LDR REPORT WASTE LOCATION-SPECIFIC DATA SHEET

3.0 WASTE MINIMIZATION

3.1 Has a waste minimization assessment been completed for this stream?

☐ Yes ☒ No

If yes, provide date assessment conducted: N/A

If yes, provide document number or other identification:

N/A

If no, provide date assessment will be completed, or if waste stream is no longer generated, then indicate N/A:

No assessment planned at this time.

3.2 Provide details of current and proposed methods for minimizing the generation of this stream (e.g., process changes to reduce or eliminate LDR waste, methods to reduce volume through segregation and avoidance of commingling, substitution of less-toxic materials):

Facility operating procedures provide instructions on packaging and segregation of waste.

3.3 Waste minimization schedule

3.3.1 Reduction achieved during calendar year 2009 (volume or mass)

0.000 m3

3.3.2 Projected future waste volume reductions

Year	m^3	and/or	kg
2010	0.00		0.00
2011	0.00		0.00
2012	0.00		0.00
2013	0.00		0.00
2014	0.00		0.00
Total	0.00		0.00

3.3.3 Bases and assumptions used in above estimates:

N/A

LDR REPORT WASTE LOCATION-SPECIFIC DATA SHEET

1.0 WASTE STREAM IDENTIFICATION AND SOURCE

1.1 Unit/Plant name: LERF/ETF **Waste Stream:** Operational and Maintenance waste

Treatabilitiy Group Name: LERF/ETF Solid Waste

1.2 Applicable profile number(s) for this waste stream:

Resin Beeds- ETF001 ERDF Disposal
Filters -ETF001 ERDF Disposal
Acid spill cleanup - profile not developed

1.3 Waste stream source information

1.3.1 General description of the waste (e.g., spill clean-up waste, discarded lab materials, maintenance waste):

Process waste generated from maintenance and clean-up activities.

1.3.2 History of how and where the waste was/is generated:

Generated during operation and maintenance activities at the ETF and associated facilities.

1.3.3 Source of the regulated constituents:

Hanford Site generated wastewaters that are treated through the ETF and used oils/greases from LERF/ETF equipment.

1.3.4 Source of the information (e.g., analytical data, process knowledge, document number, etc.)

Analytical data, process knowledge, MSDS's.

1.3.5 Additional notes:

None.

2.0 WASTE STREAM STORAGE, INVENTORY, AND GENERATION INFORMATION

(NOTE: For waste in satellite accumulation areas and 90-day accumulation areas, skip to Section 2.6.)

2.1 Current storage method

- ☐ Container (pad)
- ☒ Container (covered)
- ☐ Container (retrievably buried)
- ☐ Tank
- ☐ DST
- ☐ SST
- ☐ Other (explain):

2.1.1 How was the waste managed prior to storage?

Waste was in the process of generation.

2.1.2 Timeframe when waste was placed to storage?

Ongoing.

LDR REPORT WASTE LOCATION-SPECIFIC DATA SHEET

2.2 Storage inventory locations:

Building/Room Number	Number of Containers/Tanks
2025E Resin beeds	3 (4x4x8) boxes
2025E Process filters	1 (4x4x8) box
2025E Acid spill cleanup	3 (55 gallon) drums

2.3 Current stored inventory for this stream.

Total volume (cubic meters): 40.000

Date of inventory values: 12/31/2009

Comments on waste inventory:

None.

2.4 Is storage capacity at this location potentially an issue for this waste stream?

☐ Yes ☒ No

If yes, what is the total estimated storage capacity? N/A

When is this capacity expected to be reached? N/A

Bases and assumptions used:

2.5 Planned storage areas for this waste:

☒ Current Location ☐ CWC ☐ DST

☐ Other Area(s) (list):

☐ None

2.6 Estimated generation projection by calendar year (includes waste in satellite and 90-day accumulation areas):

Year	m^3	and/or	kg
2010	40.000		0.000
2011	40.000		0.000
2012	40.000		0.000
2013	40.000		0.000
2014	40.000		0.000
Total	200.000		0.000

2.7 DOE Storage Compliance Assessment information:

☐ Assessment has been completed.

Document Number	Date

LDR REPORT WASTE LOCATION-SPECIFIC DATA SHEET

☐ Assessment has been scheduled. Scheduled date:

☒ Other. Explain: Assessment not applicable.

2.8 Applicable Tri-Party Agreement milestones related to storage at this location:

Milestone Number	Due Date
N/A	

2.9 Has there ever been any non-permitted, unauthorized release of this waste stream from this storage unit to the environment?

☐ Yes ☒ No

If yes, summarize releases and quantities and provide date:

N/A

2.10 Are there any plans to submit requests for variances or other exemptions related to storage?

☐ Yes ☒ No

If yes, explain: N/A

2.11 Characterization

2.11.1 Is further characterization needed about the waste prior to acceptance for storage?

☐ Yes ☒ No ☐ Unknown at this time

Milestone Number	Due Date
N/A	N/A

If yes or unknown, comment on characterization for storage.

N/A

2.11.2 Is further characterization needed about the waste prior to acceptance for treatment?

☐ Yes ☒ No ☐ Unknown at this time

Milestone Number	Due Date
N/A	N/A

If yes or unknown, comment on characterization for treatment.

N/A

2.11.3 Is further characterization needed about the waste prior to acceptance for disposal?

☐ Yes ☒ No ☐ Unknown at this time

Milestone Number	Due Date
N/A	N/A

LDR REPORT WASTE LOCATION-SPECIFIC DATA SHEET

If yes or unknown, comment on characterization for disposal.

N/A

2.12 Other key assumptions related to storage, inventory, and generation information:

None.

3.0 WASTE MINIMIZATION

3.1 Has a waste minimization assessment been completed for this stream?

☐ Yes ☒ No

If yes, provide date assessment conducted: N/A

If yes, provide document number or other identification:

N/A

If no, provide date assessment will be completed, or if waste stream is no longer generated, then indicate N/A:

No assessment planned at this time.

3.2 Provide details of current and proposed methods for minimizing the generation of this stream (e.g., process changes to reduce or eliminate LDR waste, methods to reduce volume through segregation and avoidance of commingling, substitution of less-toxic materials):

Facility operating procedures provide instructions on packaging and segregation of waste.

3.3 Waste minimization schedule

3.3.1 Reduction achieved during calendar year 2009 (volume or mass)

0.000 m3

3.3.2 Projected future waste volume reductions

Year	m^3	and/or	kg
2010	0.00		0.00
2011	0.00		0.00
2012	0.00		0.00
2013	0.00		0.00
2014	0.00		0.00
Total	0.00		0.00

3.3.3 Bases and assumptions used in above estimates:

N/A

MLLW-01 – LDR
Compliant Waste

LDR REPORT TREATABILITY GROUP DATA SHEET

1.0 WASTE STREAM IDENTIFICATION

1.1 Treatability Group Name: MLLW-01 - LDR Compliant Waste

1.2 Description of waste (list WSRd numbers for this waste stream, as applicable)

This waste consist of MLLW meeting the disposal requirements for Hanford's Mixed Waste Disposal Units (ref: LLBG 218W5, T31 & T34). The waste either meets RCRA, and applicable State, land disposal requirements (LDRs) as-generated or the waste has been treated to meet the LDRs. Additionally, the waste meets unit specific disposal requirements (e.g., 90% full, minimum of 50psi unconfined compressive strength, etc). The applicable Waste Specification Records (WSRds) include 930 and 931. This waste can consist of: soils, immobilized waste, stabilized/solidified waste, thermal treatment residues, etc.

2.0 WASTE INVENTORY AND GENERATION

2.1 Current total inventory for this waste stream (stored waste only, not accumulation areas). [Equals sum of location-specific data sheets for this treatability group.]

Total volume (cubic meters): 0.400

2.2 Estimated generation projection by calendar year: [equals annual sums of location-specfic data sheets for this treatability group].

Year	m^3	and/or	kg
2010	0.700		0.000
2011	0.700		0.000
2012	0.700		0.000
2013	0.300		0.000
2014	0.300		0.000
Total	2.700		0.000

3.0 WASTE STREAM CHARACTERIZATION

3.1 Radiological Characteristics

3.1.1 Mixed waste type: ☐ High-level ☐ Transuranic ☒ Low-level

3.1.2 Handling (as package contents would need to be handled during treatment):

☒ Contact-handled ☐ Remote-handled

3.1.3 Comments on radiological characteristics (e.g., more specific information on content, treatment concerns caused by radiation, confidence level):

This waste is a general category based on dangerous waste characteristics; hence, the radiological characteristics are expected to vary greatly. However, the waste will meet low-level-waste per DOE Order 435.1. The LDR compliant treatability group will consist of both RH and CH waste packages; however, the majority of the waste will be CH. Greater than Hanford Category 1 (GTC1) waste will normally be radiologically stabilization prior to disposal; however, radiological stabilization may take place in the disposal unit.

LDR REPORT TREATABILITY GROUP DATA SHEET

3.2 Physical Form

3.2.1 Physical form of the waste:

☒ Solid ☐ Liquid ☒ Semi-solid ☒ Debris

☒ Other (Describe in comments.)

3.2.2 Comments on physical form:

LDR compliant waste forms including soils, immobilized waste, stabilized/solidified waste, thermal treatment residues, etc. packaged in DOT compliant or onsite authorized containers for direct disposal into the disposal units.

3.3 Regulated constituents and wastewater/non-wastewater category

3.3.1 Wastewater/non-wastewater under RCRA

☐ Wastewater ☒ Non-wastewater ☐ Unknown

3.3.2 Regulated constituents table including treatment requirements and UHCs, if applicable.

EPA/ State Number	Waste Description	LDR Sub-Category*	Concentration (Typical or Range)**	Basis	LDR Treatment Concentration Standard or Technology Code
	See Footnote (1)				

* LDR Subcategory marked N/A if no existing subcategory adequately describes this waste, or if there are no defined subcategories for the waste number (40 CFR 268.40).

** If waste is not consistent in concentration, this may not apply. Described in Section 3.3.6.

(1) Subject treatability group has been assigned those waste codes that are listed on the current CWC and/or LLBG Part A Form 3. Individual waste packages assigned to the treatability group may have one or more of these waste codes. The waste meets (or will meet) the treatment standards listed in 40 CFR 268.40, 40 CFR 268.45, and/or WAC 173-303-140.

3.3.3 List any waste numbers from Section 3.3.2 for which the waste stream already meets established LDR treatment standards.

☒ List: All.

☐ No LDR treatment required (e.g. TRUM waste destined for WIPP, exclusion, etc.)

☐ None (i.e. all constituents/waste numbers of this waste stream still require treatment).

LDR REPORT TREATABILITY GROUP DATA SHEET

3.3.4 Does this waste stream contain PCBs?

☒ Yes ☐ No ☐ Unknown

If no or unknown, skip to Section 3.3.5.

3.3.4.1 Is waste stream subject to TSCA regulations for PCBs?

☒ Yes ☐ No ☐ Unknown

3.3.4.2 Indicate the PCB concentration range.

☒ < 50 ppm ☐ ≥ 50 ppm ☐ Unknown

3.3.5 What is the confidence level for the regulated constituents?

☐ Low ☐ Medium ☒ High

3.3.6 Comments on regulated constituents and wastewater/non-wastewater category:

Confidence level for this waste treatability group is high since the waste has either undergone treatment to meet LDR, or the as-generated MLLW was tested to demonstrate the waste meets applicable LDRs. Waste with numerical WSRds (e.g., 930, etc.) meets all applicable LDR treatment standards including applicable UHCs. Treatment per 40 CFR 268.40, 40 CFR 268.45 and/or WAC 173-303-140.

4.0 WASTE STREAM TREATMENT

4.1 Is this waste stream currently being treated?

☐ Yes ☒ No

If yes, provide details: N/A

4.2 Planned treatment: Check the appropriate box indicating future plans for treating this waste stream to meet applicable regulations, including LDR treatment standards.

☒ No treatment required (skip to Section 5.0)

☐ Treating or plan to treat on site

☐ Treating or plan to treat off site

☐ Treatment options still being assessed

4.3 Planned treatment method, facility, extent of treatment capacity available:

N/A

4.4 Treatment schedule information:

N/A

4.5 Applicable Tri-Party Agreement treatment milestone numbers (including permitting):

Milestone Number	Due Date
N/A	N/A

LDR REPORT TREATABILITY GROUP DATA SHEET

4.6 Proposed new Tri-Party Agreement treatment milestones:

N/A

4.7 If treating or planning to treat on site, was or will waste minimization be addressed in developing and/or selecting the treatment method?

☐ Yes ☐ No ☒ Unknown

If yes, describe: N/A

4.8 List or describe treatability equivalency petitions, rulemaking petitions, and case-by-case exemptions needed for treatment or already in place.

N/A

4.9 Key Assumptions:

Although "no" is marked in Section 4.1, some of this waste stream is treated at the generators facilities under treatment-by-generator (TBG) provisions prior to receipt at the LLBG mixed waste trenches. Deactivation, stabilization and alternative debris treatment technologies are used.

5.0 WASTE STREAM DISPOSAL

After treatment, how will the waste stream be disposed of (include locations, milestone numbers, variances required, etc. as applicable):

Waste in this treatability group will be disposed of in Mixed Waste Disposal Unitsl located on the Hanford Site.

LDR REPORT WASTE LOCATION-SPECIFIC DATA SHEET

1.0 WASTE STREAM IDENTIFICATION AND SOURCE

1.1 Unit/Plant name: CS&I **Waste Stream:** Miscellaneous non-routine streams

Treatabilitiy Group Name: MLLW-01 - LDR Compliant Waste

1.2 Applicable profile number(s) for this waste stream:

930-07

1.3 Waste stream source information

1.3.1 General description of the waste (e.g., spill clean-up waste, discarded lab materials, maintenance waste):

Miscellaneous, unplanned, and/or non-routine waste from spills, site support services, and/or unknown discoveries

1.3.2 History of how and where the waste was/is generated:

CS&I (HSO) does not have routine MW generation processes. The forecasted MW is based on historical data. MW is periodically encountered/generated due to the various work activities and services performed by CS&I around the site. CS&I forecasts periodic future MW generation, but cannot point to an associated generating process.

1.3.3 Source of the regulated constituents:

Various Hanford Site Operations

1.3.4 Source of the information (e.g., analytical data, process knowledge, document number, etc.)

Historical data

1.3.5 Additional notes:

2.0 WASTE STREAM STORAGE, INVENTORY, AND GENERATION INFORMATION

(NOTE: For waste in satellite accumulation areas and 90-day accumulation areas, skip to Section 2.6.)

2.1 Current storage method

- ☐ Container (pad)
- ☐ Container (covered)
- ☐ Container (retrievably buried)
- ☐ Tank
- ☐ DST
- ☐ SST
- ☐ Other (explain):

2.1.1 How was the waste managed prior to storage?

2.1.2 Timeframe when waste was placed to storage?

LDR REPORT WASTE LOCATION-SPECIFIC DATA SHEET

2.2 Storage inventory locations:

Building/Room Number	Number of Containers/Tanks
N/A	N/A

2.3 Current stored inventory for this stream.

Total volume (cubic meters): 0.000

Date of inventory values: 12/31/2009

Comments on waste inventory:

Waste is managed in a satellite accumulation area.

2.4 Is storage capacity at this location potentially an issue for this waste stream?

☐ Yes ☐ No

If yes, what is the total estimated storage capacity?

When is this capacity expected to be reached?

Bases and assumptions used:

2.5 Planned storage areas for this waste:

☐ Current Location ☒ CWC ☐ DST

☐ Other Area(s) (list):

☐ None

2.6 Estimated generation projection by calendar year (includes waste in satellite and 90-day accumulation areas):

Year	m^3	and/or	kg
2010	0.300		0.000
2011	0.300		0.000
2012	0.300		0.000
2013	0.300		0.000
2014	0.300		0.000
Total	1.500		0.000

2.7 DOE Storage Compliance Assessment information:

☐ Assessment has been completed.

Document Number	Date

☐ Assessment has been scheduled. Scheduled date:

☒ Other. Explain: Not Applicable

LDR REPORT WASTE LOCATION-SPECIFIC DATA SHEET

2.8 Applicable Tri-Party Agreement milestones related to storage at this location:

Milestone Number	Due Date
N/A	

2.9 Has there ever been any non-permitted, unauthorized release of this waste stream from this storage unit to the environment?

☐ Yes ☒ No

If yes, summarize releases and quantities and provide date:

N/A

2.10 Are there any plans to submit requests for variances or other exemptions related to storage?

☐ Yes ☒ No

If yes, explain: N/A

2.11 Characterization

2.11.1 Is further characterization needed about the waste prior to acceptance for storage?

☐ Yes ☐ No ☒ Unknown at this time

Milestone Number	Due Date
N/A	N/A

If yes or unknown, comment on characterization for storage.

2.11.2 Is further characterization needed about the waste prior to acceptance for treatment?

☐ Yes ☐ No ☒ Unknown at this time

Milestone Number	Due Date
N/A	N/A

If yes or unknown, comment on characterization for treatment.

Characterization will be determined on a case by case basis

2.11.3 Is further characterization needed about the waste prior to acceptance for disposal?

☐ Yes ☐ No ☒ Unknown at this time

Milestone Number	Due Date
N/A	N/A

If yes or unknown, comment on characterization for disposal.

Characterization will be determined on a case by case basis

LDR REPORT WASTE LOCATION-SPECIFIC DATA SHEET

2.12 Other key assumptions related to storage, inventory, and generation information:

None

3.0 WASTE MINIMIZATION

3.1 Has a waste minimization assessment been completed for this stream?

☐ Yes ☒ No

If yes, provide date assessment conducted: N/A

If yes, provide document number or other identification:

N/A

If no, provide date assessment will be completed, or if waste stream is no longer generated, then indicate N/A:

N/A - One time generation

3.2 Provide details of current and proposed methods for minimizing the generation of this stream (e.g., process changes to reduce or eliminate LDR waste, methods to reduce volume through segregation and avoidance of commingling, substitution of less-toxic materials):

None

3.3 Waste minimization schedule

3.3.1 Reduction achieved during calendar year 2009 (volume or mass)

0.000 m3

3.3.2 Projected future waste volume reductions

Year	m^3	and/or	kg
2010	0.00		0.00
2011	0.00		0.00
2012	0.00		0.00
2013	0.00		0.00
2014	0.00		0.00
Total	0.00		0.00

3.3.3 Bases and assumptions used in above estimates:

None.

LDR REPORT WASTE LOCATION-SPECIFIC DATA SHEET

1.0 WASTE STREAM IDENTIFICATION AND SOURCE

1.1 Unit/Plant name: CWC **Waste Stream:** LDR Compliant

Treatabilitiy Group Name: MLLW-01 - LDR Compliant Waste

1.2 Applicable profile number(s) for this waste stream:

A WSRd identified in the treatability group data sheet section 1.2.

1.3 Waste stream source information

1.3.1 General description of the waste (e.g., spill clean-up waste, discarded lab materials, maintenance waste):

Backlog soils from around the waste tank farms, debris, particulates, and solidified liquids. All waste forms contain LDR compliant levels of dangerous waste constituents.

1.3.2 History of how and where the waste was/is generated:

Some of subject waste was generated in the early 1990s through various operation activities at the 200 East and 200 West DST and SST Systems. Other portion of subject waste was generated and put into CWC storage in boxes and drums prior to the implementation of the WSS.

1.3.3 Source of the regulated constituents:

Portions of the waste were incidentally contaminated with tank waste. Other waste is equipment from operations and maintenance of DST/SST systems.

1.3.4 Source of the information (e.g., analytical data, process knowledge, document number, etc.)

Analytical data, process knowledge.

1.3.5 Additional notes:

The backlog soils were selected as a direct disposal waste stream per DOE/RL/95-35, "Direct Disposal Team Report" (RL 1995a). The general past-practice and WSS LDR compliant waste is anticipated not to be restricted by LDRs; however, the waste will continue to be managed under dangerous waste regulation and be directly disposed of into a RCRA Subtitle-C or equivelent disposal cell located on the Hanford Site.

2.0 WASTE STREAM STORAGE, INVENTORY, AND GENERATION INFORMATION

(NOTE: For waste in satellite accumulation areas and 90-day accumulation areas, skip to Section 2.6.)

2.1 Current storage method

- ☐ Container (pad)
- ☒ Container (covered)
- ☐ Container (retrievably buried)
- ☐ Tank
- ☐ DST
- ☐ SST
- ☐ Other (explain):

2.1.1 How was the waste managed prior to storage?

Waste was placed in boxes and drums by generators.

LDR REPORT WASTE LOCATION-SPECIFIC DATA SHEET

2.1.2 Timeframe when waste was placed to storage?

Waste storage at CWC began in 1988 and continues.

2.2 Storage inventory locations:

Building/Room Number	Number of Containers/Tanks
CWC	2

2.3 Current stored inventory for this stream.

Total volume (cubic meters): 0.400

Date of inventory values: 12/31/2009

Comments on waste inventory:

Based on the inventory residing at CWC as reported in SWITS.

2.4 Is storage capacity at this location potentially an issue for this waste stream?

☐ Yes ☒ No

If yes, what is the total estimated storage capacity? N/A

When is this capacity expected to be reached? N/A

Bases and assumptions used:

No issues with CWC storage based on 20-year waste generation forecast.

2.5 Planned storage areas for this waste:

☒ Current Location ☒ CWC ☐ DST

☐ Other Area(s) (list):

☐ None

2.6 Estimated generation projection by calendar year (includes waste in satellite and 90-day accumulation areas):

Year	m^3	and/or	kg
2010	0.000		0.000
2011	0.000		0.000
2012	0.000		0.000
2013	0.000		0.000
2014	0.000		0.000
Total	0.000		0.000

2.7 DOE Storage Compliance Assessment information:

☒ Assessment has been completed.

Document Number	Date
A&E-SEC-02-001	01/21/2002

LDR REPORT WASTE LOCATION-SPECIFIC DATA SHEET

☐ Assessment has been scheduled. Scheduled date:

☐ Other. Explain:

2.8 Applicable Tri-Party Agreement milestones related to storage at this location:

Milestone Number	Due Date
N/A	

2.9 Has there ever been any non-permitted, unauthorized release of this waste stream from this storage unit to the environment?

☐ Yes ☒ No

If yes, summarize releases and quantities and provide date:

N/A

2.10 Are there any plans to submit requests for variances or other exemptions related to storage?

☐ Yes ☒ No

If yes, explain: N/A

2.11 Characterization

2.11.1 Is further characterization needed about the waste prior to acceptance for storage?

☐ Yes ☒ No ☐ Unknown at this time

Milestone Number	Due Date
N/A	N/A

If yes or unknown, comment on characterization for storage.

N/A

2.11.2 Is further characterization needed about the waste prior to acceptance for treatment?

☐ Yes ☐ No ☒ Unknown at this time

Milestone Number	Due Date
N/A	N/A

If yes or unknown, comment on characterization for treatment.

Should further treatment be required due to changing regulations, waste will be re-characterized for most efficient use of resources. Characterization will be performed as necessary to support the results of the active M-91 TPA negotiations.

2.11.3 Is further characterization needed about the waste prior to acceptance for disposal?

☐ Yes ☐ No ☒ Unknown at this time

LDR REPORT WASTE LOCATION-SPECIFIC DATA SHEET

Milestone Number	Due Date
N/A	N/A

If yes or unknown, comment on characterization for disposal.

Should further characterization be required due to changing regulations, waste will be re-characterized for most efficient use of resources. Characterization will be performed as necessary to support the results of the active M-91 TPA negotiations.

2.12 Other key assumptions related to storage, inventory, and generation information:

None.

3.0 WASTE MINIMIZATION

3.1 Has a waste minimization assessment been completed for this stream?

☐ Yes ☒ No

If yes, provide date assessment conducted: N/A

If yes, provide document number or other identification:

N/A

If no, provide date assessment will be completed, or if waste stream is no longer generated, then indicate N/A:

None planned - waste not generated at CWC.

3.2 Provide details of current and proposed methods for minimizing the generation of this stream (e.g., process changes to reduce or eliminate LDR waste, methods to reduce volume through segregation and avoidance of commingling, substitution of less-toxic materials):

These activities occur before the wastes are transferred/shipped to CWC. There are few opportunities to reduce waste volumes placed into storage.

3.3 Waste minimization schedule

3.3.1 Reduction achieved during calendar year 2009 (volume or mass)

0.000 m3

3.3.2 Projected future waste volume reductions

Year	m^3	and/or	kg
2010	0.00		0.00
2011	0.00		0.00
2012	0.00		0.00
2013	0.00		0.00
2014	0.00		0.00
Total	0.00		0.00

3.3.3 Bases and assumptions used in above estimates:

There is no projected waste generation by CWC.

LDR REPORT WASTE LOCATION-SPECIFIC DATA SHEET

1.0 WASTE STREAM IDENTIFICATION AND SOURCE

1.1 Unit/Plant name: PFP **Waste Stream:** Lab Chemicals/Reagents, LDR Compliant

Treatabilitiy Group Name: MLLW-01 - LDR Compliant Waste

1.2 Applicable profile number(s) for this waste stream:

To Be Determined

1.3 Waste stream source information

1.3.1 General description of the waste (e.g., spill clean-up waste, discarded lab materials, maintenance waste):

Spent or expired lab chemicals/reagents. Federal and State LDR compliant waste that does not require stabilization.

1.3.2 History of how and where the waste was/is generated:

Laboratory D&D

1.3.3 Source of the regulated constituents:

Intrinsically hazardous.

1.3.4 Source of the information (e.g., analytical data, process knowledge, document number, etc.)

Analytical data, process knowledge.

1.3.5 Additional notes:

None.

2.0 WASTE STREAM STORAGE, INVENTORY, AND GENERATION INFORMATION

(NOTE: For waste in satellite accumulation areas and 90-day accumulation areas, skip to Section 2.6.)

2.1 Current storage method

- ☐ Container (pad)
- ☐ Container (covered)
- ☐ Container (retrievably buried)
- ☐ Tank
- ☐ DST
- ☐ SST
- ☐ Other (explain):

2.1.1 How was the waste managed prior to storage?

N/A

2.1.2 Timeframe when waste was placed to storage?

N/A

2.2 Storage inventory locations:

Building/Room Number	Number of Containers/Tanks
N/A	N/A

LDR REPORT WASTE LOCATION-SPECIFIC DATA SHEET

2.3 Current stored inventory for this stream.

Total volume (cubic meters): 0.000

Date of inventory values: 12/31/2009

Comments on waste inventory:

Chemical product. When declared as waste, it is placed into a CERCLA waste area prior to transfer an approved CERCLA off-site facility.

2.4 Is storage capacity at this location potentially an issue for this waste stream?

☐ Yes ☒ No

If yes, what is the total estimated storage capacity? N/A

When is this capacity expected to be reached? N/A

Bases and assumptions used:

None.

2.5 Planned storage areas for this waste:

☐ Current Location ☐ CWC ☐ DST

☐ Other Area(s) (list):

☒ None

2.6 Estimated generation projection by calendar year (includes waste in satellite and 90-day accumulation areas):

Year	m^3	and/or	kg
2010	0.400		0.000
2011	0.400		0.000
2012	0.400		0.000
2013	0.000		0.000
2014	0.000		0.000
Total	1.200		0.000

2.7 DOE Storage Compliance Assessment information:

☒ Assessment has been completed.

Document Number	Date
PFP Env. Compliance Assess.; Ltr. # 01-A&E-129	09/13/2001

☐ Assessment has been scheduled. Scheduled date:

☐ Other. Explain:

LDR REPORT WASTE LOCATION-SPECIFIC DATA SHEET

2.8 Applicable Tri-Party Agreement milestones related to storage at this location:

Milestone Number	Due Date
N/A	

2.9 Has there ever been any non-permitted, unauthorized release of this waste stream from this storage unit to the environment?

☐ Yes ☒ No

If yes, summarize releases and quantities and provide date:

N/A

2.10 Are there any plans to submit requests for variances or other exemptions related to storage?

☐ Yes ☒ No

If yes, explain: N/A

2.11 Characterization

2.11.1 Is further characterization needed about the waste prior to acceptance for storage?

☐ Yes ☒ No ☐ Unknown at this time

Milestone Number	Due Date
N/A	N/A

If yes or unknown, comment on characterization for storage.

2.11.2 Is further characterization needed about the waste prior to acceptance for treatment?

☐ Yes ☒ No ☐ Unknown at this time

Milestone Number	Due Date
N/A	N/A

If yes or unknown, comment on characterization for treatment.

N/A

2.11.3 Is further characterization needed about the waste prior to acceptance for disposal?

☐ Yes ☒ No ☐ Unknown at this time

Milestone Number	Due Date
N/A	N/A

If yes or unknown, comment on characterization for disposal.

N/A

LDR REPORT WASTE LOCATION-SPECIFIC DATA SHEET

2.12 Other key assumptions related to storage, inventory, and generation information:

None.

3.0 WASTE MINIMIZATION

3.1 Has a waste minimization assessment been completed for this stream?

☒ Yes ☐ No

If yes, provide date assessment conducted: CY 2001

If yes, provide document number or other identification:

PFP 2001 Waste Minimization Evaluation for LDR Report Waste Streams, Letter# M2100-02-016.

If no, provide date assessment will be completed, or if waste stream is no longer generated, then indicate N/A:

3.2 Provide details of current and proposed methods for minimizing the generation of this stream (e.g., process changes to reduce or eliminate LDR waste, methods to reduce volume through segregation and avoidance of commingling, substitution of less-toxic materials):

PFP routinely evaluates the chemicals in the labs to ensure that there is an identified use for them. Chemicals with no justifiable use will be either recycled, if possible, or discarded as waste and not reordered.

3.3 Waste minimization schedule

3.3.1 Reduction achieved during calendar year 2009 (volume or mass)

0.000 m3

3.3.2 Projected future waste volume reductions

Year	m^3	and/or	kg
2010	0.00		0.00
2011	0.00		0.00
2012	0.00		0.00
2013	0.00		0.00
2014	0.00		0.00
Total	0.00		0.00

3.3.3 Bases and assumptions used in above estimates:

N/A

LDR REPORT WASTE LOCATION-SPECIFIC DATA SHEET

1.0 WASTE STREAM IDENTIFICATION AND SOURCE

1.1 Unit/Plant name: T Plant Complex **Waste Stream:** LDR Compliant

Treatabilitiy Group Name: MLLW-01 - LDR Compliant Waste

1.2 Applicable profile number(s) for this waste stream:

WSRd BLS, and 930.

1.3 Waste stream source information

1.3.1 General description of the waste (e.g., spill clean-up waste, discarded lab materials, maintenance waste):

Expired/excess chemicals from 221-T canyon cleanout, materials generated during routine maintenance and operations, and contaminated soil. Federal and state LDR compliant waste that does not require additional treatment.

1.3.2 History of how and where the waste was/is generated:

This waste is generated as a result of cleanout activities from the 221-T Canyon and from routine maintenance and operations. In addition, this waste is generated from various onsite locations and by offsite generators.

1.3.3 Source of the regulated constituents:

See 1.3.1 and 1.3.2.

1.3.4 Source of the information (e.g., analytical data, process knowledge, document number, etc.)

Analytical data and process knowledge.

1.3.5 Additional notes:

None.

2.0 WASTE STREAM STORAGE, INVENTORY, AND GENERATION INFORMATION

(NOTE: For waste in satellite accumulation areas and 90-day accumulation areas, skip to Section 2.6.)

2.1 Current storage method

- ☒ Container (pad)
- ☒ Container (covered)
- ☐ Container (retrievably buried)
- ☐ Tank
- ☐ DST
- ☐ SST
- ☐ Other (explain): T Plant Complex has a combination of covered and uncovered storage areas to support various waste management operations/activities. Depending upon the type of waste being managed, the waste can be stored in covered or uncovered storage locations. As an example: If the waste is bulk liquid, this waste might be stored in a storage building equipped with HVAC to prevent freezing.

2.1.1 How was the waste managed prior to storage?

Generated by various onsite and offsite generators.

LDR REPORT WASTE LOCATION-SPECIFIC DATA SHEET

2.1.2 Timeframe when waste was placed to storage?

1993 to present.

2.2 Storage inventory locations:

Building/Room Number	Number of Containers/Tanks
T Plant	0

2.3 Current stored inventory for this stream.

Total volume (cubic meters): 0.000

Date of inventory values: 12/31/2009

Comments on waste inventory:

Inventory fluctuates as T Plant Complex generates waste, or perform waste treatment/verification for onsite/offsite generators.

2.4 Is storage capacity at this location potentially an issue for this waste stream?

☐ Yes ☒ No

If yes, what is the total estimated storage capacity? N/A

When is this capacity expected to be reached? N/A

Bases and assumptions used:

N/A

2.5 Planned storage areas for this waste:

☒ Current Location ☒ CWC ☐ DST

☒ Other Area(s) (list): e.g., LLBG mixed waste trenches.

☐ None

2.6 Estimated generation projection by calendar year (includes waste in satellite and 90-day accumulation areas):

Year	m^3	and/or	kg
2010	0.000		0.000
2011	0.000		0.000
2012	0.000		0.000
2013	0.000		0.000
2014	0.000		0.000
Total	0.000		0.000

2.7 DOE Storage Compliance Assessment information:

☒ Assessment has been completed.

LDR REPORT WASTE LOCATION-SPECIFIC DATA SHEET

Document Number	Date
01- A&E-012	11/28/2000

☒ Assessment has been scheduled. Scheduled date: 3rd quarter 2005.

☐ Other. Explain:

2.8 Applicable Tri-Party Agreement milestones related to storage at this location:

Milestone Number	Due Date
N/A	

2.9 Has there ever been any non-permitted, unauthorized release of this waste stream from this storage unit to the environment?

☐ Yes ☒ No

If yes, summarize releases and quantities and provide date:

N/A

2.10 Are there any plans to submit requests for variances or other exemptions related to storage?

☐ Yes ☒ No

If yes, explain: N/A

2.11 Characterization

2.11.1 Is further characterization needed about the waste prior to acceptance for storage?

☐ Yes ☒ No ☐ Unknown at this time

Milestone Number	Due Date
N/A	N/A

If yes or unknown, comment on characterization for storage.

N/A

2.11.2 Is further characterization needed about the waste prior to acceptance for treatment?

☐ Yes ☒ No ☐ Unknown at this time

Milestone Number	Due Date
N/A	N/A

If yes or unknown, comment on characterization for treatment.

N/A

2.11.3 Is further characterization needed about the waste prior to acceptance for disposal?

☐ Yes ☒ No ☐ Unknown at this time

LDR REPORT WASTE LOCATION-SPECIFIC DATA SHEET

Milestone Number	Due Date
N/A	N/A

If yes or unknown, comment on characterization for disposal.

N/A

2.12 Other key assumptions related to storage, inventory, and generation information:

Projection volumes for this waste stream are expected to fluctuate as 221-T Canyon cleanout continues as well as from maintenance and other operation activities. The generation rates will be updated as necessary.

3.0 WASTE MINIMIZATION

3.1 Has a waste minimization assessment been completed for this stream?

☐ Yes ☒ No

If yes, provide date assessment conducted: N/A

If yes, provide document number or other identification:

N/A

If no, provide date assessment will be completed, or if waste stream is no longer generated, then indicate N/A:

See Section 3.3.3 for discussion on waste minimization.

3.2 Provide details of current and proposed methods for minimizing the generation of this stream (e.g., process changes to reduce or eliminate LDR waste, methods to reduce volume through segregation and avoidance of commingling, substitution of less-toxic materials):

This waste will be generated as part of cleanup activities from the 221-T, maintenance, and operations. In addition, this waste is generated from various onsite and offsite generators. Waste minimization techniques are incorporated to the extent practical at the T Plant Complex including segregation of low-level waste from mixed waste.

3.3 Waste minimization schedule

3.3.1 Reduction achieved during calendar year 2009 (volume or mass)

0.000 m3

3.3.2 Projected future waste volume reductions

Year	m^3	and/or	kg
2010	0.00		0.00
2011	0.00		0.00
2012	0.00		0.00
2013	0.00		0.00
2014	0.00		0.00
Total	0.00		0.00

3.3.3 Bases and assumptions used in above estimates:

LDR REPORT WASTE LOCATION-SPECIFIC DATA SHEET

The T Plant Complex has submitted a P2/Wmin fiscal year 2004 goal to reduce, where possible, mixed waste generation. For FY 2004 to 2008, new goals will be evaluated and identified on a year-by-year basis. The T Plant Complex does not track waste reduction by treatability groups. Routine and non-routine generated waste is reported quarterly to the Waste Minimization/Pollution Prevention Group.

LDR REPORT WASTE LOCATION-SPECIFIC DATA SHEET

1.0 WASTE STREAM IDENTIFICATION AND SOURCE

1.1 Unit/Plant name: WRAP **Waste Stream:** LDR Compliant

Treatabilitiy Group Name: MLLW-01 - LDR Compliant Waste

1.2 Applicable profile number(s) for this waste stream:

A WSRd identified in the treatability group data sheet section 1.2.

1.3 Waste stream source information

1.3.1 General description of the waste (e.g., spill clean-up waste, discarded lab materials, maintenance waste):

Can consist of soils, debris, particulates, etc. with LDR compliant levels of hazardous constituents, and/or state-only dangerous constituents. This waste does not include hazardous debris other than incidental debris material commingled with the non-debris.

1.3.2 History of how and where the waste was/is generated:

The waste was generated at many onsite locations and also by offsite generators.

1.3.3 Source of the regulated constituents:

See 1.3.1 and 1.3.2.

1.3.4 Source of the information (e.g., analytical data, process knowledge, document number, etc.)

Process knowledge.

1.3.5 Additional notes:

Waste at WRAP comes from various generators and generating processes around the Hanford Site due to WRAP's verification and repackaging mission.

2.0 WASTE STREAM STORAGE, INVENTORY, AND GENERATION INFORMATION

(NOTE: For waste in satellite accumulation areas and 90-day accumulation areas, skip to Section 2.6.)

2.1 Current storage method

- ☐ Container (pad)
- ☒ Container (covered)
- ☐ Container (retrievably buried)
- ☐ Tank
- ☐ DST
- ☐ SST
- ☐ Other (explain): N/A

2.1.1 How was the waste managed prior to storage?

Waste was repackaged at WRAP.

2.1.2 Timeframe when waste was placed to storage?

MLLW at WRAP is both MLLW dating back to the late 80's as well as newly generated MLLW.

LDR REPORT WASTE LOCATION-SPECIFIC DATA SHEET

2.2 Storage inventory locations:

Building/Room Number	Number of Containers/Tanks
WRAP	0

2.3 Current stored inventory for this stream.

Total volume (cubic meters): 0.000

Date of inventory values: 12/30/2009

Comments on waste inventory:

Based on the inventory residing at WRAP as reported in SWITS.

2.4 Is storage capacity at this location potentially an issue for this waste stream?

☐ Yes ☒ No

If yes, what is the total estimated storage capacity? N/A

When is this capacity expected to be reached? N/A

Bases and assumptions used:

Due to proximity to and interchange with CWC, there is no storage capacity issue at WRAP.

2.5 Planned storage areas for this waste:

☒ Current Location ☒ CWC ☐ DST

☐ Other Area(s) (list):

☐ None

2.6 Estimated generation projection by calendar year (includes waste in satellite and 90-day accumulation areas):

Year	m^3	and/or	kg
2010	0.000		0.000
2011	0.000		0.000
2012	0.000		0.000
2013	0.000		0.000
2014	0.000		0.000
Total	0.000		0.000

2.7 DOE Storage Compliance Assessment information:

☒ Assessment has been completed.

Document Number	Date
DE-AC06-96RL13200	09/26/2001

☐ Assessment has been scheduled. Scheduled date:

☐ Other. Explain:

LDR REPORT WASTE LOCATION-SPECIFIC DATA SHEET

2.8 Applicable Tri-Party Agreement milestones related to storage at this location:

Milestone Number	Due Date
N/A	

2.9 Has there ever been any non-permitted, unauthorized release of this waste stream from this storage unit to the environment?

☐ Yes ☒ No

If yes, summarize releases and quantities and provide date:

N/A

2.10 Are there any plans to submit requests for variances or other exemptions related to storage?

☐ Yes ☒ No

If yes, explain: N/A

2.11 Characterization

2.11.1 Is further characterization needed about the waste prior to acceptance for storage?

☐ Yes ☒ No ☐ Unknown at this time

Milestone Number	Due Date
N/A	N/A

If yes or unknown, comment on characterization for storage.

N/A

2.11.2 Is further characterization needed about the waste prior to acceptance for treatment?

☐ Yes ☒ No ☐ Unknown at this time

Milestone Number	Due Date
N/A	N/A

If yes or unknown, comment on characterization for treatment.

N/A

2.11.3 Is further characterization needed about the waste prior to acceptance for disposal?

☐ Yes ☒ No ☐ Unknown at this time

Milestone Number	Due Date
N/A	N/A

If yes or unknown, comment on characterization for disposal.

N/A

LDR REPORT WASTE LOCATION-SPECIFIC DATA SHEET

2.12 Other key assumptions related to storage, inventory, and generation information:

None.

3.0 WASTE MINIMIZATION

3.1 Has a waste minimization assessment been completed for this stream?

☐ Yes ☒ No

If yes, provide date assessment conducted: N/A

If yes, provide document number or other identification:

N/A

If no, provide date assessment will be completed, or if waste stream is no longer generated, then indicate N/A:

N/A

3.2 Provide details of current and proposed methods for minimizing the generation of this stream (e.g., process changes to reduce or eliminate LDR waste, methods to reduce volume through segregation and avoidance of commingling, substitution of less-toxic materials):

To the extent practical, all mixed waste is segregated and packaged separately from LLW or TRU wastes. To minimize the generation of mixed waste, WRAP actively seeks nondangerous alternatives for the dangerous constituents in their processes.

3.3 Waste minimization schedule

3.3.1 Reduction achieved during calendar year 2009 (volume or mass)

0.000 m3

3.3.2 Projected future waste volume reductions

Year	m^3	and/or	kg
2010	0.00		0.00
2011	0.00		0.00
2012	0.00		0.00
2013	0.00		0.00
2014	0.00		0.00
Total	0.00		0.00

3.3.3 Bases and assumptions used in above estimates:

Since subject waste has already been generated, no additional waste minimization activities are planned.

This page intentionally left blank.

MLLW-02 – Inorganic
Non-Debris

LDR REPORT TREATABILITY GROUP DATA SHEET

1.0 WASTE STREAM IDENTIFICATION

1.1 Treatability Group Name: MLLW-02 - Inorganic Non-Debris

1.2 Description of waste (list WSRd numbers for this waste stream, as applicable)

This treatability group is for non-debris waste that contains hazardous constituents that either requires non-thermal treatment (specified technology) or non-thermal treatment is BDAT for meeting the applicable LDR treatment standards (concentration-based standards). The applicable WSRds for this treatability group are: 420, 421, 422, 425, 426, 428, 506, 507, 521, 523, 524, 525, 900, 901, 902, and 904. This waste consists of many different inorganic solids (e.g., particulates, absorbed liquids, sludges, resin beads, soils) and lab packs that are contaminated with regulated metals and other inorganics. This waste treatability group does not include hazardous debris other than incidental debris material commingled with the non-debris.

2.0 WASTE INVENTORY AND GENERATION

2.1 Current total inventory for this waste stream (stored waste only, not accumulation areas). [Equals sum of location-specific data sheets for this treatability group.]

Total volume (cubic meters): 2.300

2.2 Estimated generation projection by calendar year: [equals annual sums of location-specfic data sheets for this treatability group].

Year	m^3	and/or	kg
2010	0.000		0.000
2011	0.000		0.000
2012	0.000		0.000
2013	0.000		0.000
2014	0.000		0.000
Total	0.000		0.000

3.0 WASTE STREAM CHARACTERIZATION

3.1 Radiological Characteristics

3.1.1 Mixed waste type: ☐ High-level ☐ Transuranic ☒ Low-level

3.1.2 Handling (as package contents would need to be handled during treatment):

☒ Contact-handled ☐ Remote-handled

3.1.3 Comments on radiological characteristics (e.g., more specific information on content, treatment concerns caused by radiation, confidence level):

This waste is a general category based on dangerous waste physical and chemical characteristics; therefore, the radiological characteristics vary greatly between individual waste packages. The waste meets low-level-waste requirements as defined by DOE Order 435.1. This treatability group is for Contact Handled (CH) waste. Greater than Hanford Category 1 (GTC1) waste will normally be radiologically stabilization prior to disposal; however, radiological stabilization may take place in the disposal unit.

LDR REPORT TREATABILITY GROUP DATA SHEET

3.2 Physical Form

3.2.1 Physical form of the waste:

☒ Solid ☒ Liquid ☒ Semi-solid ☐ Debris

☒ Other (Describe in comments.)

3.2.2 Comments on physical form:

This waste consists primarily of soils, sludges, particulates, labpacked and bulk non-wastewater liquids. The majority of the waste packages are 55-gal and 85-gal drums, but smaller sized boxes are also utilized. The packages normally also contain absorbent materials, plastic liners and/or small amounts of misc. step-of-pad waste (i.e., debris) materials.

3.3 Regulated constituents and wastewater/non-wastewater category

3.3.1 Wastewater/non-wastewater under RCRA

☐ Wastewater ☒ Non-wastewater ☐ Unknown

3.3.2 Regulated constituents table including treatment requirements and UHCs, if applicable.

EPA/ State Number	Waste Description	LDR Sub-Category*	Concentration (Typical or Range)**	Basis	LDR Treatment Concentration Standard or Technology Code
D001	Ignitable	Ignitable Charac.	***	***	DEACT and meet 40 CFR 268.48
D002	Corrosive	Corrosive Charac.	***	***	DEACT and meet 40 CFR 268.48
D004	TC-Arsenic	N/A	***	***	5.0 mg/l TCLP and meet 40 CFR 268.48
D005	TC-Barium	N/A	***	***	21 mg/l TCLP and meet 40 CFR 268.48
D006	TC-Cadmium	Cadmium Charac.	***	***	0.11 mg/l TCLP and meet 40 CFR 268.48
D007	TC-Chromium	N/A	***	***	0.60 mg/l TCLP and meet 40 CFR 268.48

LDR REPORT TREATABILITY GROUP DATA SHEET

EPA/ State Number	Waste Description	LDR Sub-Category*	Concentration (Typical or Range)**	Basis	LDR Treatment Concentration Standard or Technology Code
D008	TC-Lead	Lead Charac.	***	***	0.75 mg/l TCLP and meet 40 CFR 268.48
D009	Mercury	All D009 Wastewaters	***	***	0.15 and meet 268.48 standard
D009	TC-Mercury	Low Mercury	<260 mg/kg	***	0.20 mg/l TCLP and meet 40 CFR 268.48
D010	TC-Selenium	N/A	***	***	5.7 mg/l TCLP and meet 40 CFR 268.48
D011	TC-Silver	N/A	***	***	0.14 mg/l TCLP and meet 40 CFR 268.48
F001	F001-F005 constituent	Spent Solvent	<6.0 mg/kg	****	6.0 mg/kg
F002	F001-F005 constituent	Spent Solvent	<30 mg/kg	****	30 mg/kg
F003	F001-F005 constituent	Spent Solvent	<160 mg/kg	****	160 mg/kg
F004	F001-F005 constituent	Spent Solvent	<5.6 mg/kg	****	5.6 mg/kg
F005	F001-F005 constituent	Spent Solvent	<36 mg/kg	****	36 mg/kg
F039	Applicable Metals	N/A	***	***	Applicable Metals
WP01	State Only Constituents	N/A	***	***	N/A
WP02	Persistent, DW	N/A	***	***	N/A
WSC2	Solid Corrosive	N/A	<=2.5 pH	Process Knowledge	Remove Solid Acid Charac.
WT01	Toxic, EHW	N/A	***	***	None (1)
WT02	Toxic, DW	N/A	***	***	N/A

* LDR Subcategory marked N/A if no existing subcategory adequately describes this waste, or if there are no defined subcategories for the waste number (40 CFR 268.40).

** If waste is not consistent in concentration, this may not apply. Described in Section 3.3.6.

***The concentration varies and is based on process knowledge and/or analytical data.

(1) Mixed extremely hazardous wastes may be land disposed in Washington State in DOE facilities in accordance with RCW 70.105.050(2).

UHCs to be determined on a per-package basis during waste receipt, from characterization activities, or when the waste is sent for treatment.
(1) Mixed extremely hazardous wastes may be land-disposed in Washington State in DOE facilities in accordance with RCW 70.105.050 (2)

**** - F001 - F005 constituents are LDR compliant at the point of generation or treated for the solvent constituent.

3.3.3 List any waste numbers from Section 3.3.2 for which the waste stream already meets established LDR treatment standards.

☒ List: F001-F005 (Tank Farm contacted waste).

LDR REPORT TREATABILITY GROUP DATA SHEET

☐ No LDR treatment required (e.g. TRUM waste destined for WIPP, exclusion, etc.)

☐ None (i.e. all constituents/waste numbers of this waste stream still require treatment).

3.3.4 Does this waste stream contain PCBs?

☐ Yes ☒ No ☐ Unknown

If no or unknown, skip to Section 3.3.5.

3.3.4.1 Is waste stream subject to TSCA regulations for PCBs?

☐ Yes ☐ No ☐ Unknown

3.3.4.2 Indicate the PCB concentration range.

☐ < 50 ppm ☐ ≥ 50 ppm ☐ Unknown

3.3.5 What is the confidence level for the regulated constituents?

☐ Low ☒ Medium ☐ High

3.3.6 Comments on regulated constituents and wastewater/non-wastewater category:

Waste received under the Waste Specification System (WSS) has a high confidence level. Waste received prior to establishment of the WSS has a medium to low confidence level and may require characterization conformation by the waste treater prior to treatment and disposal. If, during the conformation process it is determined that some of the waste does not meet the MLLW-02 waste stream description, then it will be reassigned into the appropriate waste stream (e.g., MLLW-03 through -10) and treated accordingly. The LDR class, wastewater or nonwastewater will be determined per container.

4.0 WASTE STREAM TREATMENT

4.1 Is this waste stream currently being treated?

☒ Yes ☐ No

If yes, provide details: This waste is being commercially treated by several treatment vendors (e.g., Perma-Fix Environmental, EnergySolutions, etc.). Currently, there is sufficient capability/capacity to treat the stored and forecasted waste volumes.

LDR REPORT TREATABILITY GROUP DATA SHEET

4.2 Planned treatment: Check the appropriate box indicating future plans for treating this waste stream to meet applicable regulations, including LDR treatment standards.

☐ No treatment required (skip to Section 5.0)

☒ Treating or plan to treat on site

☒ Treating or plan to treat off site

☐ Treatment options still being assessed

4.3 Planned treatment method, facility, extent of treatment capacity available:

Deactivation and/or stablization are the primary treatment methods for this waste. Currently, there is sufficent commerical treatment capability/capacity avalable to handle the forecasted waste volumes.

4.4 Treatment schedule information:

Treatment is on-going to meet objectives set-forth in TPA Milestone M-91-42.

4.5 Applicable Tri-Party Agreement treatment milestone numbers (including permitting):

Milestone Number	Due Date
M-091-42Q	

4.6 Proposed new Tri-Party Agreement treatment milestones:

Currently in negotiations with the TPA members.

4.7 If treating or planning to treat on site, was or will waste minimization be addressed in developing and/or selecting the treatment method?

☒ Yes ☐ No ☐ Unknown

If yes, describe: To the extent practical, all mixed waste is segregated and packaged separately from LLW or TRU wastes. The volume of mixed waste is reduced by in-drum compaction when possible, and where it does not interfere with future treatment activities. To minimize the generation of mixed waste, generators actively seek nondangerous alternatives for the dangerous constituents in their processes. Minimization goals are set annually and tracked quarterly and waste treatment is used to destroy the hazardous constituents, as allowable.

4.8 List or describe treatability equivalency petitions, rulemaking petitions, and case-by-case exemptions needed for treatment or already in place.

No new petitions identified at this time for this waste stream.

4.9 Key Assumptions:

None.

5.0 WASTE STREAM DISPOSAL

After treatment, how will the waste stream be disposed of (include locations, milestone numbers, variances required, etc. as applicable):

Treated waste residues will be disposed back at the Hanford Site (e.g., Mixed Waste Disposal Unit) or at a commerical waste disposal site (e.g., EnergySolutions Clive).

LDR REPORT WASTE LOCATION-SPECIFIC DATA SHEET

1.0 WASTE STREAM IDENTIFICATION AND SOURCE

1.1 Unit/Plant name: CWC **Waste Stream:** Inorganic Non-Debris Solids and Labpacks

Treatabilitiy Group Name: MLLW-02 - Inorganic Non-Debris

1.2 Applicable profile number(s) for this waste stream:

A WSRd identified in the treatability group data sheet section 1.2.

1.3 Waste stream source information

1.3.1 General description of the waste (e.g., spill clean-up waste, discarded lab materials, maintenance waste):

This waste stream consists of many different inorganic solids including particulates, absorbed liquids, sludges, labpacks, paint waste, salt waste, etc. This waste does not include hazardous debris other than incidental debris material commingled with the non-debris.

1.3.2 History of how and where the waste was/is generated:

The waste was generated at many onsite locations and by offsite generators. The inventory was primarily from the closure of the 183-H Solar Basins.

1.3.3 Source of the regulated constituents:

See 1.3.1 and 1.3.2.

1.3.4 Source of the information (e.g., analytical data, process knowledge, document number, etc.)

Analytical data and process knowledge.

1.3.5 Additional notes:

None.

2.0 WASTE STREAM STORAGE, INVENTORY, AND GENERATION INFORMATION

(NOTE: For waste in satellite accumulation areas and 90-day accumulation areas, skip to Section 2.6.)

2.1 Current storage method

- ☐ Container (pad)
- ☒ Container (covered)
- ☐ Container (retrievably buried)
- ☐ Tank
- ☐ DST
- ☐ SST
- ☐ Other (explain):

2.1.1 How was the waste managed prior to storage?

Accumulated and packaged by waste generators prior to storage at CWC.

2.1.2 Timeframe when waste was placed to storage?

Waste storage in CWC began in 1988 and continues.

LDR REPORT WASTE LOCATION-SPECIFIC DATA SHEET

2.2 Storage inventory locations:

Building/Room Number	Number of Containers/Tanks
CWC	11

2.3 Current stored inventory for this stream.

Total volume (cubic meters): 2.300

Date of inventory values: 12/31/2009

Comments on waste inventory:

Based on the inventory residing at CWC as reported in SWITS.

2.4 Is storage capacity at this location potentially an issue for this waste stream?

☐ Yes ☒ No

If yes, what is the total estimated storage capacity? N/A

When is this capacity expected to be reached? N/A

Bases and assumptions used:

No issues with CWC storage based on 20-year waste generation forecast.

2.5 Planned storage areas for this waste:

☒ Current Location ☒ CWC ☐ DST

☐ Other Area(s) (list):

☐ None

2.6 Estimated generation projection by calendar year (includes waste in satellite and 90-day accumulation areas):

Year	m^3	and/or	kg
2010	0.000		0.000
2011	0.000		0.000
2012	0.000		0.000
2013	0.000		0.000
2014	0.000		0.000
Total	0.000		0.000

2.7 DOE Storage Compliance Assessment information:

☒ Assessment has been completed.

Document Number	Date
A&E-SEC-02-001	01/21/2002

☐ Assessment has been scheduled. Scheduled date:

☐ Other. Explain:

LDR REPORT WASTE LOCATION-SPECIFIC DATA SHEET

2.8 Applicable Tri-Party Agreement milestones related to storage at this location:

Milestone Number	Due Date
N/A	

2.9 Has there ever been any non-permitted, unauthorized release of this waste stream from this storage unit to the environment?

☐ Yes ☒ No

If yes, summarize releases and quantities and provide date:

N/A

2.10 Are there any plans to submit requests for variances or other exemptions related to storage?

☐ Yes ☒ No

If yes, explain: N/A

2.11 Characterization

2.11.1 Is further characterization needed about the waste prior to acceptance for storage?

☐ Yes ☒ No ☐ Unknown at this time

Milestone Number	Due Date
N/A	N/A

If yes or unknown, comment on characterization for storage.

N/A

2.11.2 Is further characterization needed about the waste prior to acceptance for treatment?

☐ Yes ☒ No ☐ Unknown at this time

Milestone Number	Due Date
N/A	N/A

If yes or unknown, comment on characterization for treatment.

N/A

2.11.3 Is further characterization needed about the waste prior to acceptance for disposal?

☒ Yes ☐ No ☐ Unknown at this time

Milestone Number	Due Date
N/A	N/A

If yes or unknown, comment on characterization for disposal.

To meet concentration based treatment standards applicable for the residues, sampling will be required after treatment. No commitment is necessary for the characterization needs on this MLLW.

LDR REPORT WASTE LOCATION-SPECIFIC DATA SHEET

2.12 Other key assumptions related to storage, inventory, and generation information:

N/A

3.0 WASTE MINIMIZATION

3.1 Has a waste minimization assessment been completed for this stream?

☐ Yes ☒ No

If yes, provide date assessment conducted: N/A

If yes, provide document number or other identification:

N/A

If no, provide date assessment will be completed, or if waste stream is no longer generated, then indicate N/A:

None planned - waste not generated at CWC.

3.2 Provide details of current and proposed methods for minimizing the generation of this stream (e.g., process changes to reduce or eliminate LDR waste, methods to reduce volume through segregation and avoidance of commingling, substitution of less-toxic materials):

These activities occur before the wastes are transferred/shipped to CWC. There are few opportunities to reduce waste volumes placed into storage.

3.3 Waste minimization schedule

3.3.1 Reduction achieved during calendar year 2009 (volume or mass)

0.000 m3

3.3.2 Projected future waste volume reductions

Year	m^3	and/or	kg
2010	0.00		0.00
2011	0.00		0.00
2012	0.00		0.00
2013	0.00		0.00
2014	0.00		0.00
Total	0.00		0.00

3.3.3 Bases and assumptions used in above estimates:

There is no projected waste generation by CWC.

LDR REPORT WASTE LOCATION-SPECIFIC DATA SHEET

1.0 WASTE STREAM IDENTIFICATION AND SOURCE

1.1 Unit/Plant name: T Plant Complex **Waste Stream:** Inorganic Non-Debris

Treatabilitiy Group Name: MLLW-02 - Inorganic Non-Debris

1.2 Applicable profile number(s) for this waste stream:

WSRd: 420., 421

1.3 Waste stream source information

1.3.1 General description of the waste (e.g., spill clean-up waste, discarded lab materials, maintenance waste):

Mixed waste solids, sorbed liquids and soils, subcategory - other solids (non-thermal treatment). This waste does not include hazardous debris other than incidental debris material commingled with the non-debris.

1.3.2 History of how and where the waste was/is generated:

The waste was generated at many onsite locations and also by offsite generators.

1.3.3 Source of the regulated constituents:

See 1.3.1 and 1.3.2.

1.3.4 Source of the information (e.g., analytical data, process knowledge, document number, etc.)

Analytical data and/or process knowledge.

1.3.5 Additional notes:

None.

2.0 WASTE STREAM STORAGE, INVENTORY, AND GENERATION INFORMATION

(NOTE: For waste in satellite accumulation areas and 90-day accumulation areas, skip to Section 2.6.)

2.1 Current storage method

- ☒ Container (pad)
- ☒ Container (covered)
- ☐ Container (retrievably buried)
- ☐ Tank
- ☐ DST
- ☐ SST
- ☐ Other (explain): N/A

2.1.1 How was the waste managed prior to storage?

Waste generated at numerous onsite locations and by offsite generators.

2.1.2 Timeframe when waste was placed to storage?

1994 to present.

2.2 Storage inventory locations:

Building/Room Number	Number of Containers/Tanks
T Plant Complex	0

LDR REPORT WASTE LOCATION-SPECIFIC DATA SHEET

2.3 Current stored inventory for this stream.

Total volume (cubic meters): 0.000

Date of inventory values: 12/31/2009

Comments on waste inventory:

Inventory will fluctuate as T Plant Complex generates or performs treatment/verification of onsite/offsite generators waste.

2.4 Is storage capacity at this location potentially an issue for this waste stream?

☐ Yes ☒ No

If yes, what is the total estimated storage capacity? N/A

When is this capacity expected to be reached? N/A

Bases and assumptions used:

N/A

2.5 Planned storage areas for this waste:

☒ Current Location ☒ CWC ☐ DST

☐ Other Area(s) (list): N/A

☐ None

2.6 Estimated generation projection by calendar year (includes waste in satellite and 90-day accumulation areas):

Year	m^3	and/or	kg
2010	0.000		0.000
2011	0.000		0.000
2012	0.000		0.000
2013	0.000		0.000
2014	0.000		0.000
Total	0.000		0.000

2.7 DOE Storage Compliance Assessment information:

☒ Assessment has been completed.

Document Number	Date
01-A&E-012	11/28/2000

☒ Assessment has been scheduled. Scheduled date: 3rd quarter CY2005.

☐ Other. Explain:

LDR REPORT WASTE LOCATION-SPECIFIC DATA SHEET

2.8 Applicable Tri-Party Agreement milestones related to storage at this location:

Milestone Number	Due Date
N/A	

2.9 Has there ever been any non-permitted, unauthorized release of this waste stream from this storage unit to the environment?

☐ Yes ☒ No

If yes, summarize releases and quantities and provide date:

N/A

2.10 Are there any plans to submit requests for variances or other exemptions related to storage?

☐ Yes ☒ No

If yes, explain: N/A

2.11 Characterization

2.11.1 Is further characterization needed about the waste prior to acceptance for storage?

☐ Yes ☒ No ☐ Unknown at this time

Milestone Number	Due Date
N/A	N/A

If yes or unknown, comment on characterization for storage.

N/A

2.11.2 Is further characterization needed about the waste prior to acceptance for treatment?

☒ Yes ☐ No ☐ Unknown at this time

Milestone Number	Due Date
N/A	N/A

If yes or unknown, comment on characterization for treatment.

Will be completed during activities to facilitate transfer of the container to CWC. No commitment is necessary for the characterization needs on this MLLW.

2.11.3 Is further characterization needed about the waste prior to acceptance for disposal?

☒ Yes ☐ No ☐ Unknown at this time

Milestone Number	Due Date
N/A	N/A

If yes or unknown, comment on characterization for disposal.

To meet concentration based treatment standards applicable for the residues, sampling will be required after treatment. No commitment is necessary for the characterization needs on this MLLW.

LDR REPORT WASTE LOCATION-SPECIFIC DATA SHEET

2.12 Other key assumptions related to storage, inventory, and generation information:

None.

3.0 WASTE MINIMIZATION

3.1 Has a waste minimization assessment been completed for this stream?

☐ Yes ☒ No

If yes, provide date assessment conducted:

If yes, provide document number or other identification:

N/A

If no, provide date assessment will be completed, or if waste stream is no longer generated, then indicate N/A:

See Section 3.3.3 for discussion on waste minimization.

3.2 Provide details of current and proposed methods for minimizing the generation of this stream (e.g., process changes to reduce or eliminate LDR waste, methods to reduce volume through segregation and avoidance of commingling, substitution of less-toxic materials):

To the extent practical, all mixed waste is segregated and packaged separately from LLW or TRU wastes. To minimize the generation of mixed waste, T Plant actively seeks nondangerous alternatives for the dangerous constituents in their processes. Minimization goals are set annually and tracked quarterly, and waste treatment is used to destroy the hazardous constituents, as allowable.

3.3 Waste minimization schedule

3.3.1 Reduction achieved during calendar year 2009 (volume or mass)

0.000 m3

3.3.2 Projected future waste volume reductions

Year	m^3	and/or	kg
2010	0.00		0.00
2011	0.00		0.00
2012	0.00		0.00
2013	0.00		0.00
2014	0.00		0.00
Total	0.00		0.00

3.3.3 Bases and assumptions used in above estimates:

The T Plant Complex has submitted a P2/Wmin fiscal year 2004 goal to reduce, where possible, mixed waste generation. For FY 2004 to 2008, new goals will be evaluated and identified on a year-by-year basis. T Plant Complex does not track waste reduction by treatability groups. Routine and non-routine generated waste is reported quarterly to the Waste Minimization/Pollution Prevention Group.

LDR REPORT WASTE LOCATION-SPECIFIC DATA SHEET

1.0 WASTE STREAM IDENTIFICATION AND SOURCE

1.1 Unit/Plant name: WRAP **Waste Stream:** Inorganic Non-Debris Solids and Labpacks

Treatabilitiy Group Name: MLLW-02 - Inorganic Non-Debris

1.2 Applicable profile number(s) for this waste stream:

A WSRd identified in the treatability group data sheet section 1.2.

1.3 Waste stream source information

1.3.1 General description of the waste (e.g., spill clean-up waste, discarded lab materials, maintenance waste):

This waste stream consists of many different inorganic solids including particulates, absorbed liquids, sludges, labpacks, paint waste, salt waste, etc. This waste does not include hazardous debris other than incidental debris material commingled with the non-debris.

1.3.2 History of how and where the waste was/is generated:

The waste was generated at many onsite locations and by offsite generators.

1.3.3 Source of the regulated constituents:

See 1.3.1 and 1.3.2.

1.3.4 Source of the information (e.g., analytical data, process knowledge, document number, etc.)

Analytical data and process knowledge.

1.3.5 Additional notes:

None.

2.0 WASTE STREAM STORAGE, INVENTORY, AND GENERATION INFORMATION

(NOTE: For waste in satellite accumulation areas and 90-day accumulation areas, skip to Section 2.6.)

2.1 Current storage method

- ☐ Container (pad)
- ☒ Container (covered)
- ☐ Container (retrievably buried)
- ☐ Tank
- ☐ DST
- ☐ SST
- ☐ Other (explain):

2.1.1 How was the waste managed prior to storage?

Accumulated and packaged by waste generators prior to storage at WRAP.

2.1.2 Timeframe when waste was placed to storage?

Ongoing.

LDR REPORT WASTE LOCATION-SPECIFIC DATA SHEET

2.2 Storage inventory locations:

Building/Room Number	Number of Containers/Tanks
WRAP	0

2.3 Current stored inventory for this stream.

Total volume (cubic meters): 0.000

Date of inventory values: 12/30/2009

Comments on waste inventory:

Based on the inventory residing at WRAP as reported in SWITS.

2.4 Is storage capacity at this location potentially an issue for this waste stream?

☐ Yes ☒ No

If yes, what is the total estimated storage capacity? N/A

When is this capacity expected to be reached? N/A

Bases and assumptions used:

No issues with WRAP storage based on 20-year waste generation forecast.

2.5 Planned storage areas for this waste:

☒ Current Location ☐ CWC ☐ DST

☐ Other Area(s) (list):

☐ None

2.6 Estimated generation projection by calendar year (includes waste in satellite and 90-day accumulation areas):

Year	m^3	and/or	kg
2010	0.000		0.000
2011	0.000		0.000
2012	0.000		0.000
2013	0.000		0.000
2014	0.000		0.000
Total	0.000		0.000

2.7 DOE Storage Compliance Assessment information:

☒ Assessment has been completed.

Document Number	Date
DE-AC06-96RL13200	09/26/2001

☐ Assessment has been scheduled. Scheduled date:

☐ Other. Explain:

LDR REPORT WASTE LOCATION-SPECIFIC DATA SHEET

2.8 Applicable Tri-Party Agreement milestones related to storage at this location:

Milestone Number	Due Date
N/A	

2.9 Has there ever been any non-permitted, unauthorized release of this waste stream from this storage unit to the environment?

☐ Yes ☒ No

If yes, summarize releases and quantities and provide date:

N/A

2.10 Are there any plans to submit requests for variances or other exemptions related to storage?

☐ Yes ☒ No

If yes, explain: N/A

2.11 Characterization

2.11.1 Is further characterization needed about the waste prior to acceptance for storage?

☐ Yes ☒ No ☐ Unknown at this time

Milestone Number	Due Date
N/A	N/A

If yes or unknown, comment on characterization for storage.

N/A

2.11.2 Is further characterization needed about the waste prior to acceptance for treatment?

☐ Yes ☒ No ☐ Unknown at this time

Milestone Number	Due Date
N/A	N/A

If yes or unknown, comment on characterization for treatment.

N/A

2.11.3 Is further characterization needed about the waste prior to acceptance for disposal?

☒ Yes ☐ No ☐ Unknown at this time

Milestone Number	Due Date
M-091-42	

If yes or unknown, comment on characterization for disposal.

To meet concentration based treatment standards applicable for the residues, sampling will be required after treatment. No commitment is necessary for the characterization needs on this MLLW.

LDR REPORT WASTE LOCATION-SPECIFIC DATA SHEET

2.12 Other key assumptions related to storage, inventory, and generation information:

N/A

3.0 WASTE MINIMIZATION

3.1 Has a waste minimization assessment been completed for this stream?

☐ Yes ☒ No

If yes, provide date assessment conducted: N/A

If yes, provide document number or other identification:

N/A

If no, provide date assessment will be completed, or if waste stream is no longer generated, then indicate N/A:

None planned - waste not generated at WRAP.

3.2 Provide details of current and proposed methods for minimizing the generation of this stream (e.g., process changes to reduce or eliminate LDR waste, methods to reduce volume through segregation and avoidance of commingling, substitution of less-toxic materials):

These activities occur before the wastes are transferred/shipped to WRAP. There are few opportunities to reduce waste volumes placed into storage.

3.3 Waste minimization schedule

3.3.1 Reduction achieved during calendar year 2009 (volume or mass)

0.000 m3

3.3.2 Projected future waste volume reductions

Year	m^3	and/or	kg
2010	0.00		0.00
2011	0.00		0.00
2012	0.00		0.00
2013	0.00		0.00
2014	0.00		0.00
Total	0.00		0.00

3.3.3 Bases and assumptions used in above estimates:

There is no projected waste generation by WRAP.

This page intentionally left blank.

MLLW-03 – Organic
Non-Debris

LDR REPORT TREATABILITY GROUP DATA SHEET

1.0 WASTE STREAM IDENTIFICATION

1.1 Treatability Group Name: MLLW-03 - Organic Non-Debris

1.2 Description of waste (list WSRd numbers for this waste stream, as applicable)

This treatability group is for non-debris waste that contains hazardous constituents that either requires thermal treatment (specified technology) or thermal treatment is BDAT for meeting the applicable LDR treatment standards (concentration-based standards). Stabilization of the thermal treatment residue may also be required. The primary applicable WSRds for this treatability group are: 400, 401, 402, 403, 404, 405, 406, 407, 408, 409, 427, 429, 430, 431, 432, 500, 501, 502, 503, 504, 505, 520, 522, 700, 701, 720, 721, 920, 921, 922, and 923. This waste stream consists of many different inorganic and organic solids (e.g., particulates, absorbed liquids, sludges, resins, soils) and labpacks that are contaminated with organic regulated dangerous waste constituents. This waste stream may also include dangerous waste containing PCBs that required thermal destruction. This waste stream does not include hazardous debris other than incidental debris material commingled with the non-debris.

2.0 WASTE INVENTORY AND GENERATION

2.1 Current total inventory for this waste stream (stored waste only, not accumulation areas). [Equals sum of location-specific data sheets for this treatability group.]

Total volume (cubic meters): 0.828

2.2 Estimated generation projection by calendar year: [equals annual sums of location-specfic data sheets for this treatability group].

Year	m^3	and/or	kg
2010	0.070		0.000
2011	0.070		0.000
2012	0.070		0.000
2013	0.070		0.000
2014	0.000		0.000
Total	0.280		0.000

3.0 WASTE STREAM CHARACTERIZATION

3.1 Radiological Characteristics

3.1.1 Mixed waste type: ☐ High-level ☐ Transuranic ☒ Low-level

3.1.2 Handling (as package contents would need to be handled during treatment):

☒ Contact-handled ☐ Remote-handled

3.1.3 Comments on radiological characteristics (e.g., more specific information on content, treatment concerns caused by radiation, confidence level):

LDR REPORT TREATABILITY GROUP DATA SHEET

This waste is a general category based on dangerous waste physical and chemical characteristics; therefore, the radiological characteristics vary greatly between individual waste packages. The waste meets low-level-waste requirements as defined by DOE Order 435.1. This treatability group is for Contact Handled (CH) waste. Greater than Hanford Category 1 (GTC1) waste will normally be radiologically stabilization prior to disposal; however, radiological stabilization may take place in the disposal unit.

3.2 Physical Form

3.2.1 Physical form of the waste:

☒ Solid ☒ Liquid ☒ Semi-solid ☐ Debris

☒ Other (Describe in comments.)

3.2.2 Comments on physical form:

This waste consists primarily of soils, sludges, particulates, labpacked and bulk non-wastewater liquids. The majority of the waste packages are 55-gal and 85-gal drums, but smaller sized boxes are also utilized. The packages normally also contain absorbent materials, plastic liners and/or small amounts of misc. step-of-pad waste (i.e., debris) materials.

3.3 Regulated constituents and wastewater/non-wastewater category

3.3.1 Wastewater/non-wastewater under RCRA

☐ Wastewater ☒ Non-wastewater ☐ Unknown

3.3.2 Regulated constituents table including treatment requirements and UHCs, if applicable.

EPA/ State Number	Waste Description	LDR Sub-Category*	Concentration (Typical or Range)**	Basis	LDR Treatment Concentration Standard or Technology Code
D001	Ignitable	Low TOC	***	***	DEACT & meet 40 CFR 268.48
D002	Corrosive	Corrosive Charac.	***	***	DEACT & meet 40 CFR 268.48
D004	TC-Arsenic	N/A	***	***	5.0 mg/l TCLP & meet 40 CFR 268.48
D005	TC-Barium	N/A	***	***	21 mg/l TCLP & meet 40 CFR 268.48
D006	TC-Cadmium	Cadmium Charac.	***	***	0.11 mg/l TCLP & meet 40 CFR 268.48
D007	TC-Chromium	N/A	***	***	0.60 mg/l TCLP & meet 40 CFR 268.48
D008	TC-Lead	Lead Charac.	***	***	0.75 mg/l TCLP & meet 40 CFR 268.48
D009	TC-Mercury	Low Mercury	<260 mg/kg	***	0.20 mg/l TCLP & meet 40 CFR 268.48
D010	TC-Selenium	N/A	***	***	5.7 mg/l TCLP & meet 40 CFR 268.48

LDR REPORT TREATABILITY GROUP DATA SHEET

EPA/ State Number	Waste Description	LDR Sub-Category*	Concentration (Typical or Range)**	Basis	LDR Treatment Concentration Standard or Technology Code
D011	TC-Silver	N/A	***	***	0.14 mg/l TCLP & meet 40 CFR 268.48
D012	Endrin	N/A	***	***	0.13 mg/kg & meet 40 CFR 268.48
D016	2,4-D	N/A	***	***	10 mg/kg & meet 40 CFR 268.48
D018	Benzene	N/A	***	***	10 mg/kg & meet 40 CFR 268.48
D019	Carbon Tetrachloride	N/A	***	***	6.0 mg/kg & meet 40 CFR 268.48
D020	Chlordane	N/A	***	***	0.26 mg/kg & meet 40 CFR 268.48
D021	Chlorobenzene	N/A	***	***	6.0 mg/kg & meet 40 CFR 268.48
D022	Chloroform	N/A	***	***	6.0 mg/kg & meet 40 CFR 268.48
D023	o-Cresol	N/A	***	***	5.6 mg/kg & meet 40 CFR 268.48
D024	m-Cresol	N/A	***	***	5.6 and meet 268.48
D025	p-Cresol	N/A	***	***	5.6 and meet 268.48
D026	Cresol	N/A	***	***	11.2 mg/kg & meet 40 CFR 268.48
D027	p-Dichlorobenzene	N/A	***	***	6.0 mg/kg & meet 40 CFR 268.48
D028	1,2-Dichloroethane	N/A	***	***	6.0 mg/kg & meet 40 CFR 268.48
D029	1,1-Dichloroethylene	N/A	***	***	6.0 mg/kg & meet 40 CFR 268.48
D030	2,4-Dinitrotoluene	N/A	***	***	140 mg/kg & meet 40 CFR 268.48
D031	Heptachlor	N/A	***	***	0.066 mg/kg & meet 40 CFR 268.48
D032	Hexachlorobenzene	N/A	***	***	10 and meet 268.48
D033	Hexachlorobutadiene	N/A	***	***	5.6 mg/kg & meet 40 CFR 268.48
D034	Hexachloroethane	N/A	***	***	30 mg/kg & meet 40 CFR 268.48
D035	Methyl Ethyl Ketone	N/A	***	***	36 mg/kg & meet 40 CFR 268.48
D036	Nitrobenzene	N/A	***	***	14 mg/kg & meet 40 CFR 268.48
D037	Pentachlorophenol	N/A	***	***	7.4 mg/kg & meet 40 CFR 268.48
D038	Pyridine	N/A	***	***	16 mg/kg & meet 40 CFR 268.48

LDR REPORT TREATABILITY GROUP DATA SHEET

EPA/ State Number	Waste Description	LDR Sub-Category*	Concentration (Typical or Range)**	Basis	LDR Treatment Concentration Standard or Technology Code
D039	Tetrachloroethylene	N/A	***	***	6.0 mg/kg & meet 40 CFR 268.48
D040	Trichlorethylene	N/A	***	***	6.0 mg/kg & meet 40 CFR 268.48
D041	2,4,5- Trichlorophenol	N/A	***	***	7.4 and meet 268.48
D042	2,4,6- Trichlorophenol	N/A	***	***	7.4 and meet 268.48
D043	Vinyl Chloride	N/A	***	***	6.0 mg/kg & meet 40 CFR 268.48
F001	1,1,1-Trichloroethane	Spent Solvent	***	***	6.0 mg/kg
F002	Methylene Chloride	Spent Solvent	***	***	30 mg/kg
F003	Acetone & Hexone	Spent Solvent	***	***	160 mg/kg
F004	o-Cresol & p-Cresol	Spent Solvent	***	***	5.6 mg/kg
F005	Methyl Ethyl Ketone	Spent Solvent	***	***	36 mg/kg
F022	Process Waste Tetra-penta- or hexachloro-benzenes	N/A	***	***	Various
P012	Arsenic Trioxide	N/A	***	***	5.0 mg/l
P022	Carbon Disulfide	N/A	***	***	CMBST
P023	Chloreacetaldehyde	N/A	***	***	CMBST
P024	p-Chloroaniline	N/A	***	***	16
P029	Copper Cyanide	N/A	***	***	590 Total/30 Amenable
P030	Cyanide	N/A	***	***	590/30 mg/kg
P098	Potassium Cyanide	N/A	***	***	590 Total/30 Amenable
P102	Propargyl Alcohol	N/A	***	***	CMBST
P106	Sodium Cyanide	N/A	***	***	590 Total/30 Amenable
P113	Thallic oxide	N/A	***	***	RTHRM; OR STABL
P120	Vanadium pentoxide	N/A	***	***	STABL
U001	Acetaldeyde	N/A	***	***	CMBST
U002	Acetone	N/A	***	***	160 mg/kg
U003	Acetonitrile	N/A	***	***	CMBST
U004	Acetophenone	N/A	***	***	9.7 mg/kg
U006	Acteyl Chloride	N/A	***	***	CMBST
U007	Acryl chloride	N/A	***	***	CMBST
U012	Aniline	N/A	***	***	14
U019	Benzene	N/A	***	***	10 mg/kg

LDR REPORT TREATABILITY GROUP DATA SHEET

EPA/ State Number	Waste Description	LDR Sub-Category*	Concentration (Typical or Range)**	Basis	LDR Treatment Concentration Standard or Technology Code
U025	Bis(2-Chloroethyl)ether	N/A	***	***	6.0 mg/kg
U031	n-Butyl Alcohol	N/A	***	***	2.6 mg/kg
U037	Chlorobenzene	N/A	***	***	6.0
U044	Chloroform	N/A	***	***	6.0 mg/kg
U056	Cyclohexane	N/A	***	***	CMBST
U057	Cyclohexanone	N/A	***	***	CMBST
U063	Dibenz(a,h)anthracene	N/A	***	***	8.2
U080	Methylene Chloride	N/A	***	***	30 mg/kg
U103	Dimethyl Sulfate	N/A	***	***	CMBST
U108	1,4-Dioaxane	N/A	***	***	CMBST
U112	Ethyl Acetate	N/A	***	***	CMBST
U117	Ethyl Ether	N/A	***	***	160 mg/kg
U121	Trichloromonofluoromethane	N/A	***	***	30 mg/kg
U122	Formaldehyde	N/A	***	***	CMBST
U123	Formic Acid	N/A	***	***	CMBST
U133	Hydrazine	N/A	***	***	CMBST
U134	Hydrogen Fluoride	N/A	***	***	NEUTR
U144	Lead Acetate	N/A	***	***	0.37 mg/kg
U154	Methanol	N/A	***	***	CMBST
U159	Methyl Ethyl Ketone	N/A	***	***	36 mg/kg
U160	Methyl Ethyl Ketone Peroxide	N/A	***	***	CMBST
U161	Methyl Isobutyl Ketone	N/A	***	***	33 mg/kg
U162	Methyl Methacrylate	N/A	***	***	160 mg/kg
U165	Naphthalene	N/A	***	***	5.6 mg/kg
U169	Nitrobenzene	N/A	***	***	14 mg/kg
U170	p-Nitropropane	N/A	***	***	29 mg/kg
U187	Phenacetin	N/A	***	***	16 mg/kg
U188	Phenol	N/A	***	***	6.2 mg/kg
U189	Phosphorus Sulfide	N/A	***	***	CMBST
U196	Pyridine	N/A	***	***	16 mg/kg
U201	Resorcinol	N/A	***	***	CMBST
U203	Safrole	N/A	***	***	22 mg/kg
U204	Selenium dioxide	N/A	***	***	5.7 mg/l TCLP
U210	Tetrachloroetylene	N/A	***	***	6.0 mg/kg

LDR REPORT TREATABILITY GROUP DATA SHEET

EPA/ State Number	Waste Description	LDR Sub-Category*	Concentration (Typical or Range)**	Basis	LDR Treatment Concentration Standard or Technology Code
U211	Carbon Tetrachloride	N/A	***	***	6.0 mg/kg
U213	Tetrahydrofuran	N/A	***	***	CMBST
U218	Thioacetamide	N/A	***	***	CMBST
U218	Thioacetamide	N/A	***	***	CMBST
U220	Toluene	N/A	***	***	10 mg/kg
U226	1,1,1-Trichloroethane	N/A	***	***	6.0 mg/kg
U228	Trichloroethylene	N/A	***	***	6.0 mg/kg
U239	Xylenes	N/A	***	***	30 mg/kg
U353	p-Toluidine	N/A	***	***	CMBST
U359	2-Ethoxyethanol	N/A	***	***	CMBST
WP01	Persistent, EHW	N/A	***	***	None (1)
WP02	Persistent, DW	N/A	***	***	N/A
WP03	Polycyclic Aromatic Hydrocarbons	N/A	***	***	STATE EHW
WSC2	Solid Corrosive	N/A	***	***	Remove Solid Acid Charac.
WT01	Toxic, EHW	N/A	***	***	None(1)
WT02	Toxic, DW	N/A	***	***	N/A

* LDR Subcategory marked N/A if no existing subcategory adequately describes this waste, or if there are no defined subcategories for the waste number (40 CFR 268.40).

** If waste is not consistent in concentration, this may not apply. Described in Section 3.3.6.

***The concentration varies and is based on process knowledge and/or analytical data.

(1) Mixed extremely hazardous wastes may be land-disposed in Washington State in DOE facilities in accordance with RCW 70.105.050(2).

UHCs to be determined on a per-package basis during waste receipt, from characterization activities, or when waste is sent for treatment, unless waste package is a lab pack eligible for the alternative treatment standards in 40 CFR 268.42.

3.3.3 List any waste numbers from Section 3.3.2 for which the waste stream already meets established LDR treatment standards.

☒ List: Some of the F001-F005 designated waste may meet LDR treatment standards with out the need for further treatment. This may include soils from the various Tank Farm facilities, and some pump-and-treat filter media.

☐ No LDR treatment required (e.g. TRUM waste destined for WIPP, exclusion, etc.)

☐ None (i.e. all constituents/waste numbers of this waste stream still require treatment).

LDR REPORT TREATABILITY GROUP DATA SHEET

3.3.4 Does this waste stream contain PCBs?

☒ Yes ☐ No ☐ Unknown

If no or unknown, skip to Section 3.3.5.

3.3.4.1 Is waste stream subject to TSCA regulations for PCBs?

☒ Yes ☐ No ☐ Unknown

3.3.4.2 Indicate the PCB concentration range.

☒ < 50 ppm ☒ ≥ 50 ppm ☐ Unknown

3.3.5 What is the confidence level for the regulated constituents?

☐ Low ☒ Medium ☐ High

3.3.6 Comments on regulated constituents and wastewater/non-wastewater category:

The newly generated waste packages associated with this treatability group are characterized by the generator and packaged for offsite shipment to a commercial waste treater. Legacy waste packages that have been in storage prior to 1995 undergo record information reviews, and are updated in required to meet current shipment and treatment facility acceptance requirements. Once the waste is received at the waste treaters facility, they perform conformation sampling to determine if the waste meets the treatment facilities waste profile that has been established for the waste package/stream. The liquids in this treatability group are primarily non-wastewater, and any applicable UHCs are identified by the generator and communicated to the waste treater by means of the LDR notification.

4.0 WASTE STREAM TREATMENT

4.1 Is this waste stream currently being treated?

☒ Yes ☐ No

If yes, provide details: This waste is being commercially treated by several treatment vendors (e.g., Perma-Fix Environmental, EnergySolutions, etc.). Currently, there is sufficient capability/capacity to treat the stored and forecasted waste volumes.

4.2 Planned treatment: Check the appropriate box indicating future plans for treating this waste stream to meet applicable regulations, including LDR treatment standards.

☐ No treatment required (skip to Section 5.0)

☐ Treating or plan to treat on site

☒ Treating or plan to treat off site

☐ Treatment options still being assessed

4.3 Planned treatment method, facility, extent of treatment capacity available:

LDR REPORT TREATABILITY GROUP DATA SHEET

This waste is being commercially treated by several treatment vendors (e.g., Perma-Fix Environmental, EnergySolutions, etc.). Currently, there is sufficient capability/capacity to treat the stored and forecasted waste volumes.

4.4 Treatment schedule information:

Treatment will be performed in accordance with M-91-42 milestone objectives.

4.5 Applicable Tri-Party Agreement treatment milestone numbers (including permitting):

Milestone Number	Due Date
M-091-42Q	

4.6 Proposed new Tri-Party Agreement treatment milestones:

Currently in negotiations with the TPA members.

4.7 If treating or planning to treat on site, was or will waste minimization be addressed in developing and/or selecting the treatment method?

☐ Yes ☐ No ☒ Unknown

If yes, describe: N/A.

4.8 List or describe treatability equivalency petitions, rulemaking petitions, and case-by-case exemptions needed for treatment or already in place.

None identified at this time.

4.9 Key Assumptions:

None.

5.0 WASTE STREAM DISPOSAL

After treatment, how will the waste stream be disposed of (include locations, milestone numbers, variances required, etc. as applicable):

Treated waste residues will be disposed back at the Hanford Site (e.g., Mixed Waste Disposal Unit) or at a commerical waste disposal site (e.g., EnergySolutions Clive).

LDR REPORT WASTE LOCATION-SPECIFIC DATA SHEET

1.0 WASTE STREAM IDENTIFICATION AND SOURCE

1.1 Unit/Plant name: LLBG **Waste Stream:** MLLW Retrieval Organic Non-Debris

Treatabilitiy Group Name: MLLW-03 - Organic Non-Debris

1.2 Applicable profile number(s) for this waste stream:

A WSRd identified in the treatability group data sheet section 1.2.

1.3 Waste stream source information

1.3.1 General description of the waste (e.g., spill clean-up waste, discarded lab materials, maintenance waste):

The waste consists of many different inorganic and organic solids (e.g., particulates, absorbed liquids, sludges, resins and soils). This waste does not include hazardous debris other than incidental debris material commingled with non-debris.

1.3.2 History of how and where the waste was/is generated:

The waste was generated at many onsite locations and also by offsite generators.

1.3.3 Source of the regulated constituents:

See 1.3.1 and 1.3.2. Wastes are either contaminated with regulated organic constituents or are themselves regulated organic chemicals.

1.3.4 Source of the information (e.g., analytical data, process knowledge, document number, etc.)

Process knowledge.

1.3.5 Additional notes:

Per TPA Milestone M-91-40 this entire waste stream is suspected of being mixed waste.

2.0 WASTE STREAM STORAGE, INVENTORY, AND GENERATION INFORMATION

(NOTE: For waste in satellite accumulation areas and 90-day accumulation areas, skip to Section 2.6.)

2.1 Current storage method

- ☐ Container (pad)
- ☐ Container (covered)
- ☒ Container (retrievably buried)
- ☐ Tank
- ☐ DST
- ☐ SST
- ☒ Other (explain): Stored pursuant to M-091 TPA milestones.

2.1.1 How was the waste managed prior to storage?

In LLBG trenches.

2.1.2 Timeframe when waste was placed to storage?

Varies from 1970 through 1987.

LDR REPORT WASTE LOCATION-SPECIFIC DATA SHEET

2.2 Storage inventory locations:

Building/Room Number	Number of Containers/Tanks
LLBG	1

2.3 Current stored inventory for this stream.

Total volume (cubic meters): 0.208

Date of inventory values: 12/31/2009

Comments on waste inventory:

Per TPA Milestone M-91-40 this entire waste stream is suspected of being mixed waste. There waste is stored pursuant to M-091 milestones.

2.4 Is storage capacity at this location potentially an issue for this waste stream?

☐ Yes ☒ No

If yes, what is the total estimated storage capacity? N/A

When is this capacity expected to be reached? N/A

Bases and assumptions used:

No issues with storage based on life cycle waste generation forecasts.

2.5 Planned storage areas for this waste:

☐ Current Location ☒ CWC ☐ DST

☐ Other Area(s) (list):

☐ None

2.6 Estimated generation projection by calendar year (includes waste in satellite and 90-day accumulation areas):

Year	m^3	and/or	kg
2010	0.000		0.000
2011	0.000		0.000
2012	0.000		0.000
2013	0.000		0.000
2014	0.000		0.000
Total	0.000		0.000

2.7 DOE Storage Compliance Assessment information:

☒ Assessment has been completed.

Document Number	Date
A&E-SEC-02-003	03/28/2002

LDR REPORT WASTE LOCATION-SPECIFIC DATA SHEET

☐ Assessment has been scheduled. Scheduled date:

☐ Other. Explain:

2.8 Applicable Tri-Party Agreement milestones related to storage at this location:

Milestone Number	Due Date
N/A	

2.9 Has there ever been any non-permitted, unauthorized release of this waste stream from this storage unit to the environment?

☐ Yes ☒ No

If yes, summarize releases and quantities and provide date:

N/A

2.10 Are there any plans to submit requests for variances or other exemptions related to storage?

☐ Yes ☒ No

If yes, explain: N/A

2.11 Characterization

2.11.1 Is further characterization needed about the waste prior to acceptance for storage?

☐ Yes ☐ No ☒ Unknown at this time

Milestone Number	Due Date
N/A	N/A

If yes or unknown, comment on characterization for storage.

If information is not sufficient to ensure waste meets CWC acceptance criteria, further characterization may be necessary.

2.11.2 Is further characterization needed about the waste prior to acceptance for treatment?

☐ Yes ☐ No ☒ Unknown at this time

Milestone Number	Due Date
N/A	N/A

If yes or unknown, comment on characterization for treatment.

If information is not sufficient to ensure waste meets the treatment facilities acceptance criteria, further characterization may be necessary.

2.11.3 Is further characterization needed about the waste prior to acceptance for disposal?

☒ Yes ☐ No ☐ Unknown at this time

LDR REPORT WASTE LOCATION-SPECIFIC DATA SHEET

Milestone Number	Due Date
N/A	N/A

If yes or unknown, comment on characterization for disposal.

To meet concentration based treatment standards applicable for the residues, sampling will be required after treatment. No commitment is necessary for the characterization needs on this MLLW.

2.12 Other key assumptions related to storage, inventory, and generation information:

None.

3.0 WASTE MINIMIZATION

3.1 Has a waste minimization assessment been completed for this stream?

☐ Yes ☒ No

If yes, provide date assessment conducted:

If yes, provide document number or other identification:

If no, provide date assessment will be completed, or if waste stream is no longer generated, then indicate N/A:

None planned. Waste has already been generated.

3.2 Provide details of current and proposed methods for minimizing the generation of this stream (e.g., process changes to reduce or eliminate LDR waste, methods to reduce volume through segregation and avoidance of commingling, substitution of less-toxic materials):

Waste has already been generated. There is no opportunity to reduce the existing volume.

3.3 Waste minimization schedule

3.3.1 Reduction achieved during calendar year 2009 (volume or mass)

0.000 m3

3.3.2 Projected future waste volume reductions

Year	m^3	and/or	kg
2010	0.00		0.00
2011	0.00		0.00
2012	0.00		0.00
2013	0.00		0.00
2014	0.00		0.00
Total	0.00		0.00

3.3.3 Bases and assumptions used in above estimates:

There is no generation projected.

LDR REPORT WASTE LOCATION-SPECIFIC DATA SHEET

1.0 WASTE STREAM IDENTIFICATION AND SOURCE

1.1 Unit/Plant name: T Plant Complex **Waste Stream:** Organic Non-Debris

Treatabilitiy Group Name: MLLW-03 - Organic Non-Debris

1.2 Applicable profile number(s) for this waste stream:

WSRd: 402, 403, 404, 405, 505, 923, LPO.

1.3 Waste stream source information

1.3.1 General description of the waste (e.g., spill clean-up waste, discarded lab materials, maintenance waste):

This waste consists of many different inorganic and organic solids (e.g., particulates, absorbed liquids, sludges, soils, labpacks, etc.) and could contain PCBs. This waste does not include hazardous debris other than incidental debris material commingled with the non-debris.

1.3.2 History of how and where the waste was/is generated:

The waste was generated by T Plant Complex and from various other onsite other locations, and also by offsite generators.

1.3.3 Source of the regulated constituents:

See 1.3.1 and 1.3.2.

1.3.4 Source of the information (e.g., analytical data, process knowledge, document number, etc.)

Analytical data and process knowledge.

1.3.5 Additional notes:

None.

2.0 WASTE STREAM STORAGE, INVENTORY, AND GENERATION INFORMATION

(NOTE: For waste in satellite accumulation areas and 90-day accumulation areas, skip to Section 2.6.)

2.1 Current storage method

- ☒ Container (pad)
- ☒ Container (covered)
- ☐ Container (retrievably buried)
- ☐ Tank
- ☐ DST
- ☐ SST
- ☐ Other (explain): N/A

2.1.1 How was the waste managed prior to storage?

Generated and accumulated and packaged at various onsite locations and by offsite generators before transfer/shipment to T Plant and from T Plant maintenance/operational activities.

2.1.2 Timeframe when waste was placed to storage?

1989 to present.

LDR REPORT WASTE LOCATION-SPECIFIC DATA SHEET

2.2 Storage inventory locations:

Building/Room Number	Number of Containers/Tanks
T Plant	0

2.3 Current stored inventory for this stream.

Total volume (cubic meters): 0.000

Date of inventory values: 12/31/2009

Comments on waste inventory:

None.

2.4 Is storage capacity at this location potentially an issue for this waste stream?

☐ Yes ☒ No

If yes, what is the total estimated storage capacity? N/A

When is this capacity expected to be reached? N/A

Bases and assumptions used:

N/A

2.5 Planned storage areas for this waste:

☐ Current Location ☒ CWC ☐ DST

☐ Other Area(s) (list): N/A

☐ None

2.6 Estimated generation projection by calendar year (includes waste in satellite and 90-day accumulation areas):

Year	m^3	and/or	kg
2010	0.070		0.000
2011	0.070		0.000
2012	0.070		0.000
2013	0.070		0.000
2014	0.000		0.000
Total	0.280		0.000

2.7 DOE Storage Compliance Assessment information:

☒ Assessment has been completed.

Document Number	Date
01-A&E-012	11/28/2000

☒ Assessment has been scheduled. Scheduled date: 3rd quarter CY2005.

☐ Other. Explain:

LDR REPORT WASTE LOCATION-SPECIFIC DATA SHEET

2.8 Applicable Tri-Party Agreement milestones related to storage at this location:

Milestone Number	Due Date
N/A	

2.9 Has there ever been any non-permitted, unauthorized release of this waste stream from this storage unit to the environment?

☐ Yes ☒ No

If yes, summarize releases and quantities and provide date:

N/A

2.10 Are there any plans to submit requests for variances or other exemptions related to storage?

☐ Yes ☒ No

If yes, explain: N/A

2.11 Characterization

2.11.1 Is further characterization needed about the waste prior to acceptance for storage?

☐ Yes ☒ No ☐ Unknown at this time

Milestone Number	Due Date
N/A	N/A

If yes or unknown, comment on characterization for storage.

N/A

2.11.2 Is further characterization needed about the waste prior to acceptance for treatment?

☒ Yes ☐ No ☐ Unknown at this time

Milestone Number	Due Date
N/A	N/A

If yes or unknown, comment on characterization for treatment.

Will be completed during activities to facilitate transfer of the container to CWC. No commitment is necessary for the characterization needs on this MLLW.

2.11.3 Is further characterization needed about the waste prior to acceptance for disposal?

☒ Yes ☐ No ☐ Unknown at this time

Milestone Number	Due Date
N/A	N/A

If yes or unknown, comment on characterization for disposal.

To meet concentration based treatment standards applicable for the residues, sampling will be required after treatment. No commitment is necessary for the characterization needs on this MLLW.

LDR REPORT WASTE LOCATION-SPECIFIC DATA SHEET

2.12 Other key assumptions related to storage, inventory, and generation information:

None.

3.0 WASTE MINIMIZATION

3.1 Has a waste minimization assessment been completed for this stream?

☐ Yes ☒ No

If yes, provide date assessment conducted:

If yes, provide document number or other identification:

N/A

If no, provide date assessment will be completed, or if waste stream is no longer generated, then indicate N/A:

See Section 3.3.3 for discussion on waste minimization.

3.2 Provide details of current and proposed methods for minimizing the generation of this stream (e.g., process changes to reduce or eliminate LDR waste, methods to reduce volume through segregation and avoidance of commingling, substitution of less-toxic materials):

To the extent practical, all mixed waste is segregated and packaged separately from LLW or TRUM. The volume of mixed waste is reduced by compaction when possible. To minimize the generation of mixed waste, T Plant Complex personnel actively seek nondangerous alternatives. In addition, waste minimization goals are set annually and tracked quarterly.

3.3 Waste minimization schedule

3.3.1 Reduction achieved during calendar year 2009 (volume or mass)

0.000 m3

3.3.2 Projected future waste volume reductions

Year	m^3	and/or	kg
2010	0.00		0.00
2011	0.00		0.00
2012	0.00		0.00
2013	0.00		0.00
2014	0.00		0.00
Total	0.00		0.00

3.3.3 Bases and assumptions used in above estimates:

The T Plant Complex has submitted a P2/Wmin fiscal year 2004 goal to reduce, where possible, mixed waste generation. For FY 2004 to 2008, new goals will be evaluated and identified on a year-by-year basis. T Plant Complex does not track waste reduction by treatability groups. Routine and non-routine generated waste is reported quarterly to the Waste Minimization/Pollution Prevention Group.

LDR REPORT WASTE LOCATION-SPECIFIC DATA SHEET

1.0 WASTE STREAM IDENTIFICATION AND SOURCE

1.1 Unit/Plant name: WRAP **Waste Stream:** Organic Non-Debris

Treatabilitiy Group Name: MLLW-03 - Organic Non-Debris

1.2 Applicable profile number(s) for this waste stream:

A WSRd identified in the treatability group data sheet section 1.2.

1.3 Waste stream source information

1.3.1 General description of the waste (e.g., spill clean-up waste, discarded lab materials, maintenance waste):

The waste consists of many different inorganic and organic solids (e.g., particulates, absorbed liquids, sludges, resins, and soils) and labpacks that are contaminated with organic regulated dangerous waste constituents, including PCBs This waste does not include hazardous debris other than incidental debris material commingled with the non-debris.

1.3.2 History of how and where the waste was/is generated:

The waste was generated at many onsite locations and also by offsite generators.

1.3.3 Source of the regulated constituents:

Hazardous constituents were generated at various Hanford Site generator locations (e.g. PFP, BPLANT etc.)

1.3.4 Source of the information (e.g., analytical data, process knowledge, document number, etc.)

Process knowledge.

1.3.5 Additional notes:

Waste at WRAP comes from various generators and generating processes around the Hanford Site due to WRAP's verification and repackaging mission.

2.0 WASTE STREAM STORAGE, INVENTORY, AND GENERATION INFORMATION

(NOTE: For waste in satellite accumulation areas and 90-day accumulation areas, skip to Section 2.6.)

2.1 Current storage method

- ☐ Container (pad)
- ☒ Container (covered)
- ☐ Container (retrievably buried)
- ☐ Tank
- ☐ DST
- ☐ SST
- ☐ Other (explain): N/A

2.1.1 How was the waste managed prior to storage?

Waste was generated and packaged at various Hanford generating facilities.

2.1.2 Timeframe when waste was placed to storage?

MLLW at WRAP is both MLLW dating back to the late 80's as well as newly generated MLLW.

LDR REPORT WASTE LOCATION-SPECIFIC DATA SHEET

2.2 Storage inventory locations:

Building/Room Number	Number of Containers/Tanks
WRAP	3

2.3 Current stored inventory for this stream.

Total volume (cubic meters): 0.620

Date of inventory values: 12/30/2009

Comments on waste inventory:

Inventory based on Solid Waste Information Tracking System (SWITS)

2.4 Is storage capacity at this location potentially an issue for this waste stream?

☐ Yes ☒ No

If yes, what is the total estimated storage capacity? N/A

When is this capacity expected to be reached? N/A

Bases and assumptions used:

Due to proximity to and interchange with CWC, there is no storage capacity issue at WRAP.

2.5 Planned storage areas for this waste:

☒ Current Location ☒ CWC ☐ DST

☐ Other Area(s) (list):

☐ None

2.6 Estimated generation projection by calendar year (includes waste in satellite and 90-day accumulation areas):

Year	m^3	and/or	kg
2010	0.000		0.000
2011	0.000		0.000
2012	0.000		0.000
2013	0.000		0.000
2014	0.000		0.000
Total	0.000		0.000

2.7 DOE Storage Compliance Assessment information:

☒ Assessment has been completed.

Document Number	Date
DE-AC06-96RL13200	09/26/2001

☐ Assessment has been scheduled. Scheduled date:

☐ Other. Explain:

LDR REPORT WASTE LOCATION-SPECIFIC DATA SHEET

2.8 Applicable Tri-Party Agreement milestones related to storage at this location:

Milestone Number	Due Date
N/A	

2.9 Has there ever been any non-permitted, unauthorized release of this waste stream from this storage unit to the environment?

☐ Yes ☒ No

If yes, summarize releases and quantities and provide date:

N/A

2.10 Are there any plans to submit requests for variances or other exemptions related to storage?

☐ Yes ☒ No

If yes, explain: N/A

2.11 Characterization

2.11.1 Is further characterization needed about the waste prior to acceptance for storage?

☐ Yes ☒ No ☐ Unknown at this time

Milestone Number	Due Date
N/A	N/A

If yes or unknown, comment on characterization for storage.

N/A

2.11.2 Is further characterization needed about the waste prior to acceptance for treatment?

☐ Yes ☒ No ☐ Unknown at this time

Milestone Number	Due Date
N/A	N/A

If yes or unknown, comment on characterization for treatment.

N/A

2.11.3 Is further characterization needed about the waste prior to acceptance for disposal?

☒ Yes ☐ No ☐ Unknown at this time

Milestone Number	Due Date
M-091-42	

If yes or unknown, comment on characterization for disposal.

To meet concentration based treatment standards applicable for the residues, sampling will be required after treatment. No commitment is necessary for the characterization needs on this MLLW.

LDR REPORT WASTE LOCATION-SPECIFIC DATA SHEET

2.12 Other key assumptions related to storage, inventory, and generation information:

None.

3.0 WASTE MINIMIZATION

3.1 Has a waste minimization assessment been completed for this stream?

☐ Yes ☒ No

If yes, provide date assessment conducted: N/A

If yes, provide document number or other identification:

N/A

If no, provide date assessment will be completed, or if waste stream is no longer generated, then indicate N/A:

N/A

3.2 Provide details of current and proposed methods for minimizing the generation of this stream (e.g., process changes to reduce or eliminate LDR waste, methods to reduce volume through segregation and avoidance of commingling, substitution of less-toxic materials):

Through source reduction, waste minimization practices are being employed to ensure that the generation of this stream is being minimized. Additional waste is not expected to be generated in the future.

3.3 Waste minimization schedule

3.3.1 Reduction achieved during calendar year 2009 (volume or mass)

0.000 m3

3.3.2 Projected future waste volume reductions

Year	m^3	and/or	kg
2010	0.00		0.00
2011	0.00		0.00
2012	0.00		0.00
2013	0.00		0.00
2014	0.00		0.00
Total	0.00		0.00

3.3.3 Bases and assumptions used in above estimates:

Since subject waste has already been generated l, no additional waste minimization activities are planned. WRAP does not generate this waste stream, rather will receive waste for further processing from other generating facilities.

MLLW-04 –
Hazardous Debris

LDR REPORT TREATABILITY GROUP DATA SHEET

1.0 WASTE STREAM IDENTIFICATION

1.1 Treatability Group Name: MLLW-04 - Hazardous Debris

1.2 Description of waste (list WSRd numbers for this waste stream, as applicable)

This treatability group is for waste that meets the definition of hazardous debris as defined in 40 CFR 268.2. The physical characteristics include paper, plastic, wood, rubber, rags, and lesser quantities of metallic and inorganic waste components. The primary WSRds that comprise this treatability group are: DBR, 627, and 647. This waste may include organic/carbonaceous waste constituents in excess of 10% as defined in WAC 173-303-040 (e.g., plastic, paper, wood, rubber, etc).

2.0 WASTE INVENTORY AND GENERATION

2.1 Current total inventory for this waste stream (stored waste only, not accumulation areas). [Equals sum of location-specific data sheets for this treatability group.]

Total volume (cubic meters): 47.799

2.2 Estimated generation projection by calendar year: [equals annual sums of location-specfic data sheets for this treatability group].

Year	m^3	and/or	kg
2010	1.688		0.000
2011	1.688		0.000
2012	1.688		0.000
2013	1.688		0.000
2014	1.688		0.000
Total	8.440		0.000

3.0 WASTE STREAM CHARACTERIZATION

3.1 Radiological Characteristics

3.1.1 Mixed waste type: ☐ High-level ☐ Transuranic ☒ Low-level

3.1.2 Handling (as package contents would need to be handled during treatment):

☒ Contact-handled ☐ Remote-handled

3.1.3 Comments on radiological characteristics (e.g., more specific information on content, treatment concerns caused by radiation, confidence level):

This waste is a general category based on dangerous waste physical and chemical characteristics; therefore, the radiological characteristics vary greatly between individual waste packages. The waste meets low-level-waste requirements as defined by DOE Order 435.1. This treatability group is for Contact Handled (CH) waste. Greater than Hanford Category 1 (GTC1) waste will normally be radiologically stabilization prior to disposal; however, radiological stabilization may take place in the disposal unit.

LDR REPORT TREATABILITY GROUP DATA SHEET

3.2 Physical Form

3.2.1 Physical form of the waste:

☐ Solid ☐ Liquid ☐ Semi-solid ☒ Debris

☐ Other (Describe in comments.)

3.2.2 Comments on physical form:

This waste consists of debris materials including metal, concrete, plastic, wood, paper, etc., all non-wastewater forms. The majority of the waste packages are 55-gal and 85-gal drums, but various sized boxes are also utilized. The packages normally also contain absorbent materials and plastic liners.

3.3 Regulated constituents and wastewater/non-wastewater category

3.3.1 Wastewater/non-wastewater under RCRA

☐ Wastewater ☒ Non-wastewater ☐ Unknown

3.3.2 Regulated constituents table including treatment requirements and UHCs, if applicable.

EPA/ State Number	Waste Description	LDR Sub-Category*	Concentration (Typical or Range)**	Basis	LDR Treatment Concentration Standard or Technology Code
D004	TC-Arsenic	N/A	***	***	Alternative Stds. for Haz. Debris (40 CFR 268.45)
D005	TC-Barium	N/A	***	***	Alternative Stds. for Haz. Debris (40 CFR 268.45)
D006	Cadmium	Radioactively contaminated cadmium containing batt	***	***	Macroencapsulation in accordance with 40 CFR 268.45
D006	TC- Cadmium	Cadmium Charac.	***	***	Alternative Stds. for Haz. Debris (40 CFR 268.45)
D007	TC-Chromium	N/A	***	***	Alternative Stds. for Haz. Debris (40 CFR 268.45)
D008	Radioactive Lead Solids	Radioactive Lead Solids	<50 vol% per package basis	***	Macroencapsulation
D008	TC-Lead	Lead Charac.	***	***	Alternative Stds. for Haz. Debris (40 CFR 268.45)

LDR REPORT TREATABILITY GROUP DATA SHEET

EPA/ State Number	Waste Description	LDR Sub-Category*	Concentration (Typical or Range)**	Basis	LDR Treatment Concentration Standard or Technology Code
D009	Mercury	Radioactively contaminated mercury containing batt	***	***	Macroencapsulation in accordance with 40 CFR 268.45
D009	TC-Mercury	Low Mercury	<260 mg/kg Hg	***	Alternative Stds. for Haz. Debris (40 CFR 268.45)
D010	TC-Selenium	N/A	***	***	Alternative Stds. for Haz. Debris (40 CFR 268.45)
D011	Silver	Radioactively	***	***	Macroencapsulation in accordance with 40 CFR 268.45
D011	TC-Silver	N/A	***	***	Alternative Stds. for Haz. Debris (40 CFR 268.45)
D012	Endrin	N/A	***	***	Alternative Stds. for Haz. Debris (40 CFR 268.45)
D013	Lindane	N/A	***	***	Alternative Stds. for Haz. Debris (40 CFR 268.45)
D014	Methoxychlor	N/A	***	***	Alternative Stds. for Haz. Debris (40 CFR 268.45)
D015	Toxaphene	N/A	***	***	Alternative Stds. for Haz. Debris (40 CFR 268.45)
D016	2,4-D	N/A	***	***	Alternative Stds. for Haz. Debris (40 CFR 268.45)
D017	2,4,5-TP (Silvex)	N/A	***	***	Alternative Stds. for Haz. Debris (40 CFR 268.45)
D018	Benzene	N/A	***	***	Alternative Stds. for Haz. Debris (40 CFR 268.45)
D019	Carbon Tetrachloride	N/A	***	***	Alternative Stds. for Haz. Debris (40 CFR 268.45)
D020	Chlordane	N/A	***	***	Alternative Stds. for Haz. Debris (40 CFR 268.45)
D021	Chlorobenzene	N/A	***	***	Alternative Stds. for Haz. Debris (40 CFR 268.45)
D022	Chloroform	N/A	***	***	Alternative Stds. for Haz. Debris (40 CFR 268.45)

LDR REPORT TREATABILITY GROUP DATA SHEET

EPA/ State Number	Waste Description	LDR Sub-Category*	Concentration (Typical or Range)**	Basis	LDR Treatment Concentration Standard or Technology Code
D023	o-Cresol	N/A	***	***	Alternative Stds. for Haz. Debris (40 CFR 268.45)
D024	m-Cresol	N/A	***	***	Alternative Stds. for Haz. Debris (40 CFR 268.45)
D025	p-Cresol	N/A	***	***	Alternative Stds. for Haz. Debris (40 CFR 268.45)
D026	Cresol	N/A	***	***	Alternative Stds. for Haz. Debris (40 CFR 268.45)
D027	p-Dichlorobenzene	N/A	***	***	Alternative Stds. for Haz. Debris (40 CFR 268.45)
D028	1,2-Dichlorbenzene	N/A	***	***	Alternative Stds. for Haz. Debris (40 CFR 268.45)
D029	1,1-Dichloroethylene	N/A	***	***	Alternative Stds. for Haz. Debris (40 CFR 268.45)
D030	2,4-Dinitrotoluene	N/A	***	***	Alternative Stds. for Haz. Debris (40 CFR 268.45)
D031	Heptachlor	N/A	***	***	Alternative Stds. for Haz. Debris (40 CFR 268.45)
D032	Hexachlorobenzene	N/A	***	***	Alternative Stds. for Haz. Debris (40 CFR 268.45)
D033	Hexachlorobutadiene	N/A	***	***	Alternative Stds. for Haz. Debris (40 CFR 268.45)
D034	Hexachloroethane	N/A	***	***	Alternative Stds. for Haz. Debris (40 CFR 268.45)
D035	Methyl Ethyl Ketone	N/A	***	***	Alternative Stds. for Haz. Debris (40 CFR 268.45)
D036	Nitrobenzene	N/A	***	***	Alternative Stds. for Haz. Debris (40 CFR 268.45)
D037	Pentachlorophenol	N/A	***	***	Alternative Stds. for Haz. Debris (40 CFR 268.45)
D038	Pyridine	N/A	***	***	Alternative Stds. for Haz. Debris (40 CFR 268.45)

LDR REPORT TREATABILITY GROUP DATA SHEET

EPA/ State Number	Waste Description	LDR Sub-Category*	Concentration (Typical or Range)**	Basis	LDR Treatment Concentration Standard or Technology Code
D039	Tetrachloroethylene	N/A	***	***	Alternative Stds. for Haz. Debris (40 CFR 268.45)
D040	Trichloroethylene	N/A	***	***	Alternative Stds. for Haz. Debris (40 CFR 268.45)
D041	2,4,5-Trichlorophenol	N/A	***	***	Alternative Stds. for Haz. Debris (40 CFR 268.45)
D042	2,4,6-Trichlorophenol	N/A	***	***	Alternative Stds. for Haz. Debris (40 CFR 268.45)
D043	Vinyl Chloride	N/A	***	***	Alternative Stds. for Haz. Debris (40 CFR 268.45)
F001	1,1,1-Trichlorethane	Spent Solvent	***	***	Alternative Stds. for Haz. Debris (40 CFR 268.45)
F002	Methylene Chloride	Spent Solvent	***	***	Alternative Stds. for Haz. Debris (40 CFR 268.45)
F003	Acetone & Hexone	Spent Solvent	***	***	Alternative Stds. for Haz. Debris (40 CFR 268.45)
F004	o-Cresol & p-Cresol	Spent Solvent	***	***	Alternative Stds. for Haz. Debris (40 CFR 268.45)
F005	Methyl Ethyl Ketone	Spent Solvent	***	***	Alternative Stds. for Haz. Debris (40 CFR 268.45)
F039	Various	N/A	***	***	Alternative Stds. for Haz. Debris (40 CFR 268.45)
P029	Copper Cyanide	N/A	***	***	Alternative Stds. for Haz. Debris (40 CFR 268.45)
P030	Cyanides	N/A	***	***	Alternative Stds. for Haz. Debris (40 CFR 268.45)
P098	Potassium Cyanide	N/A	***	***	Alternative Stds. for Haz. Debris (40 CFR 268.45)
P102	Propargyl Alcohol	N/A	***	***	Alternative Stds. for Haz. Debris (40 CFR 268.45)
P106	Sodium Cyanide	N/A	***	***	Alternative Stds. for Haz. Debris (40 CFR 268.45)

LDR REPORT TREATABILITY GROUP DATA SHEET

EPA/ State Number	Waste Description	LDR Sub-Category*	Concentration (Typical or Range)**	Basis	LDR Treatment Concentration Standard or Technology Code
P120	Vanadium Pentoxide	N/A	***	***	Alternative Stds. for Haz. Debris (40 CFR 268.45)
U002	Acetone	N/A	***	***	Alternative Stds. for Haz. Debris (40 CFR 268.45)
U006	Acetyl Chloride	N/A	***	***	Alternative Stds. for Haz. Debris (40 CFR 268.45)
U031	n-Butyl Alcohol	N/A	***	***	Alternative Stds. for Haz. Debris (40 CFR 268.45)
U043	Vinyl Chloride	N/A	***	***	Alternative Stds. for Haz. Debris (40 CFR 268.45)
U057	Cyclohexanone	N/A	***	***	Alternative Stds. for Haz. Debris (40 CFR 268.45)
U080	Methylene Chloride	N/A	***	***	Alternative Stds. for Haz. Debris (40 CFR 268.45)
U108	1,4-Dioxane	N/A	***	***	CMBST or 170
U123	Formic Acid	N/A	***	***	Alternative Stds. for Haz. Debris (40 CFR 268.45)
U133	Hydrazine	N/A	***	***	CHOXD; CHRED; or CMBST
U151	Mercury	Low Mercury	<260 mg/kg Hg	***	Alternative Stds. for Haz. Debris (40 CFR 268.45)
U154	Methanol	N/A	***	***	CMBST or 0.75 mg/l TCLP
U159	Methyl Ethyl Ketone	N/A	***	***	Alternative Stds. for Haz. Debris (40 CFR 268.45)
U161	Methyl Isobutyl Ketone	N/A	***	***	Alternative Stds. for Haz. Debris (40 CFR 268.45)
U162	Methyl methacrylate	N/A	***	***	160
U196	Pyridine	N/A	***	***	Alternative Stds. for Haz. Debris (40 CFR 268.45)
U210	Tetrachloroethylene	N/A	***	***	6.0
U220	Toluene	N/A	***	***	Alternative Stds. for Haz. Debris (40 CFR 268.45)

LDR REPORT TREATABILITY GROUP DATA SHEET

EPA/ State Number	Waste Description	LDR Sub-Category*	Concentration (Typical or Range)**	Basis	LDR Treatment Concentration Standard or Technology Code
U226	1,1,1-Trichloroethane	N/A	***	***	Alternative Stds. for Haz. Debris (40 CFR 268.45)
U239	Xylenes	N/A	***	***	Alternative Stds. for Haz. Debris (40 CFR 268.45)
WP01	Persistent, EHW	N/A	***	***	None (1)
WP02	Persistent, DW	N/A	***	***	N/A
WSC2	Solid Corrosive	N/A	***	***	Remove Solid Acid Charac.
WT01	Toxic, EHW	N/A	***	***	None (1)
WT02	Toxic, DW	N/A	***	***	N/A

* LDR Subcategory marked N/A if no existing subcategory adequately describes this waste, or if there are no defined subcategories for the waste number (40 CFR 268.40).

** If waste is not consistent in concentration, this may not apply. Described in Section 3.3.6.

*** The concentration varies and is based on process knowledge and/or analytical data.

(1) Mixed extremely hazardous wastes may be land-disposed in Washington State in DOE facilities in accordance with RCW 70.105.050(2).

(2) The combination of waste codes varies on a per-package basis in accordance with WAC 173-303-070(3) and (5).

UHC identification not required when using the alternative treatment standards for hazardous debris.

3.3.3 List any waste numbers from Section 3.3.2 for which the waste stream already meets established LDR treatment standards.

☐ List:

☐ No LDR treatment required (e.g. TRUM waste destined for WIPP, exclusion, etc.)

☒ None (i.e. all constituents/waste numbers of this waste stream still require treatment).

3.3.4 Does this waste stream contain PCBs?

☒ Yes ☐ No ☐ Unknown

If no or unknown, skip to Section 3.3.5.

3.3.4.1 Is waste stream subject to TSCA regulations for PCBs?

☒ Yes ☐ No ☐ Unknown

3.3.4.2 Indicate the PCB concentration range.

☒ < 50 ppm ☒ ≥ 50 ppm ☐ Unknown

LDR REPORT TREATABILITY GROUP DATA SHEET

3.3.5 What is the confidence level for the regulated constituents?

☐ Low ☒ Medium ☐ High

3.3.6 Comments on regulated constituents and wastewater/non-wastewater category:

The newly generated waste packages associated with this treatability group are characterized by the generator and packaged for offsite shipment to a commercial waste treater. Legacy waste packages that have been in storage prior to 1995 undergo record information reviews, and are updated in required to meet current shipment and treatment facility acceptance requirements. Once the waste is received at the waste treaters facility, they perform conformation inspections to determine if the waste meets the treatment facilities waste profile that has been established for the waste package/stream.

4.0 WASTE STREAM TREATMENT

4.1 Is this waste stream currently being treated?

☒ Yes ☐ No

If yes, provide details: This waste is being commercially treated by several treatment vendors (e.g., Perma-Fix Environmental, EnergySolutions, etc.). Currently, there is sufficient capability/capacity to treat the stored and forecasted waste volumes.

4.2 Planned treatment: Check the appropriate box indicating future plans for treating this waste stream to meet applicable regulations, including LDR treatment standards.

☐ No treatment required (skip to Section 5.0)

☒ Treating or plan to treat on site

☒ Treating or plan to treat off site

☐ Treatment options still being assessed

4.3 Planned treatment method, facility, extent of treatment capacity available:

The treatment method being used to treat this TG is primarily macroencapsulation per 40 CFR 268.45. The waste is mainly being sent offsite to commercial treatment facilities (e.g., PermaFix Environmental, EnergySolutions, etc). Currently, there is sufficient non-thermal treatment capability/capacity to treat the stored and forecasted waste volumes. There is insufficient thermal treatment capability/capacity to treat organic/carbonaceous debris for which Hanford has an in-applicability certification from the WODE.

4.4 Treatment schedule information:

Treatment will be performed in accordance with M-91-42 milestone.

4.5 Applicable Tri-Party Agreement treatment milestone numbers (including permitting):

Milestone Number	Due Date
M-091-42Q	

LDR REPORT TREATABILITY GROUP DATA SHEET

4.6 Proposed new Tri-Party Agreement treatment milestones:

Currently in negotiations with the TPA members.

4.7 If treating or planning to treat on site, was or will waste minimization be addressed in developing and/or selecting the treatment method?

☒ Yes ☐ No ☐ Unknown

If yes, describe: To the extent practical, all mixed waste is segregated and packaged separately from LLW or TRU wastes. The volume of mixed waste is reduced by in-drum compaction when possible, and where it does not interfere with future treatment activities. To minimize the generation of mixed waste, generators actively seek nondangerous alternatives for the dangerous constituents in their processes. Minimization goals are set annually and tracked quarterly, and waste treatment is used to destroy the hazardous constituents, as allowable.

4.8 List or describe treatability equivalency petitions, rulemaking petitions, and case-by-case exemptions needed for treatment or already in place.

None identified at this time.

4.9 Key Assumptions:

Commercial thermal treatment capacity is not sufficient to change the status of the LDR 1,609 kilometer (1,000 mile) inapplicability certification.

5.0 WASTE STREAM DISPOSAL

After treatment, how will the waste stream be disposed of (include locations, milestone numbers, variances required, etc. as applicable):

The treated waste is returned back to Hanford for disposal in to the Mixed Waste Disposal Units or ERDF. Small quantities are disposed at an offsite commercial disposer (e.g., EnergySolution's Clive Site).

LDR REPORT WASTE LOCATION-SPECIFIC DATA SHEET

1.0 WASTE STREAM IDENTIFICATION AND SOURCE

1.1 Unit/Plant name: CWC **Waste Stream:** Hazardous Debris

Treatabilitiy Group Name: MLLW-04 - Hazardous Debris

1.2 Applicable profile number(s) for this waste stream:

A WSRd identified in the treatability group data sheet section 1.2.

1.3 Waste stream source information

1.3.1 General description of the waste (e.g., spill clean-up waste, discarded lab materials, maintenance waste):

The waste consists of hazardous debris. Debris that is contaminated with PCBs at concentrations greater than 50 ppm is not included in this waste.

1.3.2 History of how and where the waste was/is generated:

The waste was generated at many onsite locations and also by offsite generators.

1.3.3 Source of the regulated constituents:

See 1.3.1 and 1.3.2. Waste is debris contaminated with hazardous materials such as F, P, and U listed constituents, RCRA metals, corrosives, etc.

1.3.4 Source of the information (e.g., analytical data, process knowledge, document number, etc.)

Analytical data and process knowledge.

1.3.5 Additional notes:

None.

2.0 WASTE STREAM STORAGE, INVENTORY, AND GENERATION INFORMATION

(NOTE: For waste in satellite accumulation areas and 90-day accumulation areas, skip to Section 2.6.)

2.1 Current storage method

- ☐ Container (pad)
- ☒ Container (covered)
- ☐ Container (retrievably buried)
- ☐ Tank
- ☐ DST
- ☐ SST
- ☐ Other (explain):

2.1.1 How was the waste managed prior to storage?

Accumulated and packaged by waste generators prior to storage at CWC.

2.1.2 Timeframe when waste was placed to storage?

Waste storage in CWC began in 1988 and continues.

2.2 Storage inventory locations:

Building/Room Number	Number of Containers/Tanks
CWC	38

LDR REPORT WASTE LOCATION-SPECIFIC DATA SHEET

2.3 Current stored inventory for this stream.

Total volume (cubic meters): 9.900

Date of inventory values: 12/31/2009

Comments on waste inventory:

Based on the inventory residing at CWC as reported in SWITS.

2.4 Is storage capacity at this location potentially an issue for this waste stream?

☐ Yes ☒ No

If yes, what is the total estimated storage capacity? N/A

When is this capacity expected to be reached? N/A

Bases and assumptions used:

No issues with CWC storage based on 20 year waste generation forecast.

2.5 Planned storage areas for this waste:

☒ Current Location ☒ CWC ☐ DST

☐ Other Area(s) (list):

☐ None

2.6 Estimated generation projection by calendar year (includes waste in satellite and 90-day accumulation areas):

Year	m^3	and/or	kg
2010	0.000		0.000
2011	0.000		0.000
2012	0.000		0.000
2013	0.000		0.000
2014	0.000		0.000
Total	0.000		0.000

2.7 DOE Storage Compliance Assessment information:

☒ Assessment has been completed.

Document Number	Date
A&E-SEC-02-001	01/21/2002

☐ Assessment has been scheduled. Scheduled date:

☐ Other. Explain:

2.8 Applicable Tri-Party Agreement milestones related to storage at this location:

Milestone Number	Due Date
N/A	

LDR REPORT WASTE LOCATION-SPECIFIC DATA SHEET

2.9 Has there ever been any non-permitted, unauthorized release of this waste stream from this storage unit to the environment?

☐ Yes ☒ No

If yes, summarize releases and quantities and provide date:

N/A

2.10 Are there any plans to submit requests for variances or other exemptions related to storage?

☐ Yes ☒ No

If yes, explain: N/A

2.11 Characterization

2.11.1 Is further characterization needed about the waste prior to acceptance for storage?

☐ Yes ☒ No ☐ Unknown at this time

Milestone Number	Due Date
N/A	N/A

If yes or unknown, comment on characterization for storage.

N/A

2.11.2 Is further characterization needed about the waste prior to acceptance for treatment?

☐ Yes ☒ No ☐ Unknown at this time

Milestone Number	Due Date
N/A	N/A

If yes or unknown, comment on characterization for treatment.

N/A

2.11.3 Is further characterization needed about the waste prior to acceptance for disposal?

☐ Yes ☒ No ☐ Unknown at this time

Milestone Number	Due Date
N/A	N/A

If yes or unknown, comment on characterization for disposal.

N/A

2.12 Other key assumptions related to storage, inventory, and generation information:

None.

LDR REPORT WASTE LOCATION-SPECIFIC DATA SHEET

3.0 WASTE MINIMIZATION

3.1 Has a waste minimization assessment been completed for this stream?

☐ Yes ☒ No

If yes, provide date assessment conducted: N/A

If yes, provide document number or other identification:

N/A

If no, provide date assessment will be completed, or if waste stream is no longer generated, then indicate N/A:

None planned - waste not generated at CWC.

3.2 Provide details of current and proposed methods for minimizing the generation of this stream (e.g., process changes to reduce or eliminate LDR waste, methods to reduce volume through segregation and avoidance of commingling, substitution of less-toxic materials):

These activities occur before the wastes are shipped to CWC. There are few opportunities to reduce waste volumes placed into storage.

3.3 Waste minimization schedule

3.3.1 Reduction achieved during calendar year 2009 (volume or mass)

0.000 m3

3.3.2 Projected future waste volume reductions

Year	m^3	and/or	kg
2010	0.00		0.00
2011	0.00		0.00
2012	0.00		0.00
2013	0.00		0.00
2014	0.00		0.00
Total	0.00		0.00

3.3.3 Bases and assumptions used in above estimates:

There is no projected generation by CWC.

LDR REPORT WASTE LOCATION-SPECIFIC DATA SHEET

1.0 WASTE STREAM IDENTIFICATION AND SOURCE

1.1 Unit/Plant name: LLBG **Waste Stream:** MLLW Retrieval Hazardous Debris

Treatabilitiy Group Name: MLLW-04 - Hazardous Debris

1.2 Applicable profile number(s) for this waste stream:

A WSRd identified in the treatability group data sheet section 1.2.

1.3 Waste stream source information

1.3.1 General description of the waste (e.g., spill clean-up waste, discarded lab materials, maintenance waste):

The waste consists of hazardous debris. Debris that is contaminated with PCBs at concentrations greater than 50 ppm is not included in this waste. In addition, plywood, tarps, PPE, and soil contaminated by breached containers being retrieved from the covered TRUM retrieval project. It is assumed that breached containers hold material that would be regulated as hazardous waste under today's regulations.

1.3.2 History of how and where the waste was/is generated:

The waste was generated at many onsite locations and also by offsite generators. In addition, incidental waste from TRU retrieval has not been generated yet, this waste is forecasted to be generated starting in mid FY04.

1.3.3 Source of the regulated constituents:

See 1.3.1, 1.3.2 and 1.3.5. Hazardous materials could potentially be commingled with suspect-TRUM waste. Hazardous constituents were not regulated at the time of disposal but are expected to be present.

1.3.4 Source of the information (e.g., analytical data, process knowledge, document number, etc.)

Process knowledge, analytical data.

1.3.5 Additional notes:

Per TPA Milestone M-91-40 the entire waste stream is suspected of being mixed waste.

2.0 WASTE STREAM STORAGE, INVENTORY, AND GENERATION INFORMATION

(NOTE: For waste in satellite accumulation areas and 90-day accumulation areas, skip to Section 2.6.)

2.1 Current storage method

- ☐ Container (pad)
- ☐ Container (covered)
- ☒ Container (retrievably buried)
- ☐ Tank
- ☐ DST
- ☐ SST
- ☒ Other (explain): Stored pursuant to M-091 TPA milestones.

2.1.1 How was the waste managed prior to storage?

In LLBG trenches.

LDR REPORT WASTE LOCATION-SPECIFIC DATA SHEET

2.1.2 Timeframe when waste was placed to storage?

Varies from 1970 through 1087.

2.2 Storage inventory locations:

Building/Room Number	Number of Containers/Tanks
LLBG	3

2.3 Current stored inventory for this stream.

Total volume (cubic meters): 7.469

Date of inventory values: 12/31/2009

Comments on waste inventory:

Waste is stored pursuant to M-091 TPA milestones. The projected quantities are based upon the secondary waste generated during retrieval activities.

2.4 Is storage capacity at this location potentially an issue for this waste stream?

☐ Yes ☒ No

If yes, what is the total estimated storage capacity? N/A

When is this capacity expected to be reached? N/A

Bases and assumptions used:

2.5 Planned storage areas for this waste:

☐ Current Location ☒ CWC ☐ DST

☒ Other Area(s) (list): CERCLA waste generated during retrieval will be either sent directly to ERDF from the Low-Level Burial Grounds for disposal or stored at the CWC until approved for shipment to ERDF for disposal .

☐ None

2.6 Estimated generation projection by calendar year (includes waste in satellite and 90-day accumulation areas):

Year	m^3	and/or	kg
2010	0.000		0.000
2011	0.000		0.000
2012	0.000		0.000
2013	0.000		0.000
2014	0.000		0.000
Total	0.000		0.000

LDR REPORT WASTE LOCATION-SPECIFIC DATA SHEET

2.7 DOE Storage Compliance Assessment information:

☒ Assessment has been completed.

Document Number	Date
A&E-SEC-02-003	03/28/2002

☐ Assessment has been scheduled. Scheduled date:

☐ Other. Explain:

2.8 Applicable Tri-Party Agreement milestones related to storage at this location:

Milestone Number	Due Date
N/A	

2.9 Has there ever been any non-permitted, unauthorized release of this waste stream from this storage unit to the environment?

☐ Yes ☒ No

If yes, summarize releases and quantities and provide date:

N/A

2.10 Are there any plans to submit requests for variances or other exemptions related to storage?

☐ Yes ☒ No

If yes, explain: N/A

2.11 Characterization

2.11.1 Is further characterization needed about the waste prior to acceptance for storage?

☐ Yes ☐ No ☒ Unknown at this time

Milestone Number	Due Date
N/A	N/A

If yes or unknown, comment on characterization for storage.

As part of waste generation and transferring the MLLW to storage, further characterization could be necessary.

2.11.2 Is further characterization needed about the waste prior to acceptance for treatment?

☐ Yes ☐ No ☒ Unknown at this time

Milestone Number	Due Date
N/A	N/A

If yes or unknown, comment on characterization for treatment.

LDR REPORT WASTE LOCATION-SPECIFIC DATA SHEET

If information is not sufficient to ensure waste meets the treatment facilities acceptance criteria, further characterization may be necessary

2.11.3 Is further characterization needed about the waste prior to acceptance for disposal?

☐ Yes ☐ No ☒ Unknown at this time

Milestone Number	Due Date
N/A	N/A

If yes or unknown, comment on characterization for disposal.

To meet concentration based treatments standards applicable for the residues, sampling may be required after treatment if the residues are MLLW.

2.12 Other key assumptions related to storage, inventory, and generation information:

None.

3.0 WASTE MINIMIZATION

3.1 Has a waste minimization assessment been completed for this stream?

☐ Yes ☒ No

If yes, provide date assessment conducted: N/A

If yes, provide document number or other identification:

N/A

If no, provide date assessment will be completed, or if waste stream is no longer generated, then indicate N/A:

None planned. Waste has either already been generated or will be minimized as described in 3.2

3.2 Provide details of current and proposed methods for minimizing the generation of this stream (e.g., process changes to reduce or eliminate LDR waste, methods to reduce volume through segregation and avoidance of commingling, substitution of less-toxic materials):

Ability to reduce the volume of waste is limited, since waste has either already been generated or will be encountered during suspect-TRUM retrieval activities and identified when radiological contamination is found. Thorough document review and visual observation of waste contaminants contributing to waste stream could lead to portions of waste stream being not regulated as hazardous waste (low-level only).

3.3 Waste minimization schedule

3.3.1 Reduction achieved during calendar year 2009 (volume or mass)

0.000 m3

LDR REPORT WASTE LOCATION-SPECIFIC DATA SHEET

3.3.2 Projected future waste volume reductions

Year	m^3	and/or	kg
2010	0.00		0.00
2011	0.00		0.00
2012	0.00		0.00
2013	0.00		0.00
2014	0.00		0.00
Total	0.00		0.00

3.3.3 Bases and assumptions used in above estimates:

None.

LDR REPORT WASTE LOCATION-SPECIFIC DATA SHEET

1.0 WASTE STREAM IDENTIFICATION AND SOURCE

1.1 Unit/Plant name: T Plant Complex **Waste Stream:** Hazardous Debris

Treatabilitiy Group Name: MLLW-04 - Hazardous Debris

1.2 Applicable profile number(s) for this waste stream:

WSRD: 601, 60A, 606, 626, 627.

1.3 Waste stream source information

1.3.1 General description of the waste (e.g., spill clean-up waste, discarded lab materials, maintenance waste):

Hazardous debris generated as a result of 221-T Canyon cleanout, maintenance, and operational activities. In addition, this waste is generated from various onsite and offsite generators in which their waste is sent to the T Plant Complex for waste verification/storage/treatment.

1.3.2 History of how and where the waste was/is generated:

Waste generated as part of cleanup activities, maintenance, operations, and from various onsite locations and offsite generators. See discussion in Section 1.3.1.

1.3.3 Source of the regulated constituents:

See 1.3.1 and 1.3.2.

1.3.4 Source of the information (e.g., analytical data, process knowledge, document number, etc.)

Analytical data and process knowledge.

1.3.5 Additional notes:

None.

2.0 WASTE STREAM STORAGE, INVENTORY, AND GENERATION INFORMATION

(NOTE: For waste in satellite accumulation areas and 90-day accumulation areas, skip to Section 2.6.)

2.1 Current storage method

- ☒ Container (pad)
- ☒ Container (covered)
- ☐ Container (retrievably buried)
- ☐ Tank
- ☐ DST
- ☐ SST
- ☐ Other (explain):

2.1.1 How was the waste managed prior to storage?

Generated from various onsite locations and offsite generators. Generated as part of routine maintenance, operation and cell cleanout/canyon deck cleanoff.

2.1.2 Timeframe when waste was placed to storage?

1994 to present.

LDR REPORT WASTE LOCATION-SPECIFIC DATA SHEET

2.2 Storage inventory locations:

Building/Room Number	Number of Containers/Tanks
T Plant Complex	0

2.3 Current stored inventory for this stream.

Total volume (cubic meters): 0.000

Date of inventory values: 12/31/2009

Comments on waste inventory:

Inventory will fluctuate as T Plant Complex generates or performs treatment/verification on onsite/offsite generators.

2.4 Is storage capacity at this location potentially an issue for this waste stream?

☐ Yes ☒ No

If yes, what is the total estimated storage capacity? N/A

When is this capacity expected to be reached? N/A

Bases and assumptions used:

N/A

2.5 Planned storage areas for this waste:

☒ Current Location ☒ CWC ☐ DST

☐ Other Area(s) (list): N/A

☐ None

2.6 Estimated generation projection by calendar year (includes waste in satellite and 90-day accumulation areas):

Year	m^3	and/or	kg
2010	1.480		0.000
2011	1.480		0.000
2012	1.480		0.000
2013	1.480		0.000
2014	1.480		0.000
Total	7.400		0.000

2.7 DOE Storage Compliance Assessment information:

☒ Assessment has been completed.

Document Number	Date
01-A&E-012	11/28/2000

LDR REPORT WASTE LOCATION-SPECIFIC DATA SHEET

☒ Assessment has been scheduled. Scheduled date: 3rd quarter CY2005.

☐ Other. Explain:

2.8 Applicable Tri-Party Agreement milestones related to storage at this location:

Milestone Number	Due Date
N/A	

2.9 Has there ever been any non-permitted, unauthorized release of this waste stream from this storage unit to the environment?

☐ Yes ☒ No

If yes, summarize releases and quantities and provide date:

N/A

2.10 Are there any plans to submit requests for variances or other exemptions related to storage?

☐ Yes ☒ No

If yes, explain: Not aware of any variances.

2.11 Characterization

2.11.1 Is further characterization needed about the waste prior to acceptance for storage?

☐ Yes ☒ No ☐ Unknown at this time

Milestone Number	Due Date
N/A	N/A

If yes or unknown, comment on characterization for storage.

N/A

2.11.2 Is further characterization needed about the waste prior to acceptance for treatment?

☐ Yes ☒ No ☐ Unknown at this time

Milestone Number	Due Date
N/A	N/A

If yes or unknown, comment on characterization for treatment.

N/A

2.11.3 Is further characterization needed about the waste prior to acceptance for disposal?

☐ Yes ☒ No ☐ Unknown at this time

Milestone Number	Due Date
N/A	N/A

LDR REPORT WASTE LOCATION-SPECIFIC DATA SHEET

If yes or unknown, comment on characterization for disposal.

N/A

2.12 Other key assumptions related to storage, inventory, and generation information:

None.

3.0 WASTE MINIMIZATION

3.1 Has a waste minimization assessment been completed for this stream?

☐ Yes ☒ No

If yes, provide date assessment conducted:

If yes, provide document number or other identification:

N/A

If no, provide date assessment will be completed, or if waste stream is no longer generated, then indicate N/A:

See Section 3.3.3 for discussion on waste minimization.

3.2 Provide details of current and proposed methods for minimizing the generation of this stream (e.g., process changes to reduce or eliminate LDR waste, methods to reduce volume through segregation and avoidance of commingling, substitution of less-toxic materials):

Waste minimization is and will continue to be incorporated to the extent practical during canyon deck cleanoff, cell cleanout as well as from other activities. Attempts will be made to segregate low-level from mixed and from TRU.

3.3 Waste minimization schedule

3.3.1 Reduction achieved during calendar year 2009 (volume or mass)

0.000 m3

3.3.2 Projected future waste volume reductions

Year	m^3	and/or	kg
2010	0.00		0.00
2011	0.00		0.00
2012	0.00		0.00
2013	0.00		0.00
2014	0.00		0.00
Total	0.00		0.00

3.3.3 Bases and assumptions used in above estimates:

The T Plant Complex has submitted a P2/Wmin fiscal year 2004 goal to reduce, where possible, mixed waste generation. For FY 2004 to 2008, new goals will be evaluated and identified on a year-by-year basis. The T Plant Complex does not track waste reduction by treatability groups. Routine and non-routine generated waste is reported quarterly to the Waste Minimization/Pollution Prevention Group.

LDR REPORT WASTE LOCATION-SPECIFIC DATA SHEET

1.0 WASTE STREAM IDENTIFICATION AND SOURCE

1.1 Unit/Plant name: WRAP **Waste Stream:** Hazardous Debris

Treatabilitiy Group Name: MLLW-04 - Hazardous Debris

1.2 Applicable profile number(s) for this waste stream:

A WSRd identified in the treatability group data sheet section 1.2.

1.3 Waste stream source information

1.3.1 General description of the waste (e.g., spill clean-up waste, discarded lab materials, maintenance waste):

The waste consists of hazardous debris. Debris that is contaminated with PCBs at concentrations greater than 50 ppm is not included in this waste.

1.3.2 History of how and where the waste was/is generated:

The waste was generated at many onsite locations and also by offsite generators.

1.3.3 Source of the regulated constituents:

Hazardous constituents most likely entered the waste as chemicals used during analytical processes and operating activities. See 1.3.1 and 1.3.2.

1.3.4 Source of the information (e.g., analytical data, process knowledge, document number, etc.)

Process knowledge.

1.3.5 Additional notes:

Waste at WRAP comes from various generators and generating processes around the Hanford Site due to WRAP's verification and repackaging mission.

2.0 WASTE STREAM STORAGE, INVENTORY, AND GENERATION INFORMATION

(NOTE: For waste in satellite accumulation areas and 90-day accumulation areas, skip to Section 2.6.)

2.1 Current storage method

- ☐ Container (pad)
- ☒ Container (covered)
- ☐ Container (retrievably buried)
- ☐ Tank
- ☐ DST
- ☐ SST
- ☐ Other (explain):

2.1.1 How was the waste managed prior to storage?

Waste was generated and packaged at various locations around the Hanford Site or by offsite generators.

2.1.2 Timeframe when waste was placed to storage?

MLLW at WRAP is both MLLW dating back to the late 80's as well as newly generated MLLW.

LDR REPORT WASTE LOCATION-SPECIFIC DATA SHEET

2.2 Storage inventory locations:

Building/Room Number	Number of Containers/Tanks
WRAP	104

2.3 Current stored inventory for this stream.

Total volume (cubic meters): 30.430

Date of inventory values: 12/30/2009

Comments on waste inventory:

Inventory fluctuates daily to support WRAP's mission of waste verification. Inventory based on Solid Waste Information Tracking System (SWITS) printout dated 12/30/2009.

2.4 Is storage capacity at this location potentially an issue for this waste stream?

☐ Yes ☒ No

If yes, what is the total estimated storage capacity? N/A

When is this capacity expected to be reached? N/A

Bases and assumptions used:

Due to proximity to and interchange with CWC, there is no storage capacity issue at WRAP.

2.5 Planned storage areas for this waste:

☒ Current Location ☒ CWC ☐ DST

☐ Other Area(s) (list):

☐ None

2.6 Estimated generation projection by calendar year (includes waste in satellite and 90-day accumulation areas):

Year	m^3	and/or	kg
2010	0.208		0.000
2011	0.208		0.000
2012	0.208		0.000
2013	0.208		0.000
2014	0.208		0.000
Total	1.040		0.000

2.7 DOE Storage Compliance Assessment information:

☒ Assessment has been completed.

Document Number	Date
DE-AC06-96RL13200	09/26/2001

LDR REPORT WASTE LOCATION-SPECIFIC DATA SHEET

☐ Assessment has been scheduled. Scheduled date:

☐ Other. Explain:

2.8 Applicable Tri-Party Agreement milestones related to storage at this location:

Milestone Number	Due Date
N/A	

2.9 Has there ever been any non-permitted, unauthorized release of this waste stream from this storage unit to the environment?

☐ Yes ☒ No

If yes, summarize releases and quantities and provide date:

N/A

2.10 Are there any plans to submit requests for variances or other exemptions related to storage?

☐ Yes ☒ No

If yes, explain: N/A

2.11 Characterization

2.11.1 Is further characterization needed about the waste prior to acceptance for storage?

☐ Yes ☒ No ☐ Unknown at this time

Milestone Number	Due Date
N/A	N/A

If yes or unknown, comment on characterization for storage.

N/A

2.11.2 Is further characterization needed about the waste prior to acceptance for treatment?

☐ Yes ☒ No ☐ Unknown at this time

Milestone Number	Due Date
N/A	N/A

If yes or unknown, comment on characterization for treatment.

N/A

2.11.3 Is further characterization needed about the waste prior to acceptance for disposal?

☒ Yes ☐ No ☐ Unknown at this time

Milestone Number	Due Date
M-091-42	

LDR REPORT WASTE LOCATION-SPECIFIC DATA SHEET

If yes or unknown, comment on characterization for disposal.

The nonconforming waste items will be confirmed by the waste treater and treated as required prior to disposal.

2.12 Other key assumptions related to storage, inventory, and generation information:

None.

3.0 WASTE MINIMIZATION

3.1 Has a waste minimization assessment been completed for this stream?

☐ Yes ☒ No

If yes, provide date assessment conducted: N/A

If yes, provide document number or other identification:

N/A

If no, provide date assessment will be completed, or if waste stream is no longer generated, then indicate N/A:

N/A

3.2 Provide details of current and proposed methods for minimizing the generation of this stream (e.g., process changes to reduce or eliminate LDR waste, methods to reduce volume through segregation and avoidance of commingling, substitution of less-toxic materials):

This is waste generated by other facilities. However, to the extent practical, all mixed waste is segregated and packaged separately from LLW with future treatment activities.

3.3 Waste minimization schedule

3.3.1 Reduction achieved during calendar year 2009 (volume or mass)

0.000 m3

3.3.2 Projected future waste volume reductions

Year	m^3	and/or	kg
2010	0.00		0.00
2011	0.00		0.00
2012	0.00		0.00
2013	0.00		0.00
2014	0.00		0.00
Total	0.00		0.00

3.3.3 Bases and assumptions used in above estimates:

Since subject waste has already been generated, no additional waste minimization activities are planned. WRAP does not generate this waste stream, rather is previously generated by various generating facilities.

MLLW-05 – Radioactive Lead Solids

LDR REPORT TREATABILITY GROUP DATA SHEET

1.0 WASTE STREAM IDENTIFICATION

1.1 Treatability Group Name: MLLW-05 - Radioactive Lead Solids

1.2 Description of waste (list WSRd numbers for this waste stream, as applicable)

This treatability group is for waste that meets the definition of radioactive lead solids subcategory as described in 40 CFR 268.40. The physical makeup consists of many different forms of radioactive lead solids including bricks, sheets, shot-filled blankets, lead-lined debris items where the lead comprises more than 50% of the waste matrix. The primary WSRds that comprise this treatability group are EPB and 800. The waste is generated by many onsite generating organizations.

2.0 WASTE INVENTORY AND GENERATION

2.1 Current total inventory for this waste stream (stored waste only, not accumulation areas). [Equals sum of location-specific data sheets for this treatability group.]

Total volume (cubic meters): 0.210

2.2 Estimated generation projection by calendar year: [equals annual sums of location-specfic data sheets for this treatability group].

Year	m^3	and/or	kg
2010	0.000		0.000
2011	0.000		0.000
2012	0.000		0.000
2013	0.000		0.000
2014	0.000		0.000
Total	0.000		0.000

3.0 WASTE STREAM CHARACTERIZATION

3.1 Radiological Characteristics

3.1.1 Mixed waste type: ☐ High-level ☐ Transuranic ☒ Low-level

3.1.2 Handling (as package contents would need to be handled during treatment):

☒ Contact-handled ☐ Remote-handled

3.1.3 Comments on radiological characteristics (e.g., more specific information on content, treatment concerns caused by radiation, confidence level):

This waste is a general category based on dangerous waste physical and chemical characteristics; therefore, the radiological characteristics vary greatly between individual waste packages. The waste meets low-level-waste requirements as defined by DOE Order 435.1. This treatability group is for Contact Handled (CH) waste. Greater than Hanford Category 1 (GTC1) waste will normally be radiologically stabilization prior to disposal; however, radiological stabilization may take place in the disposal unit.

LDR REPORT TREATABILITY GROUP DATA SHEET

3.2 Physical Form

3.2.1 Physical form of the waste:

☒ Solid ☐ Liquid ☐ Semi-solid ☒ Debris

☒ Other (Describe in comments.)

3.2.2 Comments on physical form:

This waste consists of various forms of radioactive lead solids, all non-wastewater forms. Miscellaneous debris type waste materials are normally included in with lead solids. The majority of the waste packages are 55-gal and 85-gal drums, but various sized boxes are also utilized. The packages normally also contain absorbent materials and plastic liners.

3.3 Regulated constituents and wastewater/non-wastewater category

3.3.1 Wastewater/non-wastewater under RCRA

☐ Wastewater ☒ Non-wastewater ☐ Unknown

3.3.2 Regulated constituents table including treatment requirements and UHCs, if applicable.

EPA/ State Number	Waste Description	LDR Sub-Category*	Concentration (Typical or Range)**	Basis	LDR Treatment Concentration Standard or Technology Code
F001	1,1,1-Trichloroethane	Spent Solvent	***	***	Alternative Treatment Stds. for Haz. Debris (40 CFR 268.45)
F002	Methylene Chloride	Spent Solvent	***	***	Alternative Treatment Stds. for Haz. Debris (40 CFR 268.45)

LDR REPORT TREATABILITY GROUP DATA SHEET

EPA/ State Number	Waste Description	LDR Sub-Category*	Concentration (Typical or Range)**	Basis	LDR Treatment Concentration Standard or Technology Code
F003	Acetone & Hexone	Spent Solvent	***	***	Alternative Treatment Stds. for Haz. Debris (40 CFR 268.45)
F004	o-Cresol & p-Cresol	Spent Solvent	***	***	Alternative Treatment Stds. for Haz. Debris (40 CFR 268.45)
F005	Methyl Ethyl Ketone	Spent Solvent	***	***	Alternative Treatment Stds. for Haz. Debris (40 CFR 268.45)
WSC2	Solid Corrosive Acid	N/A	***	***	Remove Solid Acid Charac.
WT01	Toxic, EHW	N/A	***	***	None (1)
WT02	Toxic, DW	N/A	***	***	N/A

* LDR Subcategory marked N/A if no existing subcategory adequately describes this waste, or if there are no defined subcategories for the waste number (40 CFR 268.40).

** If waste is not consistent in concentration, this may not apply. Described in Section 3.3.6.

*** The concentration varies and is based on process knowledge and/or analytical data.

(1) Mixed extremely hazardous wastes may be land-disposed in Washington State in DOE facilities in accordance with RCW 70.105.050(2).

UHC identification not required for D008 radioactive lead solids and hazardous debris when using alternative treatment standards for hazardous debris.

3.3.3 List any waste numbers from Section 3.3.2 for which the waste stream already meets established LDR treatment standards.

☐ List:

☐ No LDR treatment required (e.g. TRUM waste destined for WIPP, exclusion, etc.)

☒ None (i.e. all constituents/waste numbers of this waste stream still require treatment).

3.3.4 Does this waste stream contain PCBs?

☐ Yes ☒ No ☐ Unknown

If no or unknown, skip to Section 3.3.5.

3.3.4.1 Is waste stream subject to TSCA regulations for PCBs?

☐ Yes ☒ No ☐ Unknown

3.3.4.2 Indicate the PCB concentration range.

☐ < 50 ppm ☐ ≥ 50 ppm ☐ Unknown

LDR REPORT TREATABILITY GROUP DATA SHEET

3.3.5 What is the confidence level for the regulated constituents?

☐ Low ☒ Medium ☐ High

3.3.6 Comments on regulated constituents and wastewater/non-wastewater category:

The newly generated waste packages associated with this treatability group are characterized by the generator and packaged for offsite shipment to a commercial waste treater. Legacy waste packages that have been in storage prior to 1995 undergo record information reviews, and are updated in required to meet current shipment and treatment facility acceptance requirements. Once the waste is received at the waste treaters facility, they perform conformation inspections to determine if the waste meets the treatment facilities waste profile that has been established for the waste package/stream.

4.0 WASTE STREAM TREATMENT

4.1 Is this waste stream currently being treated?

☒ Yes ☐ No

If yes, provide details: Since 2003, this wastestream has been treated (macroencapsulated) in accordance with the requirements of CFR 40 Part 268.40 at several offsite commercal waste treaters (e.g., Perma-Fix, EnergySolutions).

4.2 Planned treatment: Check the appropriate box indicating future plans for treating this waste stream to meet applicable regulations, including LDR treatment standards.

☐ No treatment required (skip to Section 5.0)

☒ Treating or plan to treat on site

☒ Treating or plan to treat off site

☐ Treatment options still being assessed

4.3 Planned treatment method, facility, extent of treatment capacity available:

RCRA specifies that this waste type (D008) be treated via macroencapsulation without using a sealed container. Treatment will be performed by means of onsite and offsite commercial treatment contracts, and/or by onsite treatment units.

4.4 Treatment schedule information:

Treatment will be performed in accordance with TPA Milestone M-91-42.

4.5 Applicable Tri-Party Agreement treatment milestone numbers (including permitting):

Milestone Number	Due Date
M-091-42Q	

4.6 Proposed new Tri-Party Agreement treatment milestones:

Currently in negotiations with the TPA members.

LDR REPORT TREATABILITY GROUP DATA SHEET

4.7 If treating or planning to treat on site, was or will waste minimization be addressed in developing and/or selecting the treatment method?

☒ Yes ☐ No ☐ Unknown

If yes, describe: When feasible and/or practical, decontamination and segregation will be performed on this waste to reduce the ultimate disposal volumes.

4.8 List or describe treatability equivalency petitions, rulemaking petitions, and case-by-case exemptions needed for treatment or already in place.

None currently identified at this time.

4.9 Key Assumptions:

5.0 WASTE STREAM DISPOSAL

After treatment, how will the waste stream be disposed of (include locations, milestone numbers, variances required, etc. as applicable):

Treated waste residues will be disposed back at the Hanford Site (e.g., Mixed Waste Disposal Unit) or at a commerical waste disposal site (e.g., EnergySolutions Clive).

LDR REPORT WASTE LOCATION-SPECIFIC DATA SHEET

1.0 WASTE STREAM IDENTIFICATION AND SOURCE

1.1 Unit/Plant name: CWC **Waste Stream:** Elemental Lead

Treatabilitiy Group Name: MLLW-05 - Radioactive Lead Solids

1.2 Applicable profile number(s) for this waste stream:

A WSRd identified in the treatability group data sheet section 1.2.

1.3 Waste stream source information

1.3.1 General description of the waste (e.g., spill clean-up waste, discarded lab materials, maintenance waste):

The waste consists of elemental lead solids (bricks, shot, gloves, shielding, etc.). The lead may be commingled with heterogeneous debris or the lead may be a component of a debris article.

1.3.2 History of how and where the waste was/is generated:

The waste was generated at many onsite locations and also by offsite generators.

1.3.3 Source of the regulated constituents:

See 1.3.1 and 1.3.2.

1.3.4 Source of the information (e.g., analytical data, process knowledge, document number, etc.)

Analytical data and process knowledge.

1.3.5 Additional notes:

None.

2.0 WASTE STREAM STORAGE, INVENTORY, AND GENERATION INFORMATION

(NOTE: For waste in satellite accumulation areas and 90-day accumulation areas, skip to Section 2.6.)

2.1 Current storage method

- ☐ Container (pad)
- ☒ Container (covered)
- ☐ Container (retrievably buried)
- ☐ Tank
- ☐ DST
- ☐ SST
- ☐ Other (explain):

2.1.1 How was the waste managed prior to storage?

Accumulated and packaged by waste generators prior to storage at CWC.

2.1.2 Timeframe when waste was placed to storage?

Waste storage began at CWC in 1988 and continues.

2.2 Storage inventory locations:

Building/Room Number	Number of Containers/Tanks
CWC	0

LDR REPORT WASTE LOCATION-SPECIFIC DATA SHEET

2.3 Current stored inventory for this stream.

Total volume (cubic meters): 0.000

Date of inventory values: 12/31/2009

Comments on waste inventory:

Based on the inventory residing at CWC as reported in SWITS.

2.4 Is storage capacity at this location potentially an issue for this waste stream?

☐ Yes ☒ No

If yes, what is the total estimated storage capacity? N/A

When is this capacity expected to be reached? N/A

Bases and assumptions used:

No issues with CWC storage based on 20 year waste generation forecast.

2.5 Planned storage areas for this waste:

☒ Current Location ☒ CWC ☐ DST

☐ Other Area(s) (list):

☐ None

2.6 Estimated generation projection by calendar year (includes waste in satellite and 90-day accumulation areas):

Year	m^3	and/or	kg
2010	0.000		0.000
2011	0.000		0.000
2012	0.000		0.000
2013	0.000		0.000
2014	0.000		0.000
Total	0.000		0.000

2.7 DOE Storage Compliance Assessment information:

☒ Assessment has been completed.

Document Number	Date
A&E-SEC-02-001	01/21/2002

☐ Assessment has been scheduled. Scheduled date:

☐ Other. Explain:

2.8 Applicable Tri-Party Agreement milestones related to storage at this location:

Milestone Number	Due Date
N/A	

LDR REPORT WASTE LOCATION-SPECIFIC DATA SHEET

2.9 Has there ever been any non-permitted, unauthorized release of this waste stream from this storage unit to the environment?

☐ Yes ☒ No

If yes, summarize releases and quantities and provide date:

N/A

2.10 Are there any plans to submit requests for variances or other exemptions related to storage?

☐ Yes ☒ No

If yes, explain: N/A

2.11 Characterization

2.11.1 Is further characterization needed about the waste prior to acceptance for storage?

☐ Yes ☒ No ☐ Unknown at this time

Milestone Number	Due Date
N/A	N/A

If yes or unknown, comment on characterization for storage.

N/A

2.11.2 Is further characterization needed about the waste prior to acceptance for treatment?

☐ Yes ☒ No ☐ Unknown at this time

Milestone Number	Due Date
N/A	N/A

If yes or unknown, comment on characterization for treatment.

N/A

2.11.3 Is further characterization needed about the waste prior to acceptance for disposal?

☐ Yes ☒ No ☐ Unknown at this time

Milestone Number	Due Date
N/A	N/A

If yes or unknown, comment on characterization for disposal.

N/A

2.12 Other key assumptions related to storage, inventory, and generation information:

None.

LDR REPORT WASTE LOCATION-SPECIFIC DATA SHEET

3.0 WASTE MINIMIZATION

3.1 Has a waste minimization assessment been completed for this stream?

☐ Yes ☒ No

If yes, provide date assessment conducted: N/A

If yes, provide document number or other identification:

N/A

If no, provide date assessment will be completed, or if waste stream is no longer generated, then indicate N/A:

None planned - waste not generated at CWC.

3.2 Provide details of current and proposed methods for minimizing the generation of this stream (e.g., process changes to reduce or eliminate LDR waste, methods to reduce volume through segregation and avoidance of commingling, substitution of less-toxic materials):

These activities occur before the wastes are shipped to CWC. There are few opportunities to reduce waste volumes placed into storage.

3.3 Waste minimization schedule

3.3.1 Reduction achieved during calendar year 2009 (volume or mass)

0.000 m3

3.3.2 Projected future waste volume reductions

Year	m^3	and/or	kg
2010	0.00		0.00
2011	0.00		0.00
2012	0.00		0.00
2013	0.00		0.00
2014	0.00		0.00
Total	0.00		0.00

3.3.3 Bases and assumptions used in above estimates:

There is no projected generation by CWC.

LDR REPORT WASTE LOCATION-SPECIFIC DATA SHEET

1.0 WASTE STREAM IDENTIFICATION AND SOURCE

1.1 Unit/Plant name: T Plant Complex **Waste Stream:** Elemental Lead

Treatabilitiy Group Name: MLLW-05 - Radioactive Lead Solids

1.2 Applicable profile number(s) for this waste stream:

800

1.3 Waste stream source information

1.3.1 General description of the waste (e.g., spill clean-up waste, discarded lab materials, maintenance waste):

Radioactive lead solids.

1.3.2 History of how and where the waste was/is generated:

Lead bricks/sheets formerly used for shielding in the facility.

1.3.3 Source of the regulated constituents:

See 1.3.1 and 1.3.2

1.3.4 Source of the information (e.g., analytical data, process knowledge, document number, etc.)

Process knowledge.

1.3.5 Additional notes:

None.

2.0 WASTE STREAM STORAGE, INVENTORY, AND GENERATION INFORMATION

(NOTE: For waste in satellite accumulation areas and 90-day accumulation areas, skip to Section 2.6.)

2.1 Current storage method

- ☒ Container (pad)
- ☒ Container (covered)
- ☐ Container (retrievably buried)
- ☐ Tank
- ☐ DST
- ☐ SST
- ☐ Other (explain): If this waste is received and/or generated by the T Plant Complex is CY 2004, this waste could be stored in outdoor storage pads or within buildings or other types of structures.

2.1.1 How was the waste managed prior to storage?

Waste could be generated during routine maintenance and packaged accordingly.

2.1.2 Timeframe when waste was placed to storage?

2002.

2.2 Storage inventory locations:

Building/Room Number	Number of Containers/Tanks
T Plant Complex	0

LDR REPORT WASTE LOCATION-SPECIFIC DATA SHEET

2.3 Current stored inventory for this stream.

Total volume (cubic meters): 0.000

Date of inventory values: 12/31/2009

Comments on waste inventory:

None.

2.4 Is storage capacity at this location potentially an issue for this waste stream?

☐ Yes ☒ No

If yes, what is the total estimated storage capacity? N/A

When is this capacity expected to be reached? N/A

Bases and assumptions used:

2.5 Planned storage areas for this waste:

☒ Current Location ☒ CWC ☐ DST

☐ Other Area(s) (list):

☐ None

2.6 Estimated generation projection by calendar year (includes waste in satellite and 90-day accumulation areas):

Year	m^3	and/or	kg
2010	0.000		0.000
2011	0.000		0.000
2012	0.000		0.000
2013	0.000		0.000
2014	0.000		0.000
Total	0.000		0.000

2.7 DOE Storage Compliance Assessment information:

☒ Assessment has been completed.

Document Number	Date
01-A&E-012	11/28/2000

☒ Assessment has been scheduled. Scheduled date: 3rd quarter CY2005

☐ Other. Explain:

2.8 Applicable Tri-Party Agreement milestones related to storage at this location:

Milestone Number	Due Date
N/A	

LDR REPORT WASTE LOCATION-SPECIFIC DATA SHEET

2.9 Has there ever been any non-permitted, unauthorized release of this waste stream from this storage unit to the environment?

☐ Yes ☒ No

If yes, summarize releases and quantities and provide date:

N/A

2.10 Are there any plans to submit requests for variances or other exemptions related to storage?

☐ Yes ☒ No

If yes, explain: N/A

2.11 Characterization

2.11.1 Is further characterization needed about the waste prior to acceptance for storage?

☐ Yes ☒ No ☐ Unknown at this time

Milestone Number	Due Date
N/A	N/A

If yes or unknown, comment on characterization for storage.

N/A

2.11.2 Is further characterization needed about the waste prior to acceptance for treatment?

☐ Yes ☒ No ☐ Unknown at this time

Milestone Number	Due Date
N/A	N/A

If yes or unknown, comment on characterization for treatment.

N/A

2.11.3 Is further characterization needed about the waste prior to acceptance for disposal?

☐ Yes ☒ No ☐ Unknown at this time

Milestone Number	Due Date
N/A	N/A

If yes or unknown, comment on characterization for disposal.

N/A

2.12 Other key assumptions related to storage, inventory, and generation information:

None.

LDR REPORT WASTE LOCATION-SPECIFIC DATA SHEET

3.0 WASTE MINIMIZATION

3.1 Has a waste minimization assessment been completed for this stream?

☐ Yes ☒ No

If yes, provide date assessment conducted: N/A

If yes, provide document number or other identification:

N/A

If no, provide date assessment will be completed, or if waste stream is no longer generated, then indicate N/A:

N/A

3.2 Provide details of current and proposed methods for minimizing the generation of this stream (e.g., process changes to reduce or eliminate LDR waste, methods to reduce volume through segregation and avoidance of commingling, substitution of less-toxic materials):

To the extent practical, all mixed waste waste is segregated and packaged separately from LLW. The volume of mixed waste is reducted by compoaction where possible. To minimize the generation of mixed waste, T Plant Complex personnel actively seek non-dangerous waste alternatives. In addition, waste minimization goals are set annually and tracked quarterly.

3.3 Waste minimization schedule

3.3.1 Reduction achieved during calendar year 2009 (volume or mass)

0.000 m3

3.3.2 Projected future waste volume reductions

Year	m^3	and/or	kg
2010	0.00		0.00
2011	0.00		0.00
2012	0.00		0.00
2013	0.00		0.00
2014	0.00		0.00
Total	0.00		0.00

3.3.3 Bases and assumptions used in above estimates:

The T Plant Complex has submitted a P2/Wmin fiscal year 2004 goal to reduce, where possible, mixed waste generation. For FY 2003 to 2008, new goals will be evaluated and idnetified on a year-by-year basis. T Palnt Comples does not track waste reduction by treatability groups. Routine and non-routine generated waste is reported quarterly to the Wmin/P2 group.

LDR REPORT WASTE LOCATION-SPECIFIC DATA SHEET

1.0 WASTE STREAM IDENTIFICATION AND SOURCE

1.1 Unit/Plant name: WRAP **Waste Stream:** Radioactive Lead Solids

Treatabilitiy Group Name: MLLW-05 - Radioactive Lead Solids

1.2 Applicable profile number(s) for this waste stream:

A WSRd identified in the treatability group data sheet section 1.2.

1.3 Waste stream source information

1.3.1 General description of the waste (e.g., spill clean-up waste, discarded lab materials, maintenance waste):

Elemental Lead

1.3.2 History of how and where the waste was/is generated:

The waste was generated at many onsite locations and also by offsite generators.

1.3.3 Source of the regulated constituents:

Hazardous constituents were generated at various Hanford Site generator locations (e.g. PFP, 222S, etc.)

1.3.4 Source of the information (e.g., analytical data, process knowledge, document number, etc.)

Process knowledge.

1.3.5 Additional notes:

Waste at WRAP comes from various generators and generating processes around the Hanford Site due to WRAP's verification and repackaging mission.

2.0 WASTE STREAM STORAGE, INVENTORY, AND GENERATION INFORMATION

(NOTE: For waste in satellite accumulation areas and 90-day accumulation areas, skip to Section 2.6.)

2.1 Current storage method

☐ Container (pad) ☒ Container (covered) ☐ Container (retrievably buried)

☐ Tank ☐ DST ☐ SST

☐ Other (explain): N/A

2.1.1 How was the waste managed prior to storage?

Waste was generated and packaged at a Hanford generating facility.

2.1.2 Timeframe when waste was placed to storage?

MLLW at WRAP is both MLLW dating back to the late 80's as well as newly generated MLLW.

2.2 Storage inventory locations:

Building/Room Number	Number of Containers/Tanks
WRAP	1

LDR REPORT WASTE LOCATION-SPECIFIC DATA SHEET

2.3 Current stored inventory for this stream.

Total volume (cubic meters): 0.210

Date of inventory values: 12/30/2009

Comments on waste inventory:

Inventory based on Solid Waste Information Tracking System (SWITS) printout dated 12/30/2009.

2.4 Is storage capacity at this location potentially an issue for this waste stream?

☐ Yes ☒ No

If yes, what is the total estimated storage capacity? N/A

When is this capacity expected to be reached? N/A

Bases and assumptions used:

Due to proximity to and interchange with CWC, there is no storage capacity issue at WRAP.

2.5 Planned storage areas for this waste:

☒ Current Location ☒ CWC ☐ DST

☐ Other Area(s) (list):

☐ None

2.6 Estimated generation projection by calendar year (includes waste in satellite and 90-day accumulation areas):

Year	m^3	and/or	kg
2010	0.000		0.000
2011	0.000		0.000
2012	0.000		0.000
2013	0.000		0.000
2014	0.000		0.000
Total	0.000		0.000

2.7 DOE Storage Compliance Assessment information:

☒ Assessment has been completed.

Document Number	Date
DE-AC06-96RL13200	09/26/2001

☐ Assessment has been scheduled. Scheduled date:

☐ Other. Explain:

2.8 Applicable Tri-Party Agreement milestones related to storage at this location:

Milestone Number	Due Date
N/A	

LDR REPORT WASTE LOCATION-SPECIFIC DATA SHEET

2.9 Has there ever been any non-permitted, unauthorized release of this waste stream from this storage unit to the environment?

☐ Yes ☒ No

If yes, summarize releases and quantities and provide date:

N/A

2.10 Are there any plans to submit requests for variances or other exemptions related to storage?

☐ Yes ☒ No

If yes, explain: N/A

2.11 Characterization

2.11.1 Is further characterization needed about the waste prior to acceptance for storage?

☐ Yes ☒ No ☐ Unknown at this time

Milestone Number	Due Date
N/A	N/A

If yes or unknown, comment on characterization for storage.

N/A

2.11.2 Is further characterization needed about the waste prior to acceptance for treatment?

☐ Yes ☒ No ☐ Unknown at this time

Milestone Number	Due Date
N/A	N/A

If yes or unknown, comment on characterization for treatment.

N/A

2.11.3 Is further characterization needed about the waste prior to acceptance for disposal?

☐ Yes ☒ No ☐ Unknown at this time

Milestone Number	Due Date
N/A	N/A

If yes or unknown, comment on characterization for disposal.

N/A

2.12 Other key assumptions related to storage, inventory, and generation information:

LDR REPORT WASTE LOCATION-SPECIFIC DATA SHEET

3.0 WASTE MINIMIZATION

3.1 Has a waste minimization assessment been completed for this stream?

☐ Yes ☒ No

If yes, provide date assessment conducted:

If yes, provide document number or other identification:

If no, provide date assessment will be completed, or if waste stream is no longer generated, then indicate N/A:

N/A

3.2 Provide details of current and proposed methods for minimizing the generation of this stream (e.g., process changes to reduce or eliminate LDR waste, methods to reduce volume through segregation and avoidance of commingling, substitution of less-toxic materials):

Through source reduction, waste minimization practices are being employed to ensure that the generation of this stream is being minimized. Additional waste is not expected to be generated in the future.

3.3 Waste minimization schedule

3.3.1 Reduction achieved during calendar year 2009 (volume or mass)

0.000 m3

3.3.2 Projected future waste volume reductions

Year	m^3	and/or	kg
2010	0.00		0.00
2011	0.00		0.00
2012	0.00		0.00
2013	0.00		0.00
2014	0.00		0.00
Total	0.00		0.00

3.3.3 Bases and assumptions used in above estimates:

Since subject waste has already been generated, no additional waste minimization activities are planned. WRAP does not generate this waste stream, rather will receive waste for further processing from other generating facilities.

This page intentionally left blank.

MLLW-06 – Mercury Wastes

LDR REPORT TREATABILITY GROUP DATA SHEET

1.0 WASTE STREAM IDENTIFICATION

1.1 Treatability Group Name: MLLW-06 - Mercury Wastes

1.2 Description of waste (list WSRd numbers for this waste stream, as applicable)

This treatability group is for waste that contains various forms of mercury requiring special waste treatments. The form can consist of elemental liquid mercury, partially amalgamated mercury, mercury spill cleanups, high-mercury subcategory waste, and some debris waste items packaged in with the mercury waste. The primary WSRds that comprise this treatability group are EHG, HHG and 810. The waste is generated by many onsite generating organizations.

2.0 WASTE INVENTORY AND GENERATION

2.1 Current total inventory for this waste stream (stored waste only, not accumulation areas). [Equals sum of location-specific data sheets for this treatability group.]

Total volume (cubic meters): 0.000

2.2 Estimated generation projection by calendar year: [equals annual sums of location-specfic data sheets for this treatability group].

Year	m^3	and/or	kg
2010	0.000		0.000
2011	0.000		0.000
2012	0.000		0.000
2013	0.000		0.000
2014	0.000		0.000
Total	0.000		0.000

3.0 WASTE STREAM CHARACTERIZATION

3.1 Radiological Characteristics

3.1.1 Mixed waste type: ☐ High-level ☐ Transuranic ☒ Low-level

3.1.2 Handling (as package contents would need to be handled during treatment):

☒ Contact-handled ☐ Remote-handled

3.1.3 Comments on radiological characteristics (e.g., more specific information on content, treatment concerns caused by radiation, confidence level):

This waste is a general category based on dangerous waste physical and chemical characteristics; therefore, the radiological characteristics vary greatly between individual waste packages. The waste meets low-level-waste requirements as defined by DOE Order 435.1. This treatability group is for Contact Handled (CH) waste. Greater than Hanford Category 1 (GTC1) waste will normally be radiologically stabilization prior to disposal; however, radiological stabilization may take place in the disposal unit.

LDR REPORT TREATABILITY GROUP DATA SHEET

3.2 Physical Form

3.2.1 Physical form of the waste:

☒ Solid ☒ Liquid ☒ Semi-solid ☐ Debris

☒ Other (Describe in comments.)

3.2.2 Comments on physical form:

The form can consist of elemental liquid mercury, partially amalgamated mercury, mercury spill cleanups, high-mercury subcategory waste, and some debris waste items packaged in with the mercury waste.

3.3 Regulated constituents and wastewater/non-wastewater category

3.3.1 Wastewater/non-wastewater under RCRA

☐ Wastewater ☒ Non-wastewater ☐ Unknown

3.3.2 Regulated constituents table including treatment requirements and UHCs, if applicable.

EPA/ State Number	Waste Description	LDR Sub-Category*	Concentration (Typical or Range)**	Basis	LDR Treatment Concentration Standard or Technology Code

LDR REPORT TREATABILITY GROUP DATA SHEET

EPA/ State Number	Waste Description	LDR Sub-Category*	Concentration (Typical or Range)**	Basis	LDR Treatment Concentration Standard or Technology Code
D009	TC-Mercury	Elemental	***	***	Amalgamation
D009	TC-Mercury	High Mercury	>260 mg/kg	***	RMERC
U151	Mercury	Elemental	***	***	Amalgamation

* LDR Subcategory marked N/A if no existing subcategory adequately describes this waste, or if there are no defined subcategories for the waste number (40 CFR 268.40).

** If waste is not consistent in concentration, this may not apply. Described in Section 3.3.6.

***The concentration varies and is based on process knowledge and/or analytical data.

(1) Mixed extremely hazardous wastes may be land-disposed in Washington State in DOE facilities in accordance with RCW 70.105.050(2).

UHC identification not required for D009 elemental mercury and hazardous debris when using the alternative treatment standards for hazardous debris.

3.3.3 List any waste numbers from Section 3.3.2 for which the waste stream already meets established LDR treatment standards.

☐ List:

☐ No LDR treatment required (e.g. TRUM waste destined for WIPP, exclusion, etc.)

☒ None (i.e. all constituents/waste numbers of this waste stream still require treatment).

LDR REPORT TREATABILITY GROUP DATA SHEET

3.3.4 Does this waste stream contain PCBs?

☐ Yes ☒ No ☐ Unknown

If no or unknown, skip to Section 3.3.5.

3.3.4.1 Is waste stream subject to TSCA regulations for PCBs?

☐ Yes ☐ No ☐ Unknown

3.3.4.2 Indicate the PCB concentration range.

☐ < 50 ppm ☐ ≥ 50 ppm ☐ Unknown

3.3.5 What is the confidence level for the regulated constituents?

☐ Low ☒ Medium ☐ High

3.3.6 Comments on regulated constituents and wastewater/non-wastewater category:

The newly generated waste packages associated with this treatability group are characterized by the generator and packaged for offsite shipment to a commercial waste treater. Legacy waste packages that have been in storage prior to 1995 undergo record information reviews, and are updated in required to meet current shipment and treatment facility acceptance requirements. Once the waste is received at the waste treaters facility, they perform conformation inspections to determine if the waste meets the treatment facilities waste profile that has been established for the waste package/stream.

4.0 WASTE STREAM TREATMENT

4.1 Is this waste stream currently being treated?

☒ Yes ☐ No

If yes, provide details: The majority of the legacy inventory of this waste stream has been shipped offsite to commercial treatment facilities (e.g., Perma-Fix, EnergySolutions). Treatment of the remaining legacy waste and any newly generated waste will continue.

4.2 Planned treatment: Check the appropriate box indicating future plans for treating this waste stream to meet applicable regulations, including LDR treatment standards.

☐ No treatment required (skip to Section 5.0)

☐ Treating or plan to treat on site

☒ Treating or plan to treat off site

☐ Treatment options still being assessed

4.3 Planned treatment method, facility, extent of treatment capacity available:

Waste is being treated at offsite commerical treatment units (e.g., Perma-Fix, EnergySolutions).

4.4 Treatment schedule information:

Treatment will be performed in accordance with M-91-42 milestone dates.

LDR REPORT TREATABILITY GROUP DATA SHEET

4.5 Applicable Tri-Party Agreement treatment milestone numbers (including permitting):

Milestone Number	Due Date
M-091-42Q	

4.6 Proposed new Tri-Party Agreement treatment milestones:

Currently in negotiations with the TPA members.

4.7 If treating or planning to treat on site, was or will waste minimization be addressed in developing and/or selecting the treatment method?

☐ Yes ☐ No ☒ Unknown

If yes, describe: Offsite treatment only.

4.8 List or describe treatability equivalency petitions, rulemaking petitions, and case-by-case exemptions needed for treatment or already in place.

None identified at this time.

4.9 Key Assumptions:

5.0 WASTE STREAM DISPOSAL

After treatment, how will the waste stream be disposed of (include locations, milestone numbers, variances required, etc. as applicable):

Treated waste residues will be disposed back at the Hanford Site (e.g., Mixed Waste Disposal Unit) or at a commerical waste disposal site (e.g., EnergySolutions Clive).

LDR REPORT WASTE LOCATION-SPECIFIC DATA SHEET

1.0 WASTE STREAM IDENTIFICATION AND SOURCE

1.1 Unit/Plant name: CWC **Waste Stream:** Elemental Mercury

Treatabilitiy Group Name: MLLW-06 - Mercury Wastes

1.2 Applicable profile number(s) for this waste stream:

A WSRd identified in the treatability group data sheet section 1.2.

1.3 Waste stream source information

1.3.1 General description of the waste (e.g., spill clean-up waste, discarded lab materials, maintenance waste):

This waste stream consists of elemental mercury, amalgamated mercury, and debris articles containing small amounts of elemental mercury in their components (mercury switches, thermometers, etc).

1.3.2 History of how and where the waste was/is generated:

The waste was generated at many onsite locations and by offsite generators.

1.3.3 Source of the regulated constituents:

See 1.3.1 and 1.3.2.

1.3.4 Source of the information (e.g., analytical data, process knowledge, document number, etc.)

Analytical data and process knowledge.

1.3.5 Additional notes:

None.

2.0 WASTE STREAM STORAGE, INVENTORY, AND GENERATION INFORMATION

(NOTE: For waste in satellite accumulation areas and 90-day accumulation areas, skip to Section 2.6.)

2.1 Current storage method

- ☐ Container (pad)
- ☒ Container (covered)
- ☐ Container (retrievably buried)
- ☐ Tank
- ☐ DST
- ☐ SST
- ☐ Other (explain):

2.1.1 How was the waste managed prior to storage?

Accumulated and packaged by waste generators prior to storage at CWC.

2.1.2 Timeframe when waste was placed to storage?

Waste storage at CWC began in 1988 and continues.

2.2 Storage inventory locations:

Building/Room Number	Number of Containers/Tanks
CWC	0

LDR REPORT WASTE LOCATION-SPECIFIC DATA SHEET

2.3 Current stored inventory for this stream.

Total volume (cubic meters): 0.000

Date of inventory values: 12/31/2009

Comments on waste inventory:

Based on the inventory residing at CWC as reported in SWITS.

2.4 Is storage capacity at this location potentially an issue for this waste stream?

☐ Yes ☒ No

If yes, what is the total estimated storage capacity? N/A

When is this capacity expected to be reached? N/A

Bases and assumptions used:

No issues with CWC storage based on 20 year waste generation forecast.

2.5 Planned storage areas for this waste:

☒ Current Location ☒ CWC ☐ DST

☐ Other Area(s) (list):

☐ None

2.6 Estimated generation projection by calendar year (includes waste in satellite and 90-day accumulation areas):

Year	m^3	and/or	kg
2010	0.000		0.000
2011	0.000		0.000
2012	0.000		0.000
2013	0.000		0.000
2014	0.000		0.000
Total	0.000		0.000

2.7 DOE Storage Compliance Assessment information:

☒ Assessment has been completed.

Document Number	Date
A&E-SEC-02-001	01/21/2002

☐ Assessment has been scheduled. Scheduled date:

☐ Other. Explain:

2.8 Applicable Tri-Party Agreement milestones related to storage at this location:

Milestone Number	Due Date
N/A	

LDR REPORT WASTE LOCATION-SPECIFIC DATA SHEET

2.9 Has there ever been any non-permitted, unauthorized release of this waste stream from this storage unit to the environment?

☐ Yes ☒ No

If yes, summarize releases and quantities and provide date:

N/A

2.10 Are there any plans to submit requests for variances or other exemptions related to storage?

☐ Yes ☒ No

If yes, explain: N/A

2.11 Characterization

2.11.1 Is further characterization needed about the waste prior to acceptance for storage?

☐ Yes ☒ No ☐ Unknown at this time

Milestone Number	Due Date
N/A	N/A

If yes or unknown, comment on characterization for storage.

N/A

2.11.2 Is further characterization needed about the waste prior to acceptance for treatment?

☐ Yes ☒ No ☐ Unknown at this time

Milestone Number	Due Date
N/A	N/A

If yes or unknown, comment on characterization for treatment.

N/A

2.11.3 Is further characterization needed about the waste prior to acceptance for disposal?

☐ Yes ☒ No ☐ Unknown at this time

Milestone Number	Due Date
N/A	N/A

If yes or unknown, comment on characterization for disposal.

N/A

2.12 Other key assumptions related to storage, inventory, and generation information:

N/A

LDR REPORT WASTE LOCATION-SPECIFIC DATA SHEET

3.0 WASTE MINIMIZATION

3.1 Has a waste minimization assessment been completed for this stream?

☐ Yes ☒ No

If yes, provide date assessment conducted: N/A

If yes, provide document number or other identification:

N/A

If no, provide date assessment will be completed, or if waste stream is no longer generated, then indicate N/A:

None planned - waste not generated at CWC.

3.2 Provide details of current and proposed methods for minimizing the generation of this stream (e.g., process changes to reduce or eliminate LDR waste, methods to reduce volume through segregation and avoidance of commingling, substitution of less-toxic materials):

These activities occur before the wastes are shipped to CWC. There are few opportunities to reduce waste volumes placed into storage.

3.3 Waste minimization schedule

3.3.1 Reduction achieved during calendar year 2009 (volume or mass)

0.000 m3

3.3.2 Projected future waste volume reductions

Year	m^3	and/or	kg
2010	0.00		0.00
2011	0.00		0.00
2012	0.00		0.00
2013	0.00		0.00
2014	0.00		0.00
Total	0.00		0.00

3.3.3 Bases and assumptions used in above estimates:

There is no projected generation by CWC.

LDR REPORT WASTE LOCATION-SPECIFIC DATA SHEET

1.0 WASTE STREAM IDENTIFICATION AND SOURCE

1.1 Unit/Plant name: WRAP **Waste Stream:** Elemental Mercury

Treatabilitiy Group Name: MLLW-06 - Mercury Wastes

1.2 Applicable profile number(s) for this waste stream:

A WSRd identified in the treatability group data sheet section 1.2.

1.3 Waste stream source information

1.3.1 General description of the waste (e.g., spill clean-up waste, discarded lab materials, maintenance waste):

Elemental mercury

1.3.2 History of how and where the waste was/is generated:

The waste was generated at many onsite locations and also by offsite generators.

1.3.3 Source of the regulated constituents:

Hazardous constituents were generated at various Hanford Site generator locations (e.g. PFP, 222S, etc.)

1.3.4 Source of the information (e.g., analytical data, process knowledge, document number, etc.)

Process knowledge.

1.3.5 Additional notes:

Waste at WRAP comes from various generators and generating processes around the Hanford Site due to WRAP's verification and repackaging mission.

2.0 WASTE STREAM STORAGE, INVENTORY, AND GENERATION INFORMATION

(NOTE: For waste in satellite accumulation areas and 90-day accumulation areas, skip to Section 2.6.)

2.1 Current storage method

- ☐ Container (pad)
- ☒ Container (covered)
- ☐ Container (retrievably buried)
- ☐ Tank
- ☐ DST
- ☐ SST
- ☐ Other (explain): N/A

2.1.1 How was the waste managed prior to storage?

Waste was generated and packaged at a Hanford generating facility.

2.1.2 Timeframe when waste was placed to storage?

MLLW at WRAP is both MLLW dating back to the late 80's as well as newly generated MLLW.

2.2 Storage inventory locations:

Building/Room Number	Number of Containers/Tanks
WRAP	0

LDR REPORT WASTE LOCATION-SPECIFIC DATA SHEET

2.3 Current stored inventory for this stream.

Total volume (cubic meters): 0.000

Date of inventory values: 12/30/2009

Comments on waste inventory:

Inventory based on Solid Waste Information Tracking System (SWITS) printout dated 12/30/2009.

2.4 Is storage capacity at this location potentially an issue for this waste stream?

☐ Yes ☒ No

If yes, what is the total estimated storage capacity? N/A

When is this capacity expected to be reached? N/A

Bases and assumptions used:

Due to proximity to and interchange with CWC, there is no storage capacity issue at WRAP.

2.5 Planned storage areas for this waste:

☒ Current Location ☒ CWC ☐ DST

☐ Other Area(s) (list):

☐ None

2.6 Estimated generation projection by calendar year (includes waste in satellite and 90-day accumulation areas):

Year	m^3	and/or	kg
2010	0.000		0.000
2011	0.000		0.000
2012	0.000		0.000
2013	0.000		0.000
2014	0.000		0.000
Total	0.000		0.000

2.7 DOE Storage Compliance Assessment information:

☒ Assessment has been completed.

Document Number	Date
DE-AC06-96RL13200	09/26/2001

☐ Assessment has been scheduled. Scheduled date:

☐ Other. Explain:

2.8 Applicable Tri-Party Agreement milestones related to storage at this location:

Milestone Number	Due Date
N/A	

LDR REPORT WASTE LOCATION-SPECIFIC DATA SHEET

2.9 Has there ever been any non-permitted, unauthorized release of this waste stream from this storage unit to the environment?

☐ Yes ☒ No

If yes, summarize releases and quantities and provide date:

N/A

2.10 Are there any plans to submit requests for variances or other exemptions related to storage?

☐ Yes ☒ No

If yes, explain: N/A

2.11 Characterization

2.11.1 Is further characterization needed about the waste prior to acceptance for storage?

☐ Yes ☒ No ☐ Unknown at this time

Milestone Number	Due Date
N/A	N/A

If yes or unknown, comment on characterization for storage.

N/A

2.11.2 Is further characterization needed about the waste prior to acceptance for treatment?

☐ Yes ☒ No ☐ Unknown at this time

Milestone Number	Due Date
N/A	N/A

If yes or unknown, comment on characterization for treatment.

N/A

2.11.3 Is further characterization needed about the waste prior to acceptance for disposal?

☐ Yes ☒ No ☐ Unknown at this time

Milestone Number	Due Date
N/A	N/A

If yes or unknown, comment on characterization for disposal.

N/A

2.12 Other key assumptions related to storage, inventory, and generation information:

LDR REPORT WASTE LOCATION-SPECIFIC DATA SHEET

3.0 WASTE MINIMIZATION

3.1 Has a waste minimization assessment been completed for this stream?

☐ Yes ☒ No

If yes, provide date assessment conducted:

If yes, provide document number or other identification:

If no, provide date assessment will be completed, or if waste stream is no longer generated, then indicate N/A:

N/A

3.2 Provide details of current and proposed methods for minimizing the generation of this stream (e.g., process changes to reduce or eliminate LDR waste, methods to reduce volume through segregation and avoidance of commingling, substitution of less-toxic materials):

Through source reduction, waste minimization practices are being employed to ensure that the generation of this stream is being minimized. Additional waste is not expected to be generated in the future.

3.3 Waste minimization schedule

3.3.1 Reduction achieved during calendar year 2009 (volume or mass)

0.000 m3

3.3.2 Projected future waste volume reductions

Year	m^3	and/or	kg
2010	0.00		0.00
2011	0.00		0.00
2012	0.00		0.00
2013	0.00		0.00
2014	0.00		0.00
Total	0.00		0.00

3.3.3 Bases and assumptions used in above estimates:

Since subject waste has already been generated, no additional waste minimization activities are planned. WRAP does not generate this waste stream, rather will receive waste for further processing from other generating facilities.

This page intentionally left blank.

MLLW-07 – RH and Large Container

LDR REPORT TREATABILITY GROUP DATA SHEET

1.0 WASTE STREAM IDENTIFICATION

1.1 Treatability Group Name: MLLW-07 - RH and Large Container

1.2 Description of waste (list WSRd numbers for this waste stream, as applicable)

This treatability group consists of the following waste types: (1) Large containers of MLLW (large containers for MLLW are defined as greater than 10m3 in size, (2) Remote handled (RH) MLLW packages (RH-MLLW is defined as waste packages that have an external surface dose rate of greater than 200mR/hr on contact), and (3) RH-MLLW that is shielded down to contact handling levels for safe handling and storage (shielding can be internal, external, and/or integral to the waste container). The primary WSRds that comprise this treatability group are DBL, HRW, 450, 550, and 650. The waste is generated by many onsite generating organizations.

2.0 WASTE INVENTORY AND GENERATION

2.1 Current total inventory for this waste stream (stored waste only, not accumulation areas). [Equals sum of location-specific data sheets for this treatability group.]

Total volume (cubic meters): 120.724

2.2 Estimated generation projection by calendar year: [equals annual sums of location-specfic data sheets for this treatability group].

Year	m^3	and/or	kg
2010	0.000		0.000
2011	0.000		0.000
2012	0.000		0.000
2013	0.000		0.000
2014	0.000		0.000
Total	0.000		0.000

3.0 WASTE STREAM CHARACTERIZATION

3.1 Radiological Characteristics

3.1.1 Mixed waste type: ☐ High-level ☐ Transuranic ☒ Low-level

3.1.2 Handling (as package contents would need to be handled during treatment):

☐ Contact-handled ☒ Remote-handled

3.1.3 Comments on radiological characteristics (e.g., more specific information on content, treatment concerns caused by radiation, confidence level):

This waste is a general category based on dangerous waste physical and chemical characteristics; therefore, the radiological characteristics vary greatly between individual waste packages. The waste meets low-level-waste requirements as defined by DOE Order 435.1. This treatability group is for Contact Handled (CH) waste that is in packages greater than 10m3 in volume and/or Remote Handled (RH) waste in all sizes of waste packages. Some of the RH waste has various types of shielding (e.g., lead, concrete, steel, rubber, etc) to reduce the exposure to ALARA. Greater than Hanford Category 1 (GTC1) waste will normally be radiologically stabilization prior to disposal; however, radiological stabilization may take place in the disposal unit.

LDR REPORT TREATABILITY GROUP DATA SHEET

3.2 Physical Form

3.2.1 Physical form of the waste:

☒ Solid ☒ Liquid ☒ Semi-solid ☒ Debris

☒ Other (Describe in comments.)

3.2.2 Comments on physical form:

This is a very diverse treatability group from a physical waste form perspective.

3.3 Regulated constituents and wastewater/non-wastewater category

3.3.1 Wastewater/non-wastewater under RCRA

☐ Wastewater ☒ Non-wastewater ☐ Unknown

3.3.2 Regulated constituents table including treatment requirements and UHCs, if applicable.

EPA/ State Number	Waste Description	LDR Sub-Category*	Concentration (Typical or Range)**	Basis	LDR Treatment Concentration Standard or Technology Code
D001	Ignitable	Ingnitable charac.	***	***	DEACT & meet 40 CFR 268.48
D002	Corrosive	Corrosiv charac.	***	***	DEACT & meet 40 CFR 268.48
D005	Barium Characteristic	N/A	***	***	21 mg/l tclp and meet 268.48 standards
D006	TC-Cadmium	Cadmium charac	***	***	0.11 mg/l TCLP & meet 40 CFR 268.48
D007	TC-Chromium	N/A	***	***	0.60 mg/l TCLP & meet 40 CFR 268.48
D008	TC-Lead	Lead charac.	***	***	0.75 mg/l TCLP & meet 40 CFR 268.48
D011	TC-Silver	N/A	***	***	0.14 mg/l TCLP & meet 40 CFR 268.48
D026	Cresols(Total)	N/A	***	***	11.2 and meet 268.48 standards
D035	Methyl Ethyl Ketone	N/A	***	***	36 and meet 268.48 standards
F001	1,1,1-Trichlorethane	Spent Solvent	***	***	6.0 mg/kg
F002	Methylene Chloride	Spent Solvent	***	***	30 mg/kg
F003	Acetone & Hexone	Spent Solvent	***	***	160 mg/kg
F004	o-Cresol & p-Cresol	Spent Solvent	***	***	5.6 mg/kg
F005	Methyl Ethyl Ketone	Spent Solvent	***	***	36 mg/kg
WP01	Persistent, EHW	N/A	***	***	NONE(1)
WP02	Persistent, DW	N/A	***	***	N/A
WT01	Toxic, EHW	N/A	***	***	NONE (1)

LDR REPORT TREATABILITY GROUP DATA SHEET

EPA/ State Number	Waste Description	LDR Sub-Category*	Concentration (Typical or Range)**	Basis	LDR Treatment Concentration Standard or Technology Code
WT02	Toxic, DW	N/A	***	***	N/A

* LDR Subcategory marked N/A if no existing subcategory adequately describes this waste, or if there are no defined subcategories for the waste number (40 CFR 268.40).

** If waste is not consistent in concentration, this may not apply. Described in Section 3.3.6.

*** The concentration varies and is based on process knowledge and/or analytical data.

(1) Mixed extremely hazardous wastes may be land-disposed in Washington State in DOE facilities in accordance with RCW 70.105.050(2).

UHCs to be determined on a per package basis during waste "up-grading" and/or when the waste is sent for treatment.

3.3.3 List any waste numbers from Section 3.3.2 for which the waste stream already meets established LDR treatment standards.

☐ List:

☐ No LDR treatment required (e.g. TRUM waste destined for WIPP, exclusion, etc.)

☒ None (i.e. all constituents/waste numbers of this waste stream still require treatment).

3.3.4 Does this waste stream contain PCBs?

☒ Yes ☐ No ☐ Unknown

If no or unknown, skip to Section 3.3.5.

3.3.4.1 Is waste stream subject to TSCA regulations for PCBs?

☒ Yes ☐ No ☐ Unknown

3.3.4.2 Indicate the PCB concentration range.

☒ < 50 ppm ☒ ≥ 50 ppm ☐ Unknown

3.3.5 What is the confidence level for the regulated constituents?

☐ Low ☒ Medium ☐ High

3.3.6 Comments on regulated constituents and wastewater/non-wastewater category:

The newly generated waste packages associated with this treatability group are characterized by the generator and packaged for offsite shipment to a commercial waste treater. Legacy waste packages that have been in storage prior to 1995 undergo record information reviews, and are updated in required to meet current shipment and treatment facility acceptance requirements. Once the waste is received at the waste treaters facility, they perform conformation inspections to determine if the waste meets the treatment facilities waste profile that has been established for the waste package/stream.

LDR REPORT TREATABILITY GROUP DATA SHEET

4.0 WASTE STREAM TREATMENT

4.1 Is this waste stream currently being treated?

☒ Yes ☐ No

If yes, provide details: The majority of the legacy inventory of this waste stream has been shipped offsite to commercial treatment facilities (e.g., Perma-Fix, EnergySolutions). Treatment of the remaining legacy waste and any newly generated waste will continue.

4.2 Planned treatment: Check the appropriate box indicating future plans for treating this waste stream to meet applicable regulations, including LDR treatment standards.

☐ No treatment required (skip to Section 5.0)

☒ Treating or plan to treat on site

☒ Treating or plan to treat off site

☒ Treatment options still being assessed

4.3 Planned treatment method, facility, extent of treatment capacity available:

Treatment for this waste stream will be performed by immobilzation technology onsite and by commercial treatment contract. Immobilization technology will includes MACRO in accordance with 40 CFR 268.42 and alternative treatment for hazardous debis in accordance with 40 CFR268.45.

4.4 Treatment schedule information:

Treatment will be performed in accordance with M-91-43 milestone dates.

4.5 Applicable Tri-Party Agreement treatment milestone numbers (including permitting):

Milestone Number	Due Date
M-091-43T-T01	

4.6 Proposed new Tri-Party Agreement treatment milestones:

Currently in negotiations with the TPA members.

4.7 If treating or planning to treat on site, was or will waste minimization be addressed in developing and/or selecting the treatment method?

☒ Yes ☐ No ☐ Unknown

If yes, describe: When feasible and/or practical, decontamination and segregation will be performed on this waste to reduce the ultimate disposal volumes.

4.8 List or describe treatability equivalency petitions, rulemaking petitions, and case-by-case exemptions needed for treatment or already in place.

One or more Site Specific LDR treatment variance will be required to disposition different sub-populations of this waste stream.

4.9 Key Assumptions:

None.

LDR REPORT TREATABILITY GROUP DATA SHEET

5.0 WASTE STREAM DISPOSAL

After treatment, how will the waste stream be disposed of (include locations, milestone numbers, variances required, etc. as applicable):

Treated waste residues will be disposed back at the Hanford Site (e.g., Mixed Waste Disposal Unit) or at a commerical waste disposal site (e.g., EnergySolutions Clive).

LDR REPORT WASTE LOCATION-SPECIFIC DATA SHEET

1.0 WASTE STREAM IDENTIFICATION AND SOURCE

1.1 Unit/Plant name: 325 HWTU **Waste Stream:** MLLW-07 RH

Treatabilitiy Group Name: MLLW-07 - RH and Large Container

1.2 Applicable profile number(s) for this waste stream:

N/A

1.3 Waste stream source information

1.3.1 General description of the waste (e.g., spill clean-up waste, discarded lab materials, maintenance waste):

Subject waste is generated from PNNL laboratory and hot cell operations.

1.3.2 History of how and where the waste was/is generated:

Waste is generated from routine operations at PNNL. - Laboratory analysis (physical and chemical) and other testing conducted on SST/DST waste and other high dose-rate substances and wastes.

1.3.3 Source of the regulated constituents:

This waste stream consists of liquid waste and debris contaminated with inorganic and organic regulated dangerous waste constituents.

1.3.4 Source of the information (e.g., analytical data, process knowledge, document number, etc.)

Wastes are characterized as specified in PNNL Waste Stream Profiles.

1.3.5 Additional notes:

Wastes are shielded to meet CH dose limits for CWC before shipping.

2.0 WASTE STREAM STORAGE, INVENTORY, AND GENERATION INFORMATION

(NOTE: For waste in satellite accumulation areas and 90-day accumulation areas, skip to Section 2.6.)

2.1 Current storage method

- ☐ Container (pad)
- ☒ Container (covered)
- ☐ Container (retrievably buried)
- ☐ Tank
- ☐ DST
- ☐ SST
- ☐ Other (explain):

2.1.1 How was the waste managed prior to storage?

Managed as valuable material in hot cell facility.

2.1.2 Timeframe when waste was placed to storage?

The waste was placed into storage on 3/21/2008.

LDR REPORT WASTE LOCATION-SPECIFIC DATA SHEET

2.2 Storage inventory locations:

Building/Room Number	Number of Containers/Tanks
325/HWTU	0
325/SAL	2

2.3 Current stored inventory for this stream.

Total volume (cubic meters): 0.004

Date of inventory values: 12/31/2009

Comments on waste inventory:

Grouted barium/radium waste to be macroencapsulated in 2010 under LDR variance granted by Ecology 8/21/09.

2.4 Is storage capacity at this location potentially an issue for this waste stream?

☐ Yes ☒ No

If yes, what is the total estimated storage capacity? N/A

When is this capacity expected to be reached? N/A

Bases and assumptions used:

N/A

2.5 Planned storage areas for this waste:

☒ Current Location ☒ CWC ☐ DST

☐ Other Area(s) (list):

☐ None

2.6 Estimated generation projection by calendar year (includes waste in satellite and 90-day accumulation areas):

Year	m^3	and/or	kg
2010	0.000		0.000
2011	0.000		0.000
2012	0.000		0.000
2013	0.000		0.000
2014	0.000		0.000
Total	0.000		0.000

2.7 DOE Storage Compliance Assessment information:

☒ Assessment has been completed.

Document Number	Date
A&E-DWR-02-004	05/31/2002

LDR REPORT WASTE LOCATION-SPECIFIC DATA SHEET

☐ Assessment has been scheduled. Scheduled date:

☐ Other. Explain:

2.8 Applicable Tri-Party Agreement milestones related to storage at this location:

Milestone Number	Due Date
N/A	

2.9 Has there ever been any non-permitted, unauthorized release of this waste stream from this storage unit to the environment?

☐ Yes ☒ No

If yes, summarize releases and quantities and provide date:

N/A

2.10 Are there any plans to submit requests for variances or other exemptions related to storage?

☐ Yes ☒ No

If yes, explain: N/A

2.11 Characterization

2.11.1 Is further characterization needed about the waste prior to acceptance for storage?

☐ Yes ☒ No ☐ Unknown at this time

Milestone Number	Due Date
N/A	N/A

If yes or unknown, comment on characterization for storage.

N/A

2.11.2 Is further characterization needed about the waste prior to acceptance for treatment?

☐ Yes ☒ No ☐ Unknown at this time

Milestone Number	Due Date
N/A	N/A

If yes or unknown, comment on characterization for treatment.

N/A

2.11.3 Is further characterization needed about the waste prior to acceptance for disposal?

☐ Yes ☒ No ☐ Unknown at this time

Milestone Number	Due Date
N/A	N/A

LDR REPORT WASTE LOCATION-SPECIFIC DATA SHEET

If yes or unknown, comment on characterization for disposal.

N/A

2.12 Other key assumptions related to storage, inventory, and generation information:

The inventory information is for what is currently in storage in the specified HWTU location(s). The stored material is a treatment residue that does not meet LDRs for barium (D005). RL has received an LDR variance from Ecology to allow this waste to be disposed.

3.0 WASTE MINIMIZATION

3.1 Has a waste minimization assessment been completed for this stream?

☐ Yes ☒ No

If yes, provide date assessment conducted: N/A

If yes, provide document number or other identification:

N/A

If no, provide date assessment will be completed, or if waste stream is no longer generated, then indicate N/A:

Assessment date to be determined.

3.2 Provide details of current and proposed methods for minimizing the generation of this stream (e.g., process changes to reduce or eliminate LDR waste, methods to reduce volume through segregation and avoidance of commingling, substitution of less-toxic materials):

Laboratory staff routinely evaluate their processes to determine if less reagent volume or a less hazardous reagent can be used in the process. The Radioactive Waste Operations Group routinely assess the possibility of consolidating items for shipment to CWC.

3.3 Waste minimization schedule

3.3.1 Reduction achieved during calendar year 2009 (volume or mass)

0.000 m3

3.3.2 Projected future waste volume reductions

Year	m^3	and/or	kg
2010	0.00		0.00
2011	0.00		0.00
2012	0.00		0.00
2013	0.00		0.00
2014	0.00		0.00
Total	0.00		0.00

3.3.3 Bases and assumptions used in above estimates:

Projects generating wastes usually have strict requirements for process outcomes. Hence, it is not possible to project specific volume reductions. As noted in Section 3.2, each project generating this waste type is reviewed to assure that waste volumes generated are minimized.

LDR REPORT WASTE LOCATION-SPECIFIC DATA SHEET

1.0 WASTE STREAM IDENTIFICATION AND SOURCE

1.1 Unit/Plant name: CWC **Waste Stream:** MLLW-07

Treatabilitiy Group Name: MLLW-07 - RH and Large Container

1.2 Applicable profile number(s) for this waste stream:

A WSRd identified in the treatability group data sheet section 1.2.

1.3 Waste stream source information

1.3.1 General description of the waste (e.g., spill clean-up waste, discarded lab materials, maintenance waste):

Subject waste is from various sources, however, the primary waste type is heterogeneous debris from the SST/DST Systems operations. Waste also includes pre-FFCA waste from the Navy.

1.3.2 History of how and where the waste was/is generated:

The waste was generated at many onsite locations and by the Navy.

1.3.3 Source of the regulated constituents:

See 1.3.1 and 1.3.2.

1.3.4 Source of the information (e.g., analytical data, process knowledge, document number, etc.)

Analytical data; process knowledge.

1.3.5 Additional notes:

Waste is shielded to meet contact handled dose limits for CWC.

2.0 WASTE STREAM STORAGE, INVENTORY, AND GENERATION INFORMATION

(NOTE: For waste in satellite accumulation areas and 90-day accumulation areas, skip to Section 2.6.)

2.1 Current storage method

- ☐ Container (pad)
- ☒ Container (covered)
- ☐ Container (retrievably buried)
- ☐ Tank
- ☐ DST
- ☐ SST
- ☐ Other (explain):

2.1.1 How was the waste managed prior to storage?

Accumulated and packaged by waste generators prior to storage at CWC.

2.1.2 Timeframe when waste was placed to storage?

Waste storage in CWC began in 1988 and continues.

2.2 Storage inventory locations:

Building/Room Number	Number of Containers/Tanks
CWC	92

LDR REPORT WASTE LOCATION-SPECIFIC DATA SHEET

2.3 Current stored inventory for this stream.

Total volume (cubic meters): 120.400

Date of inventory values: 12/31/2009

Comments on waste inventory:

Based on the inventory residing at CWC as reported in SWITS.

2.4 Is storage capacity at this location potentially an issue for this waste stream?

☐ Yes ☒ No

If yes, what is the total estimated storage capacity? N/A

When is this capacity expected to be reached? N/A

Bases and assumptions used:

No issues with CWC storage based on 20 year waste generation forecast.

2.5 Planned storage areas for this waste:

☒ Current Location ☒ CWC ☐ DST

☐ Other Area(s) (list):

☐ None

2.6 Estimated generation projection by calendar year (includes waste in satellite and 90-day accumulation areas):

Year	m^3	and/or	kg
2010	0.000		0.000
2011	0.000		0.000
2012	0.000		0.000
2013	0.000		0.000
2014	0.000		0.000
Total	0.000		0.000

2.7 DOE Storage Compliance Assessment information:

☒ Assessment has been completed.

Document Number	Date
A&E-SEC-02-001	01/21/2002

☐ Assessment has been scheduled. Scheduled date:

☐ Other. Explain:

2.8 Applicable Tri-Party Agreement milestones related to storage at this location:

Milestone Number	Due Date
N/A	

LDR REPORT WASTE LOCATION-SPECIFIC DATA SHEET

2.9 Has there ever been any non-permitted, unauthorized release of this waste stream from this storage unit to the environment?

☐ Yes ☒ No

If yes, summarize releases and quantities and provide date:

N/A

2.10 Are there any plans to submit requests for variances or other exemptions related to storage?

☐ Yes ☒ No

If yes, explain: N/A

2.11 Characterization

2.11.1 Is further characterization needed about the waste prior to acceptance for storage?

☐ Yes ☒ No ☐ Unknown at this time

Milestone Number	Due Date
N/A	N/A

If yes or unknown, comment on characterization for storage.

N/A

2.11.2 Is further characterization needed about the waste prior to acceptance for treatment?

☐ Yes ☒ No ☐ Unknown at this time

Milestone Number	Due Date
N/A	N/A

If yes or unknown, comment on characterization for treatment.

N/A

2.11.3 Is further characterization needed about the waste prior to acceptance for disposal?

☒ Yes ☐ No ☐ Unknown at this time

Milestone Number	Due Date
N/A	N/A

If yes or unknown, comment on characterization for disposal.

To meet concentration based treatment standards applicable for the residues, sampling will be required after treatment. No commitment is necessary for the characterization needs on this MLLW.

2.12 Other key assumptions related to storage, inventory, and generation information:

None.

LDR REPORT WASTE LOCATION-SPECIFIC DATA SHEET

3.0 WASTE MINIMIZATION

3.1 Has a waste minimization assessment been completed for this stream?

☐ Yes ☒ No

If yes, provide date assessment conducted: N/A

If yes, provide document number or other identification:

N/A

If no, provide date assessment will be completed, or if waste stream is no longer generated, then indicate N/A:

None planned - waste not generated at CWC.

3.2 Provide details of current and proposed methods for minimizing the generation of this stream (e.g., process changes to reduce or eliminate LDR waste, methods to reduce volume through segregation and avoidance of commingling, substitution of less-toxic materials):

These activities occur before the wastes are transferred/shipped to CWC. There are few opportunities to reduce waste volumes placed into storage.

3.3 Waste minimization schedule

3.3.1 Reduction achieved during calendar year 2009 (volume or mass)

0.000 m3

3.3.2 Projected future waste volume reductions

Year	m^3	and/or	kg
2010	0.00		0.00
2011	0.00		0.00
2012	0.00		0.00
2013	0.00		0.00
2014	0.00		0.00
Total	0.00		0.00

3.3.3 Bases and assumptions used in above estimates:

There is no projected generation by CWC.

LDR REPORT WASTE LOCATION-SPECIFIC DATA SHEET

1.0 WASTE STREAM IDENTIFICATION AND SOURCE

1.1 Unit/Plant name: LLBG **Waste Stream:** MLLW-07

Treatabilitiy Group Name: MLLW-07 - RH and Large Container

1.2 Applicable profile number(s) for this waste stream:

A WSRd identified in the treatability group data sheet section 1.2.

1.3 Waste stream source information

1.3.1 General description of the waste (e.g., spill clean-up waste, discarded lab materials, maintenance waste):

The waste consists of many different inorganic and organic solids (e.g., particulates, absorbed liquids, sludges, resins, soils) and debris.

1.3.2 History of how and where the waste was/is generated:

The waste was generated at many onsite locations and also by offsite generators.

1.3.3 Source of the regulated constituents:

See 1.3.1 and 1.3.2.

1.3.4 Source of the information (e.g., analytical data, process knowledge, document number, etc.)

Analytical data; process knowledge.

1.3.5 Additional notes:

Per TPA Milestone M-91-40 this entire waste stream is suspected of being mixed waste

2.0 WASTE STREAM STORAGE, INVENTORY, AND GENERATION INFORMATION

(NOTE: For waste in satellite accumulation areas and 90-day accumulation areas, skip to Section 2.6.)

2.1 Current storage method

- ☐ Container (pad)
- ☐ Container (covered)
- ☒ Container (retrievably buried)
- ☐ Tank
- ☐ DST
- ☐ SST
- ☐ Other (explain):

2.1.1 How was the waste managed prior to storage?

Accumulated and packaged by waste generators prior transfer to LLBG

2.1.2 Timeframe when waste was placed to storage?

Varies from 1970 through 1987.

2.2 Storage inventory locations:

Building/Room Number	Number of Containers/Tanks
LLBG	0

LDR REPORT WASTE LOCATION-SPECIFIC DATA SHEET

2.3 Current stored inventory for this stream.

Total volume (cubic meters): 0.000

Date of inventory values: 12/31/2009

Comments on waste inventory:

Per TPA Milestone M-91-40 this entire waste stream is suspected of being mixed waste. The waste is stored pursuant to M-91 milestones.

2.4 Is storage capacity at this location potentially an issue for this waste stream?

☐ Yes ☒ No

If yes, what is the total estimated storage capacity? N/A

When is this capacity expected to be reached? N/A

Bases and assumptions used:

No issues with storage based on 20 year waste generation forecast.

2.5 Planned storage areas for this waste:

☒ Current Location ☒ CWC ☐ DST

☐ Other Area(s) (list):

☐ None

2.6 Estimated generation projection by calendar year (includes waste in satellite and 90-day accumulation areas):

Year	m^3	and/or	kg
2010	0.000		0.000
2011	0.000		0.000
2012	0.000		0.000
2013	0.000		0.000
2014	0.000		0.000
Total	0.000		0.000

2.7 DOE Storage Compliance Assessment information:

☒ Assessment has been completed.

Document Number	Date
A&E-SEC-02-001	01/21/2002

☐ Assessment has been scheduled. Scheduled date:

☐ Other. Explain:

LDR REPORT WASTE LOCATION-SPECIFIC DATA SHEET

2.8 Applicable Tri-Party Agreement milestones related to storage at this location:

Milestone Number	Due Date
N/A	

2.9 Has there ever been any non-permitted, unauthorized release of this waste stream from this storage unit to the environment?

☐ Yes ☒ No

If yes, summarize releases and quantities and provide date:

N/A

2.10 Are there any plans to submit requests for variances or other exemptions related to storage?

☐ Yes ☒ No

If yes, explain: N/A

2.11 Characterization

2.11.1 Is further characterization needed about the waste prior to acceptance for storage?

☐ Yes ☒ No ☐ Unknown at this time

Milestone Number	Due Date
N/A	N/A

If yes or unknown, comment on characterization for storage.

N/A

2.11.2 Is further characterization needed about the waste prior to acceptance for treatment?

☐ Yes ☒ No ☐ Unknown at this time

Milestone Number	Due Date
N/A	N/A

If yes or unknown, comment on characterization for treatment.

N/A

2.11.3 Is further characterization needed about the waste prior to acceptance for disposal?

☒ Yes ☐ No ☐ Unknown at this time

Milestone Number	Due Date
N/A	N/A

If yes or unknown, comment on characterization for disposal.

To meet concentration based treatment standards applicable for the residues, sampling will be required after treatment. No commitment is necessary for the characterization needs on this MLLW.

LDR REPORT WASTE LOCATION-SPECIFIC DATA SHEET

2.12 Other key assumptions related to storage, inventory, and generation information:

None.

3.0 WASTE MINIMIZATION

3.1 Has a waste minimization assessment been completed for this stream?

☐ Yes ☒ No

If yes, provide date assessment conducted: N/A

If yes, provide document number or other identification:

N/A

If no, provide date assessment will be completed, or if waste stream is no longer generated, then indicate N/A:

None planned - waste not generated at LLBG.

3.2 Provide details of current and proposed methods for minimizing the generation of this stream (e.g., process changes to reduce or eliminate LDR waste, methods to reduce volume through segregation and avoidance of commingling, substitution of less-toxic materials):

These activities occur before the wastes were transferred/shipped to LLBG. There are few opportunities to reduce waste volumes placed into storage.

3.3 Waste minimization schedule

3.3.1 Reduction achieved during calendar year 2009 (volume or mass)

0.000 m3

3.3.2 Projected future waste volume reductions

Year	m^3	and/or	kg
2010	0.00		0.00
2011	0.00		0.00
2012	0.00		0.00
2013	0.00		0.00
2014	0.00		0.00
Total	0.00		0.00

3.3.3 Bases and assumptions used in above estimates:

There is no projected generation by LLBG.

LDR REPORT WASTE LOCATION-SPECIFIC DATA SHEET

1.0 WASTE STREAM IDENTIFICATION AND SOURCE

1.1 Unit/Plant name: T Plant Complex **Waste Stream:** RH and Large Container

Treatabilitiy Group Name: MLLW-07 - RH and Large Container

1.2 Applicable profile number(s) for this waste stream:

450

1.3 Waste stream source information

1.3.1 General description of the waste (e.g., spill clean-up waste, discarded lab materials, maintenance waste):

Savanah River sample returns.

1.3.2 History of how and where the waste was/is generated:

Waste originally came from Tank Farms.

1.3.3 Source of the regulated constituents:

See 1.3.1 and 1.3.2.

1.3.4 Source of the information (e.g., analytical data, process knowledge, document number, etc.)

Process knowledge and analytical data.

1.3.5 Additional notes:

None.

2.0 WASTE STREAM STORAGE, INVENTORY, AND GENERATION INFORMATION

(NOTE: For waste in satellite accumulation areas and 90-day accumulation areas, skip to Section 2.6.)

2.1 Current storage method

- ☒ Container (pad)
- ☒ Container (covered)
- ☐ Container (retrievably buried)
- ☐ Tank
- ☐ DST
- ☐ SST
- ☐ Other (explain):

2.1.1 How was the waste managed prior to storage?

Generated by Tank Farms.

2.1.2 Timeframe when waste was placed to storage?

2000

2.2 Storage inventory locations:

Building/Room Number	Number of Containers/Tanks
T Plant Complex	1

LDR REPORT WASTE LOCATION-SPECIFIC DATA SHEET

2.3 Current stored inventory for this stream.

Total volume (cubic meters): 0.320

Date of inventory values: 12/31/2009

Comments on waste inventory:

None.

2.4 Is storage capacity at this location potentially an issue for this waste stream?

☐ Yes ☒ No

If yes, what is the total estimated storage capacity? N/A

When is this capacity expected to be reached? N/A

Bases and assumptions used:

2.5 Planned storage areas for this waste:

☒ Current Location ☒ CWC ☐ DST

☐ Other Area(s) (list):

☐ None

2.6 Estimated generation projection by calendar year (includes waste in satellite and 90-day accumulation areas):

Year	m^3	and/or	kg
2010	0.000		0.000
2011	0.000		0.000
2012	0.000		0.000
2013	0.000		0.000
2014	0.000		0.000
Total	0.000		0.000

2.7 DOE Storage Compliance Assessment information:

☒ Assessment has been completed.

Document Number	Date
01-A&E-012	11/28/2000

☒ Assessment has been scheduled. Scheduled date: 3rd quarter CY2005

☐ Other. Explain:

2.8 Applicable Tri-Party Agreement milestones related to storage at this location:

Milestone Number	Due Date
N/A	

LDR REPORT WASTE LOCATION-SPECIFIC DATA SHEET

2.9 Has there ever been any non-permitted, unauthorized release of this waste stream from this storage unit to the environment?

☐ Yes ☒ No

If yes, summarize releases and quantities and provide date:

N/A

2.10 Are there any plans to submit requests for variances or other exemptions related to storage?

☐ Yes ☒ No

If yes, explain: N/A

2.11 Characterization

2.11.1 Is further characterization needed about the waste prior to acceptance for storage?

☐ Yes ☒ No ☐ Unknown at this time

Milestone Number	Due Date
N/A	N/A

If yes or unknown, comment on characterization for storage.

N/A

2.11.2 Is further characterization needed about the waste prior to acceptance for treatment?

☒ Yes ☐ No ☐ Unknown at this time

Milestone Number	Due Date
N/A	N/A

If yes or unknown, comment on characterization for treatment.

Will be completed during activities to facilitate transfer of the container to onsite TSD unit or offiste TSD facility. No commitment is necessary for the characterization needs on this MLLW.

2.11.3 Is further characterization needed about the waste prior to acceptance for disposal?

☒ Yes ☐ No ☐ Unknown at this time

Milestone Number	Due Date
N/A	N/A

If yes or unknown, comment on characterization for disposal.

To meet concentration based treatment standards applicable for the residues, sampling will be required after treatment. No commitment is necessary for the characterization needs on this MLLW.

2.12 Other key assumptions related to storage, inventory, and generation information:

None.

LDR REPORT WASTE LOCATION-SPECIFIC DATA SHEET

3.0 WASTE MINIMIZATION

3.1 Has a waste minimization assessment been completed for this stream?

☐ Yes ☒ No

If yes, provide date assessment conducted: N/A

If yes, provide document number or other identification:

N/A

If no, provide date assessment will be completed, or if waste stream is no longer generated, then indicate N/A:

N/A

3.2 Provide details of current and proposed methods for minimizing the generation of this stream (e.g., process changes to reduce or eliminate LDR waste, methods to reduce volume through segregation and avoidance of commingling, substitution of less-toxic materials):

These activities occur before waste is shipped to the T Plant Complex. During treatment/bulking sample returns, efforts are taken to minimize the generation of mixed waste.

3.3 Waste minimization schedule

3.3.1 Reduction achieved during calendar year 2009 (volume or mass)

0.000 m3

3.3.2 Projected future waste volume reductions

Year	m^3	and/or	kg
2010	0.00		0.00
2011	0.00		0.00
2012	0.00		0.00
2013	0.00		0.00
2014	0.00		0.00
Total	0.00		0.00

3.3.3 Bases and assumptions used in above estimates:

There is no projected generation of this waste by T Plant Complex other than during treatment/bulking sample returns.

LDR REPORT WASTE LOCATION-SPECIFIC DATA SHEET

1.0 WASTE STREAM IDENTIFICATION AND SOURCE

1.1 Unit/Plant name: WRPS Tank Closure **Waste Stream:** RH and Large Container

Treatabilitiy Group Name: MLLW-07 - RH and Large Container

1.2 Applicable profile number(s) for this waste stream:

2006-CHGW-0001

1.3 Waste stream source information

1.3.1 General description of the waste (e.g., spill clean-up waste, discarded lab materials, maintenance waste):

Maintenance waste

1.3.2 History of how and where the waste was/is generated:

Maintenance activities in the Tank Farms

1.3.3 Source of the regulated constituents:

Tank Waste

1.3.4 Source of the information (e.g., analytical data, process knowledge, document number, etc.)

Analytical data, and process knowledge

1.3.5 Additional notes:

2.0 WASTE STREAM STORAGE, INVENTORY, AND GENERATION INFORMATION

(NOTE: For waste in satellite accumulation areas and 90-day accumulation areas, skip to Section 2.6.)

2.1 Current storage method

☐ Container (pad) ☐ Container (covered) ☐ Container (retrievably buried)

☐ Tank ☐ DST ☐ SST

☒ Other (explain): Waste from WRPS Tank Closure has not yet been generated.

2.1.1 How was the waste managed prior to storage?

N/A

2.1.2 Timeframe when waste was placed to storage?

N/A

2.2 Storage inventory locations:

Building/Room Number	Number of Containers/Tanks
N/A	N/A

LDR REPORT WASTE LOCATION-SPECIFIC DATA SHEET

2.3 Current stored inventory for this stream.

Total volume (cubic meters): 0.000

Date of inventory values: 12/31/2009

Comments on waste inventory:

2.4 Is storage capacity at this location potentially an issue for this waste stream?

☐ Yes ☒ No

If yes, what is the total estimated storage capacity? N/A

When is this capacity expected to be reached? N/A

Bases and assumptions used:

2.5 Planned storage areas for this waste:

☐ Current Location ☐ CWC ☐ DST

☒ Other Area(s) (list): This will depend on the types of waste generated during tank closure activities. Liquid wastes may be transferred to the DSTs or containers. Solids may be stored in containers or managed in 90-day accumulation areas.

☐ None

2.6 Estimated generation projection by calendar year (includes waste in satellite and 90-day accumulation areas):

Year	m^3	and/or	kg
2010	0.000		0.000
2011	0.000		0.000
2012	0.000		0.000
2013	0.000		0.000
2014	0.000		0.000
Total	0.000		0.000

2.7 DOE Storage Compliance Assessment information:

☐ Assessment has been completed.

Document Number	Date

☐ Assessment has been scheduled. Scheduled date:

☒ Other. Explain: Tank closure negotiations are ongoing. Storage compliance assessment needs will be addressed as part of the waste planning process associated with closure.

LDR REPORT WASTE LOCATION-SPECIFIC DATA SHEET

2.8 Applicable Tri-Party Agreement milestones related to storage at this location:

Milestone Number	Due Date
N/A	

2.9 Has there ever been any non-permitted, unauthorized release of this waste stream from this storage unit to the environment?

☐ Yes ☒ No

If yes, summarize releases and quantities and provide date:

N/A

2.10 Are there any plans to submit requests for variances or other exemptions related to storage?

☐ Yes ☒ No

If yes, explain: N/A

2.11 Characterization

2.11.1 Is further characterization needed about the waste prior to acceptance for storage?

☐ Yes ☒ No ☐ Unknown at this time

Milestone Number	Due Date
N/A	N/A

If yes or unknown, comment on characterization for storage.

2.11.2 Is further characterization needed about the waste prior to acceptance for treatment?

☐ Yes ☒ No ☐ Unknown at this time

Milestone Number	Due Date
N/A	N/A

If yes or unknown, comment on characterization for treatment.

N/A

2.11.3 Is further characterization needed about the waste prior to acceptance for disposal?

☐ Yes ☒ No ☐ Unknown at this time

Milestone Number	Due Date
N/A	N/A

If yes or unknown, comment on characterization for disposal.

N/A

LDR REPORT WASTE LOCATION-SPECIFIC DATA SHEET

2.12 Other key assumptions related to storage, inventory, and generation information:

3.0 WASTE MINIMIZATION

3.1 Has a waste minimization assessment been completed for this stream?

☐ Yes ☒ No

If yes, provide date assessment conducted: N/A

If yes, provide document number or other identification:

N/A

If no, provide date assessment will be completed, or if waste stream is no longer generated, then indicate N/A:

N/A

3.2 Provide details of current and proposed methods for minimizing the generation of this stream (e.g., process changes to reduce or eliminate LDR waste, methods to reduce volume through segregation and avoidance of commingling, substitution of less-toxic materials):

Waste minimization will be included as part of the tank closure waste planning process.

3.3 Waste minimization schedule

3.3.1 Reduction achieved during calendar year 2009 (volume or mass)

0.000 kg

3.3.2 Projected future waste volume reductions

Year	m^3	and/or	kg
2010	0.00		0.00
2011	0.00		0.00
2012	0.00		0.00
2013	0.00		0.00
2014	0.00		0.00
Total	0.00		0.00

3.3.3 Bases and assumptions used in above estimates:

This waste stream has not yet been generated.

This page intentionally left blank.

MLLW-08 – Unique Waste

LDR REPORT TREATABILITY GROUP DATA SHEET

1.0 WASTE STREAM IDENTIFICATION

1.1 Treatability Group Name: MLLW-08 - Unique Waste

1.2 Description of waste (list WSRd numbers for this waste stream, as applicable)

This treatability group is for waste that has very special waste processing for which no permitted treatment capability exists in the United States or the capability exists but the capacity is very limited/restricted. Currently, this treatability group contains one drum designated with the P015 listed waste code (beryllium powder), and MLLW that requires thermal treatment due to containing TSCA PCBs (e.g., transformer fluids/oils, sludge with PCB, aqueous waste with PCBs, etc). The primary WSRds that comprise this treatability group are BER, TSC, 300, 400, 505 and 84A. The waste is generated by many onsite generating organizations.

2.0 WASTE INVENTORY AND GENERATION

2.1 Current total inventory for this waste stream (stored waste only, not accumulation areas). [Equals sum of location-specific data sheets for this treatability group.]

Total volume (cubic meters): 18.360

2.2 Estimated generation projection by calendar year: [equals annual sums of location-specfic data sheets for this treatability group].

Year	m^3	and/or	kg
2010	0.000		0.000
2011	0.000		0.000
2012	0.000		0.000
2013	0.000		0.000
2014	0.000		0.000
Total	0.000		0.000

3.0 WASTE STREAM CHARACTERIZATION

3.1 Radiological Characteristics

3.1.1 Mixed waste type: ☐ High-level ☐ Transuranic ☒ Low-level

3.1.2 Handling (as package contents would need to be handled during treatment):

☒ Contact-handled ☐ Remote-handled

3.1.3 Comments on radiological characteristics (e.g., more specific information on content, treatment concerns caused by radiation, confidence level):

This waste is a general category based on dangerous waste physical and chemical characteristics; therefore, the radiological characteristics vary greatly between individual waste packages. The waste meets low-level-waste requirements as defined by DOE Order 435.1. This treatability group is for Contact Handled (CH) waste. Greater than Hanford Category 1 (GTC1) waste will normally be radiologically stabilization prior to disposal; however, radiological stabilization may take place in the disposal unit.

LDR REPORT TREATABILITY GROUP DATA SHEET

3.2 Physical Form

3.2.1 Physical form of the waste:

☒ Solid ☒ Liquid ☒ Semi-solid ☐ Debris

☐ Other (Describe in comments.)

3.2.2 Comments on physical form:

This is a very diverse treatability group from a physical waste form perspective.

3.3 Regulated constituents and wastewater/non-wastewater category

3.3.1 Wastewater/non-wastewater under RCRA

☐ Wastewater ☒ Non-wastewater ☐ Unknown

3.3.2 Regulated constituents table including treatment requirements and UHCs, if applicable.

EPA/ State Number	Waste Description	LDR Sub-Category*	Concentration (Typical or Range)**	Basis	LDR Treatment Concentration Standard or Technology Code
D001	Ignitable	Initable Charac.	***	***	DEACT and meet 40 CFR 268.48
D008	TC-Lead	Lead Charac.	***	***	0.75 mg/l TCLP and meet 40 CFR 268.48
D018	Benzene	N/A	***	***	10 and meet 268.48
D027	Dichlorobenzene	N/A	***	***	p-Dichlorobenzene (1,4-Dichlorobenzene)
D030	2,4-Dinitrotoluene	N/A	***	***	140 and meet 268.48
D035	Methyl Ethyle Ketone	N/A	***	***	36 and meet 268.48
D038	Pyridine	N/A	***	***	16 and meet 268.48
F003	Acetone & Hexone	Spent Solvent	<160 mg/kg	***	160 mg/kg
F004	o-Cresol & p-Cresol	Spent Solvent	<5.6 mg/kg	***	5.6 mg/kg
F005	Methyl Ethyl Ketone	Spent Solvent	<36 mg/kg	***	36 mg/kg
P015	Beryllium Dust	N/A	***	***	RMETL or RTHRM

* LDR Subcategory marked N/A if no existing subcategory adequately describes this waste, or if there are no defined subcategories for the waste number (40 CFR 268.40).

** If waste is not consistent in concentration, this may not apply. Described in Section 3.3.6.

*** The concentration varies and is based on process knowledge and/or analytical data.

LDR REPORT TREATABILITY GROUP DATA SHEET

3.3.3 List any waste numbers from Section 3.3.2 for which the waste stream already meets established LDR treatment standards.

☐ List:

☐ No LDR treatment required (e.g. TRUM waste destined for WIPP, exclusion, etc.)

☒ None (i.e. all constituents/waste numbers of this waste stream still require treatment).

3.3.4 Does this waste stream contain PCBs?

☐ Yes ☒ No ☐ Unknown

If no or unknown, skip to Section 3.3.5.

3.3.4.1 Is waste stream subject to TSCA regulations for PCBs?

☐ Yes ☐ No ☐ Unknown

3.3.4.2 Indicate the PCB concentration range.

☐ < 50 ppm ☐ ≥ 50 ppm ☐ Unknown

3.3.5 What is the confidence level for the regulated constituents?

☐ Low ☒ Medium ☐ High

3.3.6 Comments on regulated constituents and wastewater/non-wastewater category:

The newly generated waste packages associated with this treatability group are characterized by the generator and packaged for offsite shipment to a commercial waste treater. Legacy waste packages that have been in storage prior to 1995 undergo record information reviews, and are updated in required to meet current shipment and treatment facility acceptance requirements. Once the waste is received at the waste treaters facility, they perform conformation inspections to determine if the waste meets the treatment facilities waste profile that has been established for the waste package/stream.

4.0 WASTE STREAM TREATMENT

4.1 Is this waste stream currently being treated?

☐ Yes ☒ No

If yes, provide details: Not treatment available for the P015 waste. The TSCA PCB waste is currently being treated.

LDR REPORT TREATABILITY GROUP DATA SHEET

4.2 Planned treatment: Check the appropriate box indicating future plans for treating this waste stream to meet applicable regulations, including LDR treatment standards.

- ☐ No treatment required (skip to Section 5.0)
- ☐ Treating or plan to treat on site
- ☒ Treating or plan to treat off site
- ☒ Treatment options still being assessed

4.3 Planned treatment method, facility, extent of treatment capacity available:

No treatment path and/or capability is currently in place for this waste stream. There is no treatment capability for dioxins in the United States. Treatment campaigns are not planned for this waste stream until after 2006, to allow the volume to accumulate for performance of more cost-effective treatment.

4.4 Treatment schedule information:

Treatment will be performed in accordance with M-91-42 milestone dates. Based upon available treatment options.

4.5 Applicable Tri-Party Agreement treatment milestone numbers (including permitting):

Milestone Number	Due Date
M-091-42Q	

4.6 Proposed new Tri-Party Agreement treatment milestones:

Currently in negotiations with the TPA members.

4.7 If treating or planning to treat on site, was or will waste minimization be addressed in developing and/or selecting the treatment method?

☐ Yes ☐ No ☒ Unknown

If yes, describe: N/A.

4.8 List or describe treatability equivalency petitions, rulemaking petitions, and case-by-case exemptions needed for treatment or already in place.

A Site Specific LDR treatment variance is required for the one package of P015 listed waste in storage at Hanford's CWC. The variance is planned to be submitted during FY2010.

4.9 Key Assumptions:

None.

5.0 WASTE STREAM DISPOSAL

After treatment, how will the waste stream be disposed of (include locations, milestone numbers, variances required, etc. as applicable):

Treated waste residues will be disposed back at the Hanford Site (e.g., Mixed Waste Disposal Unit) or at a commerical waste disposal site (e.g., EnergySolutions Clive).

LDR REPORT WASTE LOCATION-SPECIFIC DATA SHEET

1.0 WASTE STREAM IDENTIFICATION AND SOURCE

1.1 Unit/Plant name: CWC **Waste Stream:** Unique Waste

Treatabilitiy Group Name: MLLW-08 - Unique Waste

1.2 Applicable profile number(s) for this waste stream:

A WSRd identified in the treatability group data sheet section 1.2.

1.3 Waste stream source information

1.3.1 General description of the waste (e.g., spill clean-up waste, discarded lab materials, maintenance waste):

This waste stream consists of beryllium (P015), F027 contaminated waste and waste with unique processing concerns

1.3.2 History of how and where the waste was/is generated:

The waste was generated at onsite locations and placed into storage at CWC.

1.3.3 Source of the regulated constituents:

See 1.3.1 and 1.3.2.

1.3.4 Source of the information (e.g., analytical data, process knowledge, document number, etc.)

Process knowledge.

1.3.5 Additional notes:

None.

2.0 WASTE STREAM STORAGE, INVENTORY, AND GENERATION INFORMATION

(NOTE: For waste in satellite accumulation areas and 90-day accumulation areas, skip to Section 2.6.)

2.1 Current storage method

- ☐ Container (pad)
- ☒ Container (covered)
- ☐ Container (retrievably buried)
- ☐ Tank
- ☐ DST
- ☐ SST
- ☐ Other (explain):

2.1.1 How was the waste managed prior to storage?

Accumulated and packaged as waste by waste generators prior to storage at CWC.

2.1.2 Timeframe when waste was placed to storage?

Waste storage at CWC began in 1988 and continues.

2.2 Storage inventory locations:

Building/Room Number	Number of Containers/Tanks
CWC	11

LDR REPORT WASTE LOCATION-SPECIFIC DATA SHEET

2.3 Current stored inventory for this stream.

Total volume (cubic meters): 15.000

Date of inventory values: 12/31/2009

Comments on waste inventory:

Based on the inventory residing at CWC as reported in SWITS.

2.4 Is storage capacity at this location potentially an issue for this waste stream?

☐ Yes ☒ No

If yes, what is the total estimated storage capacity? N/A

When is this capacity expected to be reached? N/A

Bases and assumptions used:

No issues with CWC storage based on 20 year waste generation forecast.

2.5 Planned storage areas for this waste:

☒ Current Location ☒ CWC ☐ DST

☐ Other Area(s) (list):

☐ None

2.6 Estimated generation projection by calendar year (includes waste in satellite and 90-day accumulation areas):

Year	m^3	and/or	kg
2010	0.000		0.000
2011	0.000		0.000
2012	0.000		0.000
2013	0.000		0.000
2014	0.000		0.000
Total	0.000		0.000

2.7 DOE Storage Compliance Assessment information:

☒ Assessment has been completed.

Document Number	Date
A&E-SEC-02-001	01/21/2002

☐ Assessment has been scheduled. Scheduled date:

☐ Other. Explain:

2.8 Applicable Tri-Party Agreement milestones related to storage at this location:

Milestone Number	Due Date
N/A	

LDR REPORT WASTE LOCATION-SPECIFIC DATA SHEET

2.9 Has there ever been any non-permitted, unauthorized release of this waste stream from this storage unit to the environment?

☐ Yes ☒ No

If yes, summarize releases and quantities and provide date:

N/A

2.10 Are there any plans to submit requests for variances or other exemptions related to storage?

☐ Yes ☒ No

If yes, explain: N/A

2.11 Characterization

2.11.1 Is further characterization needed about the waste prior to acceptance for storage?

☐ Yes ☒ No ☐ Unknown at this time

Milestone Number	Due Date
N/A	N/A

If yes or unknown, comment on characterization for storage.

N/A

2.11.2 Is further characterization needed about the waste prior to acceptance for treatment?

☐ Yes ☒ No ☐ Unknown at this time

Milestone Number	Due Date
N/A	N/A

If yes or unknown, comment on characterization for treatment.

N/A

2.11.3 Is further characterization needed about the waste prior to acceptance for disposal?

☒ Yes ☐ No ☐ Unknown at this time

Milestone Number	Due Date
N/A	N/A

If yes or unknown, comment on characterization for disposal.

To meet concentration based treatment standards applicable for the residues, sampling will be required after treatment. No commitment is necessary for the characterization needs on this MLLW.

2.12 Other key assumptions related to storage, inventory, and generation information:

None.

LDR REPORT WASTE LOCATION-SPECIFIC DATA SHEET

3.0 WASTE MINIMIZATION

3.1 Has a waste minimization assessment been completed for this stream?

☐ Yes ☒ No

If yes, provide date assessment conducted: N/A

If yes, provide document number or other identification:

N/A

If no, provide date assessment will be completed, or if waste stream is no longer generated, then indicate N/A:

None planned. This waste is not generated at CWC.

3.2 Provide details of current and proposed methods for minimizing the generation of this stream (e.g., process changes to reduce or eliminate LDR waste, methods to reduce volume through segregation and avoidance of commingling, substitution of less-toxic materials):

These activities occur before waste is trransferred/shipped to CWC. There are few opportunities to reduce waste volumes placed into storage.

3.3 Waste minimization schedule

3.3.1 Reduction achieved during calendar year 2009 (volume or mass)

0.000 m3

3.3.2 Projected future waste volume reductions

Year	m^3	and/or	kg
2010	0.00		0.00
2011	0.00		0.00
2012	0.00		0.00
2013	0.00		0.00
2014	0.00		0.00
Total	0.00		0.00

3.3.3 Bases and assumptions used in above estimates:

There is no generation projected by CWC.

LDR REPORT WASTE LOCATION-SPECIFIC DATA SHEET

1.0 WASTE STREAM IDENTIFICATION AND SOURCE

1.1 Unit/Plant name: LLBG **Waste Stream:** Unique Waste

Treatabilitiy Group Name: MLLW-08 - Unique Waste

1.2 Applicable profile number(s) for this waste stream:

A WSRd identified in the treatability group data sheet section 1.2.

1.3 Waste stream source information

1.3.1 General description of the waste (e.g., spill clean-up waste, discarded lab materials, maintenance waste):

This waste stream consists of beryllium (P015), F027 contaminated waste and waste with unique processing concerns

1.3.2 History of how and where the waste was/is generated:

The waste was generated at onsite locations and placed in disposal at the LLBG.

1.3.3 Source of the regulated constituents:

See 1.3.1 and 1.3.2.

1.3.4 Source of the information (e.g., analytical data, process knowledge, document number, etc.)

Process knowledge.

1.3.5 Additional notes:

Per TPA Milestone M-91-40 this entire waste stream is suspected of being mixed waste

2.0 WASTE STREAM STORAGE, INVENTORY, AND GENERATION INFORMATION

(NOTE: For waste in satellite accumulation areas and 90-day accumulation areas, skip to Section 2.6.)

2.1 Current storage method

- ☐ Container (pad)
- ☒ Container (covered)
- ☐ Container (retrievably buried)
- ☐ Tank
- ☐ DST
- ☐ SST
- ☐ Other (explain):

2.1.1 How was the waste managed prior to storage?

Accumulated and packaged by waste generators prior transfer to LLBG

2.1.2 Timeframe when waste was placed to storage?

Varies from 1970 through 1987.

2.2 Storage inventory locations:

Building/Room Number	Number of Containers/Tanks
LLBG	0

LDR REPORT WASTE LOCATION-SPECIFIC DATA SHEET

2.3 Current stored inventory for this stream.

Total volume (cubic meters): 0.000

Date of inventory values: 12/31/2009

Comments on waste inventory:

Based on the inventory residing at the LLBG as reported in SWITS.

2.4 Is storage capacity at this location potentially an issue for this waste stream?

☐ Yes ☒ No

If yes, what is the total estimated storage capacity? N/A

When is this capacity expected to be reached? N/A

Bases and assumptions used:

No issues with storage based on 20 year waste generation forecast.

2.5 Planned storage areas for this waste:

☒ Current Location ☒ CWC ☐ DST

☐ Other Area(s) (list):

☐ None

2.6 Estimated generation projection by calendar year (includes waste in satellite and 90-day accumulation areas):

Year	m^3	and/or	kg
2010	0.000		0.000
2011	0.000		0.000
2012	0.000		0.000
2013	0.000		0.000
2014	0.000		0.000
Total	0.000		0.000

2.7 DOE Storage Compliance Assessment information:

☒ Assessment has been completed.

Document Number	Date
A&E-SEC-02-001	01/21/2002

☐ Assessment has been scheduled. Scheduled date:

☐ Other. Explain:

2.8 Applicable Tri-Party Agreement milestones related to storage at this location:

Milestone Number	Due Date
N/A	

LDR REPORT WASTE LOCATION-SPECIFIC DATA SHEET

2.9 Has there ever been any non-permitted, unauthorized release of this waste stream from this storage unit to the environment?

☐ Yes ☒ No

If yes, summarize releases and quantities and provide date:

N/A

2.10 Are there any plans to submit requests for variances or other exemptions related to storage?

☐ Yes ☒ No

If yes, explain: N/A

2.11 Characterization

2.11.1 Is further characterization needed about the waste prior to acceptance for storage?

☐ Yes ☒ No ☐ Unknown at this time

Milestone Number	Due Date
N/A	N/A

If yes or unknown, comment on characterization for storage.

N/A

2.11.2 Is further characterization needed about the waste prior to acceptance for treatment?

☐ Yes ☒ No ☐ Unknown at this time

Milestone Number	Due Date
N/A	N/A

If yes or unknown, comment on characterization for treatment.

N/A

2.11.3 Is further characterization needed about the waste prior to acceptance for disposal?

☒ Yes ☐ No ☐ Unknown at this time

Milestone Number	Due Date
N/A	N/A

If yes or unknown, comment on characterization for disposal.

To meet concentration based treatment standards applicable for the residues, sampling will be required after treatment. No commitment is necessary for the characterization needs on this MLLW.

2.12 Other key assumptions related to storage, inventory, and generation information:

None.

LDR REPORT WASTE LOCATION-SPECIFIC DATA SHEET

3.0 WASTE MINIMIZATION

3.1 Has a waste minimization assessment been completed for this stream?

☐ Yes ☒ No

If yes, provide date assessment conducted: N/A

If yes, provide document number or other identification:

N/A

If no, provide date assessment will be completed, or if waste stream is no longer generated, then indicate N/A:

None planned. This waste is not generated at the LLBG.

3.2 Provide details of current and proposed methods for minimizing the generation of this stream (e.g., process changes to reduce or eliminate LDR waste, methods to reduce volume through segregation and avoidance of commingling, substitution of less-toxic materials):

These activities occur before waste is trransferred/shipped to the LLBG. There are few opportunities to reduce waste volumes placed into storage.

3.3 Waste minimization schedule

3.3.1 Reduction achieved during calendar year 2009 (volume or mass)

0.000 m3

3.3.2 Projected future waste volume reductions

Year	m^3	and/or	kg
2010	0.00		0.00
2011	0.00		0.00
2012	0.00		0.00
2013	0.00		0.00
2014	0.00		0.00
Total	0.00		0.00

3.3.3 Bases and assumptions used in above estimates:

There is no generation projected by LLBG.

LDR REPORT WASTE LOCATION-SPECIFIC DATA SHEET

1.0 WASTE STREAM IDENTIFICATION AND SOURCE

1.1 Unit/Plant name: T Plant Complex **Waste Stream:** MW Requiring Special Processing

Treatabilitiy Group Name: MLLW-08 - Unique Waste

1.2 Applicable profile number(s) for this waste stream:

WSRD: 84A.

1.3 Waste stream source information

1.3.1 General description of the waste (e.g., spill clean-up waste, discarded lab materials, maintenance waste):

Waste that requires unique processsing and evaluation prior to treatment.

1.3.2 History of how and where the waste was/is generated:

Waste is generated at the T Plant Complex and is also received and stored at the T Plant Complex from various onsite locations and also by offsite generators

1.3.3 Source of the regulated constituents:

See 1.3.1 and 1.3.2.

1.3.4 Source of the information (e.g., analytical data, process knowledge, document number, etc.)

Process knowledge and analytical.

1.3.5 Additional notes:

None.

2.0 WASTE STREAM STORAGE, INVENTORY, AND GENERATION INFORMATION

(NOTE: For waste in satellite accumulation areas and 90-day accumulation areas, skip to Section 2.6.)

2.1 Current storage method

- ☒ Container (pad)
- ☒ Container (covered)
- ☐ Container (retrievably buried)
- ☐ Tank
- ☐ DST
- ☐ SST
- ☐ Other (explain):

2.1.1 How was the waste managed prior to storage?

Waste generated at the T Plant Complex and from onsite locations and also by offsite generators.

2.1.2 Timeframe when waste was placed to storage?

1995 through 2000.

2.2 Storage inventory locations:

Building/Room Number	Number of Containers/Tanks
T Plant Complex	0

LDR REPORT WASTE LOCATION-SPECIFIC DATA SHEET

2.3 Current stored inventory for this stream.

Total volume (cubic meters): 0.000

Date of inventory values: 12/31/2009

Comments on waste inventory:

Inventory will fluctuate as T Plant Complex generates waste, or performs waste storage and treatment/verification of onsite/offsite generators.

2.4 Is storage capacity at this location potentially an issue for this waste stream?

☐ Yes ☒ No

If yes, what is the total estimated storage capacity? N/A

When is this capacity expected to be reached? N/A

Bases and assumptions used:

N/A

2.5 Planned storage areas for this waste:

☒ Current Location ☒ CWC ☐ DST

☐ Other Area(s) (list): N/A

☐ None

2.6 Estimated generation projection by calendar year (includes waste in satellite and 90-day accumulation areas):

Year	m^3	and/or	kg
2010	0.000		0.000
2011	0.000		0.000
2012	0.000		0.000
2013	0.000		0.000
2014	0.000		0.000
Total	0.000		0.000

2.7 DOE Storage Compliance Assessment information:

☒ Assessment has been completed.

Document Number	Date
01-A&E-012	11/28/2000

☒ Assessment has been scheduled. Scheduled date: 3rd quarter CY2005.

☐ Other. Explain:

LDR REPORT WASTE LOCATION-SPECIFIC DATA SHEET

2.8 Applicable Tri-Party Agreement milestones related to storage at this location:

Milestone Number	Due Date
N/A	

2.9 Has there ever been any non-permitted, unauthorized release of this waste stream from this storage unit to the environment?

☐ Yes ☒ No

If yes, summarize releases and quantities and provide date:

N/A

2.10 Are there any plans to submit requests for variances or other exemptions related to storage?

☐ Yes ☒ No

If yes, explain: N/A

2.11 Characterization

2.11.1 Is further characterization needed about the waste prior to acceptance for storage?

☐ Yes ☒ No ☐ Unknown at this time

Milestone Number	Due Date
N/A	N/A

If yes or unknown, comment on characterization for storage.

N/A

2.11.2 Is further characterization needed about the waste prior to acceptance for treatment?

☒ Yes ☐ No ☐ Unknown at this time

Milestone Number	Due Date
N/A	N/A

If yes or unknown, comment on characterization for treatment.

Characterization needs are determined after the containers are opened and the contents are examined because the containers have failed verification. Once the containers are opened, the container is either reassigned to another treatability group/WSRd data sheet or it is declared non-mixed waste. Any containers declared non-mixed waste will be removed from the LDR report. Further characterization of mixed waste containers, if needed, is anticipated to be performed as necessary to support the results of the M-091 TPA settlement agreement.

2.11.3 Is further characterization needed about the waste prior to acceptance for disposal?

☒ Yes ☐ No ☐ Unknown at this time

Milestone Number	Due Date
N/A	N/A

LDR REPORT WASTE LOCATION-SPECIFIC DATA SHEET

If yes or unknown, comment on characterization for disposal.

To meet concentration based treatment standards applicable for the residues, sampling will be required after treatment. No commitment is necessary for the characterization needs on this MLLW.

2.12 Other key assumptions related to storage, inventory, and generation information:

None.

3.0 WASTE MINIMIZATION

3.1 Has a waste minimization assessment been completed for this stream?

☐ Yes ☒ No

If yes, provide date assessment conducted: N/A

If yes, provide document number or other identification:

N/A

If no, provide date assessment will be completed, or if waste stream is no longer generated, then indicate N/A:

N/A

3.2 Provide details of current and proposed methods for minimizing the generation of this stream (e.g., process changes to reduce or eliminate LDR waste, methods to reduce volume through segregation and avoidance of commingling, substitution of less-toxic materials):

Waste minimization techniques are used, where possible, during generation and treatment processing.

3.3 Waste minimization schedule

3.3.1 Reduction achieved during calendar year 2009 (volume or mass)

0.000 m3

3.3.2 Projected future waste volume reductions

Year	m^3	and/or	kg
2010	0.00		0.00
2011	0.00		0.00
2012	0.00		0.00
2013	0.00		0.00
2014	0.00		0.00
Total	0.00		0.00

3.3.3 Bases and assumptions used in above estimates:

The T Plant Complex has submitted a P2/Wmin fiscal year 2004 goal to reduce, where possible, mixed waste generation. For FY 2004 to 2008, new goals will be evaluated and identified on a year by year basis. The T Plant Complex does not track waste reduction by treatability groups. Routine and non-routine generated waste is reported quarterly to the Waste Minimization/Pollution Prevention Group.

LDR REPORT WASTE LOCATION-SPECIFIC DATA SHEET

1.0 WASTE STREAM IDENTIFICATION AND SOURCE

1.1 Unit/Plant name: WRAP **Waste Stream:** Unique Waste

Treatabilitiy Group Name: MLLW-08 - Unique Waste

1.2 Applicable profile number(s) for this waste stream:

A WSRd identified in the treatability group data sheet section 1.2.

1.3 Waste stream source information

1.3.1 General description of the waste (e.g., spill clean-up waste, discarded lab materials, maintenance waste):

This waste stream consists of beryllium (P015), F027 contaminated waste and waste with unique processing concerns

1.3.2 History of how and where the waste was/is generated:

The waste was generated at onsite locations and placed in storage at the WRAP.

1.3.3 Source of the regulated constituents:

See 1.3.1 and 1.3.2.

1.3.4 Source of the information (e.g., analytical data, process knowledge, document number, etc.)

Process knowledge.

1.3.5 Additional notes:

None.

2.0 WASTE STREAM STORAGE, INVENTORY, AND GENERATION INFORMATION

(NOTE: For waste in satellite accumulation areas and 90-day accumulation areas, skip to Section 2.6.)

2.1 Current storage method

- ☐ Container (pad)
- ☒ Container (covered)
- ☐ Container (retrievably buried)
- ☐ Tank
- ☐ DST
- ☐ SST
- ☐ Other (explain):

2.1.1 How was the waste managed prior to storage?

Accumulated and packaged as waste by waste generators prior to storage at WRAP.

2.1.2 Timeframe when waste was placed to storage?

Waste storage at WRAP began in 1998 and continues.

2.2 Storage inventory locations:

Building/Room Number	Number of Containers/Tanks
WRAP	15

LDR REPORT WASTE LOCATION-SPECIFIC DATA SHEET

2.3 Current stored inventory for this stream.

Total volume (cubic meters): 3.360

Date of inventory values: 12/30/2009

Comments on waste inventory:

Based on the inventory residing at WRAP as reported in SWITS.

2.4 Is storage capacity at this location potentially an issue for this waste stream?

☐ Yes ☒ No

If yes, what is the total estimated storage capacity? N/A

When is this capacity expected to be reached? N/A

Bases and assumptions used:

Due to proximity to and interchange with CWC, there is no storage capacity issue at WRAP.

2.5 Planned storage areas for this waste:

☒ Current Location ☒ CWC ☐ DST

☐ Other Area(s) (list):

☐ None

2.6 Estimated generation projection by calendar year (includes waste in satellite and 90-day accumulation areas):

Year	m^3	and/or	kg
2010	0.000		0.000
2011	0.000		0.000
2012	0.000		0.000
2013	0.000		0.000
2014	0.000		0.000
Total	0.000		0.000

2.7 DOE Storage Compliance Assessment information:

☒ Assessment has been completed.

Document Number	Date
A&E-SEC-02-001	01/21/2002

☐ Assessment has been scheduled. Scheduled date:

☐ Other. Explain:

2.8 Applicable Tri-Party Agreement milestones related to storage at this location:

Milestone Number	Due Date
N/A	

LDR REPORT WASTE LOCATION-SPECIFIC DATA SHEET

2.9 Has there ever been any non-permitted, unauthorized release of this waste stream from this storage unit to the environment?

☐ Yes ☒ No

If yes, summarize releases and quantities and provide date:

N/A

2.10 Are there any plans to submit requests for variances or other exemptions related to storage?

☐ Yes ☒ No

If yes, explain: N/A

2.11 Characterization

2.11.1 Is further characterization needed about the waste prior to acceptance for storage?

☐ Yes ☒ No ☐ Unknown at this time

Milestone Number	Due Date
N/A	N/A

If yes or unknown, comment on characterization for storage.

N/A

2.11.2 Is further characterization needed about the waste prior to acceptance for treatment?

☐ Yes ☒ No ☐ Unknown at this time

Milestone Number	Due Date
N/A	N/A

If yes or unknown, comment on characterization for treatment.

N/A

2.11.3 Is further characterization needed about the waste prior to acceptance for disposal?

☒ Yes ☐ No ☐ Unknown at this time

Milestone Number	Due Date
N/A	N/A

If yes or unknown, comment on characterization for disposal.

To meet concentration based treatment standards applicable for the residues, sampling will be required after treatment. No commitment is necessary for the characterization needs on this MLLW.

2.12 Other key assumptions related to storage, inventory, and generation information:

None.

LDR REPORT WASTE LOCATION-SPECIFIC DATA SHEET

3.0 WASTE MINIMIZATION

3.1 Has a waste minimization assessment been completed for this stream?

☐ Yes ☒ No

If yes, provide date assessment conducted: N/A

If yes, provide document number or other identification:

N/A

If no, provide date assessment will be completed, or if waste stream is no longer generated, then indicate N/A:

None planned. This waste is not generated at the WRAP.

3.2 Provide details of current and proposed methods for minimizing the generation of this stream (e.g., process changes to reduce or eliminate LDR waste, methods to reduce volume through segregation and avoidance of commingling, substitution of less-toxic materials):

These activities occur before waste is trransferred/shipped toWRAP. There are few opportunities to reduce waste volumes placed into storage.

3.3 Waste minimization schedule

3.3.1 Reduction achieved during calendar year 2009 (volume or mass)

0.000 m3

3.3.2 Projected future waste volume reductions

Year	m^3	and/or	kg
2010	0.00		0.00
2011	0.00		0.00
2012	0.00		0.00
2013	0.00		0.00
2014	0.00		0.00
Total	0.00		0.00

3.3.3 Bases and assumptions used in above estimates:

There is no generation projected by WRAP.

MLLW-09 –
Radioactive Batteries

LDR REPORT TREATABILITY GROUP DATA SHEET

1.0 WASTE STREAM IDENTIFICATION

1.1 Treatability Group Name: MLLW-09 - Radioactive Batteries

1.2 Description of waste (list WSRd numbers for this waste stream, as applicable)

This treatability group is for waste that is, or contains, radioactively contaminated batteries that have a specific treatment requirements specified in 40 CFR 268.40 (i.e., D006 cadmium batteries, D008 lead-acid batteries, D009 mercury batteries, and D011 silver batteries). The primary WSRds that comprise this treatability group are BAT, 802 and 830). The waste is generated by many onsite generating organizations.

2.0 WASTE INVENTORY AND GENERATION

2.1 Current total inventory for this waste stream (stored waste only, not accumulation areas). [Equals sum of location-specific data sheets for this treatability group.]

Total volume (cubic meters): 0.210

2.2 Estimated generation projection by calendar year: [equals annual sums of location-specfic data sheets for this treatability group].

Year	m^3	and/or	kg
2010	0.000		0.000
2011	0.000		0.000
2012	0.000		0.000
2013	0.000		0.000
2014	0.000		0.000
Total	0.000		0.000

3.0 WASTE STREAM CHARACTERIZATION

3.1 Radiological Characteristics

3.1.1 Mixed waste type: ☐ High-level ☐ Transuranic ☒ Low-level

3.1.2 Handling (as package contents would need to be handled during treatment):

☒ Contact-handled ☐ Remote-handled

3.1.3 Comments on radiological characteristics (e.g., more specific information on content, treatment concerns caused by radiation, confidence level):

This waste is a general category based on dangerous waste physical and chemical characteristics; therefore, the radiological characteristics vary greatly between individual waste packages. The waste meets low-level-waste requirements as defined by DOE Order 435.1. This treatability group is for Contact Handled (CH) waste. Greater than Hanford Category 1 (GTC1) waste will normally be radiologically stabilization prior to disposal; however, radiological stabilization may take place in the disposal unit.

LDR REPORT TREATABILITY GROUP DATA SHEET

3.2 Physical Form

3.2.1 Physical form of the waste:

☒ Solid ☐ Liquid ☐ Semi-solid ☒ Debris

☒ Other (Describe in comments.)

3.2.2 Comments on physical form:

Significant amounts of debris waste materials are typically in with the radioactively contaminated batteries.

3.3 Regulated constituents and wastewater/non-wastewater category

3.3.1 Wastewater/non-wastewater under RCRA

☐ Wastewater ☒ Non-wastewater ☐ Unknown

3.3.2 Regulated constituents table including treatment requirements and UHCs, if applicable.

EPA/ State Number	Waste Description	LDR Sub-Category*	Concentration (Typical or Range)**	Basis	LDR Treatment Concentration Standard or Technology Code
D002	Corrosive	Corrosive Charac.	***	***	DEACT and meed 40 CFR 268.48
D004	TC-Arsenic	N/A	***	***	5.0 mg/l TCLP and meed 40 CFR 268.48
D006	Cadmium	Cadmium Containing Batteries	N/A	Process Knowledge	RTHRM
D006	Cadmium	Radioactively contaminated cadmium batteries	***	***	MACRO In Accordance with 40 CFR 268.45
D008	Lead	Rad Lead Solids	N/A	Process Knowledge	MACRO (2)
D009	Mercury	Radioactively contaminated mercury batteries	***	***	MACRO In Accordance with 40 CFR 268.45
D009	TC-Mercury	Low Mercury	<260 mg/kg	***	0.20 mg/l TCLP and meed 40 CFR 268.48
D011	Silver	N/A	***	***	0.14 mg/l TCLP and meet 268.48
D011	Silver	Radioactively contaminated silver batteries	***	***	MACRO In Accordance with 40 CFR 268.45
D039	Tetrachloroethylene	N/A	***	***	6.0 and meet 268.48
WP02	Persistant HOC	N/A	***	***	N/A
WSC2	Solid Corrosive	N/A	<=2.5 pH	***	Remove Solid Acid Charac.
WT01	Toxic, EHW	N/A	***	***	N/A
WT02	Toxic, DW	N/A	***	***	N/A

LDR REPORT TREATABILITY GROUP DATA SHEET

* LDR Subcategory marked N/A if no existing subcategory adequately describes this waste, or if there are no defined subcategories for the waste number (40 CFR 268.40).

** If waste is not consistent in concentration, this may not apply. Described in Section 3.3.6.

*** The concentration varies and is based on process knowledge and/or analytical data.

(1) Mixed extremely hazardous wastes may be land-disposed in Washington State in DOE facilities in accordance with RCW 70.105.050(2).

(2) EPA has determined that the proper subcategory and the proper treatment standard for radioactively contaminated lead acid batteries are Radioactive Lead Solids and MACRO respectively. See letter dated August 9, 2001 from Elizabeth A Cotsworth, Director, Office of Solid Waste, EPA, to Andy Lawrence, Director, Office of Environmental Policy and Guidance, DOE.

UHCs to be determined on a per-package basis during waste receipt, from characterization activities, or when the waste is sent for treatment.

3.3.3 List any waste numbers from Section 3.3.2 for which the waste stream already meets established LDR treatment standards.

☐ List:

☐ No LDR treatment required (e.g. TRUM waste destined for WIPP, exclusion, etc.)

☒ None (i.e. all constituents/waste numbers of this waste stream still require treatment).

3.3.4 Does this waste stream contain PCBs?

☐ Yes ☒ No ☐ Unknown

If no or unknown, skip to Section 3.3.5.

3.3.4.1 Is waste stream subject to TSCA regulations for PCBs?

☐ Yes ☐ No ☐ Unknown

3.3.4.2 Indicate the PCB concentration range.

☐ < 50 ppm ☐ ≥ 50 ppm ☐ Unknown

3.3.5 What is the confidence level for the regulated constituents?

☐ Low ☒ Medium ☐ High

3.3.6 Comments on regulated constituents and wastewater/non-wastewater category:

The newly generated waste packages associated with this treatability group are characterized by the generator and packaged for offsite shipment to a commercial waste treater. Legacy waste packages that have been in storage prior to 1995 undergo record information reviews, and are updated in required to meet current shipment and treatment facility acceptance requirements. Once the waste is received at the waste treaters facility, they perform conformation inspections to determine if the waste meets the treatment facilities waste profile that has been established for the waste package/stream.

LDR REPORT TREATABILITY GROUP DATA SHEET

4.0 WASTE STREAM TREATMENT

4.1 Is this waste stream currently being treated?

☒ Yes ☐ No

If yes, provide details: The majority of the legacy inventory of this waste stream has been shipped offsite to commercial treatment facilities (e.g., Perma-Fix, EnergySolutions). Treatment of the remaining legacy waste and any newly generated waste will continue.

4.2 Planned treatment: Check the appropriate box indicating future plans for treating this waste stream to meet applicable regulations, including LDR treatment standards.

☐ No treatment required (skip to Section 5.0)

☐ Treating or plan to treat on site

☒ Treating or plan to treat off site

☐ Treatment options still being assessed

4.3 Planned treatment method, facility, extent of treatment capacity available:

Currently, the federal regulations provide an LDR Subcatergory for cadmium, mercury, silver batteries which allows macroencapsulation. Recently, Washington State Department of Ecology adopted this regulation. This waste will be treated by commercial treatment contract for debris non-thermal treatment.

4.4 Treatment schedule information:

Treatment will be performed in accordance with M-91-42 milestone dates.

4.5 Applicable Tri-Party Agreement treatment milestone numbers (including permitting):

Milestone Number	Due Date
M-091-42Q	

4.6 Proposed new Tri-Party Agreement treatment milestones:

Currently in negotiations with the TPA members.

4.7 If treating or planning to treat on site, was or will waste minimization be addressed in developing and/or selecting the treatment method?

☐ Yes ☐ No ☒ Unknown

If yes, describe: N/A.

4.8 List or describe treatability equivalency petitions, rulemaking petitions, and case-by-case exemptions needed for treatment or already in place.

None identified at this time.

4.9 Key Assumptions:

LDR REPORT TREATABILITY GROUP DATA SHEET

5.0 WASTE STREAM DISPOSAL

After treatment, how will the waste stream be disposed of (include locations, milestone numbers, variances required, etc. as applicable):

Treated waste residues will be disposed back at the Hanford Site (e.g., Mixed Waste Disposal Unit) or at a commerical waste disposal site (e.g., EnergySolutions Clive).

LDR REPORT WASTE LOCATION-SPECIFIC DATA SHEET

1.0 WASTE STREAM IDENTIFICATION AND SOURCE

1.1 Unit/Plant name: CWC **Waste Stream:** Pb & Cd Batteries

Treatabilitiy Group Name: MLLW-09 - Radioactive Batteries

1.2 Applicable profile number(s) for this waste stream:

A WSRd identified in the treatability group data sheet section 1.2.

1.3 Waste stream source information

1.3.1 General description of the waste (e.g., spill clean-up waste, discarded lab materials, maintenance waste):

The waste stream consists of regulated batteries.

1.3.2 History of how and where the waste was/is generated:

The waste was generated at many onsite locations and also by offsite generators.

1.3.3 Source of the regulated constituents:

See 1.3.1 and 1.3.2.

1.3.4 Source of the information (e.g., analytical data, process knowledge, document number, etc.)

Process knowledge.

1.3.5 Additional notes:

None.

2.0 WASTE STREAM STORAGE, INVENTORY, AND GENERATION INFORMATION

(NOTE: For waste in satellite accumulation areas and 90-day accumulation areas, skip to Section 2.6.)

2.1 Current storage method

- ☐ Container (pad)
- ☒ Container (covered)
- ☐ Container (retrievably buried)
- ☐ Tank
- ☐ DST
- ☐ SST
- ☐ Other (explain):

2.1.1 How was the waste managed prior to storage?

Accumulated and packaged by waste generators prior to storage at CWC.

2.1.2 Timeframe when waste was placed to storage?

Waste storage at CWC began in 1988 and continues.

2.2 Storage inventory locations:

Building/Room Number	Number of Containers/Tanks
CWC	0

LDR REPORT WASTE LOCATION-SPECIFIC DATA SHEET

2.3 Current stored inventory for this stream.

Total volume (cubic meters): 0.000

Date of inventory values: 12/31/2009

Comments on waste inventory:

Based on the inventory residing at CWC as reported in SWITS.

2.4 Is storage capacity at this location potentially an issue for this waste stream?

☐ Yes ☒ No

If yes, what is the total estimated storage capacity? N/A

When is this capacity expected to be reached? N/A

Bases and assumptions used:

No issues with CWC storage based on 20 year waste generation forecast.

2.5 Planned storage areas for this waste:

☒ Current Location ☒ CWC ☐ DST

☐ Other Area(s) (list):

☐ None

2.6 Estimated generation projection by calendar year (includes waste in satellite and 90-day accumulation areas):

Year	m^3	and/or	kg
2010	0.000		0.000
2011	0.000		0.000
2012	0.000		0.000
2013	0.000		0.000
2014	0.000		0.000
Total	0.000		0.000

2.7 DOE Storage Compliance Assessment information:

☒ Assessment has been completed.

Document Number	Date
A&E-SEC-02-001	01/21/2002

☐ Assessment has been scheduled. Scheduled date:

☐ Other. Explain:

2.8 Applicable Tri-Party Agreement milestones related to storage at this location:

Milestone Number	Due Date
N/A	

LDR REPORT WASTE LOCATION-SPECIFIC DATA SHEET

2.9 Has there ever been any non-permitted, unauthorized release of this waste stream from this storage unit to the environment?

☐ Yes ☒ No

If yes, summarize releases and quantities and provide date:

N/A

2.10 Are there any plans to submit requests for variances or other exemptions related to storage?

☐ Yes ☒ No

If yes, explain: N/A

2.11 Characterization

2.11.1 Is further characterization needed about the waste prior to acceptance for storage?

☐ Yes ☒ No ☐ Unknown at this time

Milestone Number	Due Date
N/A	N/A

If yes or unknown, comment on characterization for storage.

N/A

2.11.2 Is further characterization needed about the waste prior to acceptance for treatment?

☐ Yes ☒ No ☐ Unknown at this time

Milestone Number	Due Date
N/A	N/A

If yes or unknown, comment on characterization for treatment.

N/A

2.11.3 Is further characterization needed about the waste prior to acceptance for disposal?

☒ Yes ☐ No ☐ Unknown at this time

Milestone Number	Due Date
N/A	N/A

If yes or unknown, comment on characterization for disposal.

To meet concentration based treatment standards applicable for the residues, sampling will be required after treatment. No commitment is necessary for the characterization needs on this MLLW.

2.12 Other key assumptions related to storage, inventory, and generation information:

None.

LDR REPORT WASTE LOCATION-SPECIFIC DATA SHEET

3.0 WASTE MINIMIZATION

3.1 Has a waste minimization assessment been completed for this stream?

☐ Yes ☒ No

If yes, provide date assessment conducted: N/A

If yes, provide document number or other identification:

N/A

If no, provide date assessment will be completed, or if waste stream is no longer generated, then indicate N/A:

None planned - waste not generated at CWC.

3.2 Provide details of current and proposed methods for minimizing the generation of this stream (e.g., process changes to reduce or eliminate LDR waste, methods to reduce volume through segregation and avoidance of commingling, substitution of less-toxic materials):

These activities occur before the wastes are transferred/shipped to CWC. There are few opportunities to reduce waste volumes placed into storage.

3.3 Waste minimization schedule

3.3.1 Reduction achieved during calendar year 2009 (volume or mass)

0.000 m3

3.3.2 Projected future waste volume reductions

Year	m^3	and/or	kg
2010	0.00		0.00
2011	0.00		0.00
2012	0.00		0.00
2013	0.00		0.00
2014	0.00		0.00
Total	0.00		0.00

3.3.3 Bases and assumptions used in above estimates:

There is no projected generation by CWC.

LDR REPORT WASTE LOCATION-SPECIFIC DATA SHEET

1.0 WASTE STREAM IDENTIFICATION AND SOURCE

1.1 Unit/Plant name: T Plant Complex **Waste Stream:** Radioactive Batteries

Treatabilitiy Group Name: MLLW-09 - Radioactive Batteries

1.2 Applicable profile number(s) for this waste stream:

802

1.3 Waste stream source information

1.3.1 General description of the waste (e.g., spill clean-up waste, discarded lab materials, maintenance waste):

maintenance -

1.3.2 History of how and where the waste was/is generated:

changeout of emergency lighting batteries and other batter powered equipment.

1.3.3 Source of the regulated constituents:

1.3.4 Source of the information (e.g., analytical data, process knowledge, document number, etc.)

1.3.5 Additional notes:

2.0 WASTE STREAM STORAGE, INVENTORY, AND GENERATION INFORMATION

(NOTE: For waste in satellite accumulation areas and 90-day accumulation areas, skip to Section 2.6.)

2.1 Current storage method

- ☒ Container (pad)
- ☒ Container (covered)
- ☐ Container (retrievably buried)
- ☐ Tank
- ☐ DST
- ☐ SST
- ☐ Other (explain):

2.1.1 How was the waste managed prior to storage?

Waste generated at the T Plant Complex and from onsite locations and also by offsite generators.

2.1.2 Timeframe when waste was placed to storage?

1995 through 2000.

2.2 Storage inventory locations:

Building/Room Number	Number of Containers/Tanks
T Plant Complex	0

LDR REPORT WASTE LOCATION-SPECIFIC DATA SHEET

2.3 Current stored inventory for this stream.

Total volume (cubic meters): 0.000

Date of inventory values: 12/31/2009

Comments on waste inventory:

Inventory will fluctuate as T Plant Complex generates waste, or performs waste storage and treatment/verification of onsite/offsite generators.

2.4 Is storage capacity at this location potentially an issue for this waste stream?

☐ Yes ☒ No

If yes, what is the total estimated storage capacity? N/A

When is this capacity expected to be reached? N/A

Bases and assumptions used:

N/A

2.5 Planned storage areas for this waste:

☒ Current Location ☒ CWC ☐ DST

☐ Other Area(s) (list): N/A

☐ None

2.6 Estimated generation projection by calendar year (includes waste in satellite and 90-day accumulation areas):

Year	m^3	and/or	kg
2010	0.000		0.000
2011	0.000		0.000
2012	0.000		0.000
2013	0.000		0.000
2014	0.000		0.000
Total	0.000		0.000

2.7 DOE Storage Compliance Assessment information:

☒ Assessment has been completed.

Document Number	Date
01-A&E-012	11/28/2000

☒ Assessment has been scheduled. Scheduled date: 3rd quarter CY2005.

☐ Other. Explain:

LDR REPORT WASTE LOCATION-SPECIFIC DATA SHEET

2.8 Applicable Tri-Party Agreement milestones related to storage at this location:

Milestone Number	Due Date
N/A	

2.9 Has there ever been any non-permitted, unauthorized release of this waste stream from this storage unit to the environment?

☐ Yes ☒ No

If yes, summarize releases and quantities and provide date:

N/A

2.10 Are there any plans to submit requests for variances or other exemptions related to storage?

☐ Yes ☒ No

If yes, explain: N/A

2.11 Characterization

2.11.1 Is further characterization needed about the waste prior to acceptance for storage?

☐ Yes ☒ No ☐ Unknown at this time

Milestone Number	Due Date
N/A	N/A

If yes or unknown, comment on characterization for storage.

N/A

2.11.2 Is further characterization needed about the waste prior to acceptance for treatment?

☐ Yes ☒ No ☐ Unknown at this time

Milestone Number	Due Date
N/A	N/A

If yes or unknown, comment on characterization for treatment.

N/A

2.11.3 Is further characterization needed about the waste prior to acceptance for disposal?

☐ Yes ☒ No ☐ Unknown at this time

Milestone Number	Due Date
N/A	N/A

If yes or unknown, comment on characterization for disposal.

N/A

LDR REPORT WASTE LOCATION-SPECIFIC DATA SHEET

2.12 Other key assumptions related to storage, inventory, and generation information:

None.

3.0 WASTE MINIMIZATION

3.1 Has a waste minimization assessment been completed for this stream?

☐ Yes ☒ No

If yes, provide date assessment conducted: N/A

If yes, provide document number or other identification:

N/A

If no, provide date assessment will be completed, or if waste stream is no longer generated, then indicate N/A:

N/A

3.2 Provide details of current and proposed methods for minimizing the generation of this stream (e.g., process changes to reduce or eliminate LDR waste, methods to reduce volume through segregation and avoidance of commingling, substitution of less-toxic materials):

Waste minimization techniques are used, where possible, during generation and treatment processing.

3.3 Waste minimization schedule

3.3.1 Reduction achieved during calendar year 2009 (volume or mass)

0.000 m3

3.3.2 Projected future waste volume reductions

Year	m^3	and/or	kg
2010	0.00		0.00
2011	0.00		0.00
2012	0.00		0.00
2013	0.00		0.00
2014	0.00		0.00
Total	0.00		0.00

3.3.3 Bases and assumptions used in above estimates:

The T Plant Complex has submitted a P2/Wmin fiscal year 2004 goal to reduce, where possible, mixed waste generation. For FY 2004 to 2008, new goals will be evaluated and identified on a year by year basis. The T Plant Complex does not track waste reduction by treatability groups. Routine and non-routine generated waste is reported quarterly to the Waste Minimization/Pollution Prevention Group.

LDR REPORT WASTE LOCATION-SPECIFIC DATA SHEET

1.0 WASTE STREAM IDENTIFICATION AND SOURCE

1.1 Unit/Plant name: WRAP **Waste Stream:** Miscellaneous Heavy Metal Batteries

Treatabilitiy Group Name: MLLW-09 - Radioactive Batteries

1.2 Applicable profile number(s) for this waste stream:

A WSRd identified in the treatability group data sheet section 1.2.

1.3 Waste stream source information

1.3.1 General description of the waste (e.g., spill clean-up waste, discarded lab materials, maintenance waste):

The waste stream consists of regulated batteries.

1.3.2 History of how and where the waste was/is generated:

The waste was generated at many onsite locations and also by offsite generators.

1.3.3 Source of the regulated constituents:

See 1.3.1 and 1.3.2.

1.3.4 Source of the information (e.g., analytical data, process knowledge, document number, etc.)

Process knowledge.

1.3.5 Additional notes:

None.

2.0 WASTE STREAM STORAGE, INVENTORY, AND GENERATION INFORMATION

(NOTE: For waste in satellite accumulation areas and 90-day accumulation areas, skip to Section 2.6.)

2.1 Current storage method

- ☐ Container (pad)
- ☒ Container (covered)
- ☐ Container (retrievably buried)
- ☐ Tank
- ☐ DST
- ☐ SST
- ☐ Other (explain):

2.1.1 How was the waste managed prior to storage?

Accumulated and packaged by waste generators prior to storage at CWC.

2.1.2 Timeframe when waste was placed to storage?

MLLW at WRAP is both MLLW dating back to the late 80's as well as newly generated MLLW.

2.2 Storage inventory locations:

Building/Room Number	Number of Containers/Tanks
WRAP	1

LDR REPORT WASTE LOCATION-SPECIFIC DATA SHEET

2.3 Current stored inventory for this stream.

Total volume (cubic meters): 0.210

Date of inventory values: 12/30/2009

Comments on waste inventory:

Inventory based on data for containers residing at the WRAP as reported in the SWITS.

2.4 Is storage capacity at this location potentially an issue for this waste stream?

☐ Yes ☒ No

If yes, what is the total estimated storage capacity? N/A

When is this capacity expected to be reached? N/A

Bases and assumptions used:

Due to proximity to and interchange with CWC, there is no storage capacity issue at WRAP.

2.5 Planned storage areas for this waste:

☒ Current Location ☒ CWC ☐ DST

☐ Other Area(s) (list):

☐ None

2.6 Estimated generation projection by calendar year (includes waste in satellite and 90-day accumulation areas):

Year	m^3	and/or	kg
2010	0.000		0.000
2011	0.000		0.000
2012	0.000		0.000
2013	0.000		0.000
2014	0.000		0.000
Total	0.000		0.000

2.7 DOE Storage Compliance Assessment information:

☒ Assessment has been completed.

Document Number	Date
A&E-SEC-02-001	01/21/2002

☐ Assessment has been scheduled. Scheduled date:

☐ Other. Explain:

2.8 Applicable Tri-Party Agreement milestones related to storage at this location:

Milestone Number	Due Date
N/A	

LDR REPORT WASTE LOCATION-SPECIFIC DATA SHEET

2.9 Has there ever been any non-permitted, unauthorized release of this waste stream from this storage unit to the environment?

☐ Yes ☒ No

If yes, summarize releases and quantities and provide date:

N/A

2.10 Are there any plans to submit requests for variances or other exemptions related to storage?

☐ Yes ☒ No

If yes, explain: N/A

2.11 Characterization

2.11.1 Is further characterization needed about the waste prior to acceptance for storage?

☐ Yes ☒ No ☐ Unknown at this time

Milestone Number	Due Date
N/A	N/A

If yes or unknown, comment on characterization for storage.

N/A

2.11.2 Is further characterization needed about the waste prior to acceptance for treatment?

☐ Yes ☒ No ☐ Unknown at this time

Milestone Number	Due Date
N/A	N/A

If yes or unknown, comment on characterization for treatment.

N/A

2.11.3 Is further characterization needed about the waste prior to acceptance for disposal?

☐ Yes ☒ No ☐ Unknown at this time

Milestone Number	Due Date
N/A	N/A

If yes or unknown, comment on characterization for disposal.

N/A

2.12 Other key assumptions related to storage, inventory, and generation information:

None.

LDR REPORT WASTE LOCATION-SPECIFIC DATA SHEET

3.0 WASTE MINIMIZATION

3.1 Has a waste minimization assessment been completed for this stream?

☐ Yes ☒ No

If yes, provide date assessment conducted: N/A

If yes, provide document number or other identification:

N/A

If no, provide date assessment will be completed, or if waste stream is no longer generated, then indicate N/A:

None planned - waste not generated at WRAP.

3.2 Provide details of current and proposed methods for minimizing the generation of this stream (e.g., process changes to reduce or eliminate LDR waste, methods to reduce volume through segregation and avoidance of commingling, substitution of less-toxic materials):

These activities occur before the wastes are transferred/shipped to WRAP. There are few opportunities to reduce waste volumes placed into storage.

3.3 Waste minimization schedule

3.3.1 Reduction achieved during calendar year 2009 (volume or mass)

0.000 m3

3.3.2 Projected future waste volume reductions

Year	m^3	and/or	kg
2010	0.00		0.00
2011	0.00		0.00
2012	0.00		0.00
2013	0.00		0.00
2014	0.00		0.00
Total	0.00		0.00

3.3.3 Bases and assumptions used in above estimates:

There is no projected generation by WRAP.

This page intentionally left blank.

MLLW-10 – Reactive Metals

LDR REPORT TREATABILITY GROUP DATA SHEET

1.0 WASTE STREAM IDENTIFICATION

1.1 Treatability Group Name: MLLW-10 - Reactive Metals

1.2 Description of waste (list WSRd numbers for this waste stream, as applicable)

This treatability group is for waste that is water reactive (waste codes D003) including sodium metal, cyanides/sulfides, NAK, lithium, etc. The primary WSRds that comprise this treatability group are ENA, 820 and 822. The waste is generated by many onsite generating organizations.

2.0 WASTE INVENTORY AND GENERATION

2.1 Current total inventory for this waste stream (stored waste only, not accumulation areas). [Equals sum of location-specific data sheets for this treatability group.]

Total volume (cubic meters): 24.300

2.2 Estimated generation projection by calendar year: [equals annual sums of location-specfic data sheets for this treatability group].

Year	m^3	and/or	kg
2010	0.000		0.000
2011	0.000		0.000
2012	0.000		0.000
2013	0.000		0.000
2014	0.000		0.000
Total	0.000		0.000

3.0 WASTE STREAM CHARACTERIZATION

3.1 Radiological Characteristics

3.1.1 Mixed waste type: ☐ High-level ☐ Transuranic ☒ Low-level

3.1.2 Handling (as package contents would need to be handled during treatment):

☒ Contact-handled ☐ Remote-handled

3.1.3 Comments on radiological characteristics (e.g., more specific information on content, treatment concerns caused by radiation, confidence level):

This waste is a general category based on dangerous waste physical and chemical characteristics; therefore, the radiological characteristics vary greatly between individual waste packages. The waste meets low-level-waste requirements as defined by DOE Order 435.1. This treatability group is for Contact Handled (CH) waste. Greater than Hanford Category 1 (GTC1) waste will normally be radiologically stabilization prior to disposal; however, radiological stabilization may take place in the disposal unit.

LDR REPORT TREATABILITY GROUP DATA SHEET

3.2 Physical Form

3.2.1 Physical form of the waste:

☒ Solid ☐ Liquid ☐ Semi-solid ☒ Debris

☒ Other (Describe in comments.)

3.2.2 Comments on physical form:

Significant amounts of debris waste materials are typically in with the reactive waste components.

3.3 Regulated constituents and wastewater/non-wastewater category

3.3.1 Wastewater/non-wastewater under RCRA

☐ Wastewater ☒ Non-wastewater ☐ Unknown

3.3.2 Regulated constituents table including treatment requirements and UHCs, if applicable.

EPA/ State Number	Waste Description	LDR Sub-Category*	Concentration (Typical or Range)**	Basis	LDR Treatment Concentration Standard or Technology Code
D001	Ignitable	Low TOC	***	***	DEACT and meet 268.48 standards
D003	Reactive	Other Reactives	N/A	Process Knowledge	DEACT and meet 268.48 standards
D003	Reactive	Reactive Cyanides	N/A	Process Knowledge	590/30 mg/kg
D003	Reactive	Water Reactive	N/A	Process Knowledge	DEACT and meet 268.48 standards
WSC2	Solid Corrosive	N/A	***	***	Remove Solid Acid Charac.

* LDR Subcategory marked N/A if no existing subcategory adequately describes this waste, or if there are no defined subcategories for the waste number (40 CFR 268.40).

** If waste is not consistent in concentration, this may not apply. Described in Section 3.3.6.

*** The concentration varies and is based on process knowledge and/or analytical data.

3.3.3 List any waste numbers from Section 3.3.2 for which the waste stream already meets established LDR treatment standards.

☐ List:

☐ No LDR treatment required (e.g. TRUM waste destined for WIPP, exclusion, etc.)

☒ None (i.e. all constituents/waste numbers of this waste stream still require treatment).

LDR REPORT TREATABILITY GROUP DATA SHEET

3.3.4 Does this waste stream contain PCBs?

☐ Yes ☒ No ☐ Unknown

If no or unknown, skip to Section 3.3.5.

3.3.4.1 Is waste stream subject to TSCA regulations for PCBs?

☐ Yes ☐ No ☐ Unknown

3.3.4.2 Indicate the PCB concentration range.

☐ < 50 ppm ☐ ≥ 50 ppm ☐ Unknown

3.3.5 What is the confidence level for the regulated constituents?

☐ Low ☐ Medium ☒ High

3.3.6 Comments on regulated constituents and wastewater/non-wastewater category:

The newly generated waste packages associated with this treatability group are characterized by the generator and packaged for offsite shipment to a commercial waste treater. Legacy waste packages that have been in storage prior to 1995 undergo record information reviews, and are updated in required to meet current shipment and treatment facility acceptance requirements. Once the waste is received at the waste treaters facility, they perform conformation inspections to determine if the waste meets the treatment facilities waste profile that has been established for the waste package/stream.

4.0 WASTE STREAM TREATMENT

4.1 Is this waste stream currently being treated?

☐ Yes ☒ No

If yes, provide details:

4.2 Planned treatment: Check the appropriate box indicating future plans for treating this waste stream to meet applicable regulations, including LDR treatment standards.

☐ No treatment required (skip to Section 5.0)

☐ Treating or plan to treat on site

☐ Treating or plan to treat off site

☒ Treatment options still being assessed

4.3 Planned treatment method, facility, extent of treatment capacity available:

Deactivation of the waste is required by RCRA treatment requirements, currently, there is only limited capability/capacity available. Additional capabilities are being sought.

4.4 Treatment schedule information:

Treatment will be performed in accordance with M-91-42 milestone dates.

LDR REPORT TREATABILITY GROUP DATA SHEET

4.5 Applicable Tri-Party Agreement treatment milestone numbers (including permitting):

Milestone Number	Due Date
M-091-42Q	

4.6 Proposed new Tri-Party Agreement treatment milestones:

Currently in negotiations with the TPA members.

4.7 If treating or planning to treat on site, was or will waste minimization be addressed in developing and/or selecting the treatment method?

☐ Yes ☐ No ☒ Unknown

If yes, describe: N/A.

4.8 List or describe treatability equivalency petitions, rulemaking petitions, and case-by-case exemptions needed for treatment or already in place.

None identified at this time.

4.9 Key Assumptions:

It is assumed that a commerical waste treater(s) will be able to receive and treat this waste.

5.0 WASTE STREAM DISPOSAL

After treatment, how will the waste stream be disposed of (include locations, milestone numbers, variances required, etc. as applicable):

Treated waste residues will be disposed back at the Hanford Site (e.g., Mixed Waste Disposal Unit) or at a commerical waste disposal site (e.g., EnergySolutions Clive).

LDR REPORT WASTE LOCATION-SPECIFIC DATA SHEET

1.0 WASTE STREAM IDENTIFICATION AND SOURCE

1.1 Unit/Plant name: CWC **Waste Stream:** Alkali metals

Treatabilitiy Group Name: MLLW-10 - Reactive Metals

1.2 Applicable profile number(s) for this waste stream:

A WSRd identified in the treatability group data sheet section 1.2.

1.3 Waste stream source information

1.3.1 General description of the waste (e.g., spill clean-up waste, discarded lab materials, maintenance waste):

Reactive Metal Waste - Reactive metal (e.g. sodium, lithium, calcium), metal hydrides, borohydrides and related compounds packaged in a form that is sufficiently stable for extended storage.

1.3.2 History of how and where the waste was/is generated:

The waste was generated at various onsite locations.

1.3.3 Source of the regulated constituents:

See 1.3.1 and 1.3.2.

1.3.4 Source of the information (e.g., analytical data, process knowledge, document number, etc.)

Process knowledge.

1.3.5 Additional notes:

None.

2.0 WASTE STREAM STORAGE, INVENTORY, AND GENERATION INFORMATION

(NOTE: For waste in satellite accumulation areas and 90-day accumulation areas, skip to Section 2.6.)

2.1 Current storage method

- ☐ Container (pad)
- ☒ Container (covered)
- ☐ Container (retrievably buried)
- ☐ Tank
- ☐ DST
- ☐ SST
- ☐ Other (explain):

2.1.1 How was the waste managed prior to storage?

Accumulated and packaged by waste generators prior to storage at CWC.

2.1.2 Timeframe when waste was placed to storage?

Waste storage at CWC began in 1988 and continues.

2.2 Storage inventory locations:

Building/Room Number	Number of Containers/Tanks
CWC	40

LDR REPORT WASTE LOCATION-SPECIFIC DATA SHEET

2.3 Current stored inventory for this stream.

Total volume (cubic meters): 24.300

Date of inventory values: 12/31/2009

Comments on waste inventory:

Based on the inventory residing at CWC as reported in SWITS.

2.4 Is storage capacity at this location potentially an issue for this waste stream?

☐ Yes ☒ No

If yes, what is the total estimated storage capacity? N/A

When is this capacity expected to be reached? N/A

Bases and assumptions used:

No issues with CWC storage based on 20 year waste generation forecast.

2.5 Planned storage areas for this waste:

☒ Current Location ☒ CWC ☐ DST

☐ Other Area(s) (list):

☐ None

2.6 Estimated generation projection by calendar year (includes waste in satellite and 90-day accumulation areas):

Year	m^3	and/or	kg
2010	0.000		0.000
2011	0.000		0.000
2012	0.000		0.000
2013	0.000		0.000
2014	0.000		0.000
Total	0.000		0.000

2.7 DOE Storage Compliance Assessment information:

☒ Assessment has been completed.

Document Number	Date
A&E-SEC-02-001	01/21/2002

☐ Assessment has been scheduled. Scheduled date:

☐ Other. Explain:

2.8 Applicable Tri-Party Agreement milestones related to storage at this location:

Milestone Number	Due Date
N/A	

LDR REPORT WASTE LOCATION-SPECIFIC DATA SHEET

2.9 Has there ever been any non-permitted, unauthorized release of this waste stream from this storage unit to the environment?

☐ Yes ☒ No

If yes, summarize releases and quantities and provide date:

N/A

2.10 Are there any plans to submit requests for variances or other exemptions related to storage?

☐ Yes ☒ No

If yes, explain: N/A

2.11 Characterization

2.11.1 Is further characterization needed about the waste prior to acceptance for storage?

☐ Yes ☒ No ☐ Unknown at this time

Milestone Number	Due Date
N/A	N/A

If yes or unknown, comment on characterization for storage.

N/A

2.11.2 Is further characterization needed about the waste prior to acceptance for treatment?

☐ Yes ☒ No ☐ Unknown at this time

Milestone Number	Due Date
N/A	N/A

If yes or unknown, comment on characterization for treatment.

N/A

2.11.3 Is further characterization needed about the waste prior to acceptance for disposal?

☒ Yes ☐ No ☐ Unknown at this time

Milestone Number	Due Date
N/A	N/A

If yes or unknown, comment on characterization for disposal.

To meet concentration based treatment standards applicable for the residues, sampling will be required after treatment. No commitment is necessary for the characterization needs on this MLLW.

2.12 Other key assumptions related to storage, inventory, and generation information:

None.

LDR REPORT WASTE LOCATION-SPECIFIC DATA SHEET

3.0 WASTE MINIMIZATION

3.1 Has a waste minimization assessment been completed for this stream?

☐ Yes ☒ No

If yes, provide date assessment conducted: N/A

If yes, provide document number or other identification:

N/A

If no, provide date assessment will be completed, or if waste stream is no longer generated, then indicate N/A:

None planned - waste not generated at CWC

3.2 Provide details of current and proposed methods for minimizing the generation of this stream (e.g., process changes to reduce or eliminate LDR waste, methods to reduce volume through segregation and avoidance of commingling, substitution of less-toxic materials):

These activities occur before the wastes are transferred/shipped to CWC. There are few opportunities to reduce waste volumes placed into storage.

3.3 Waste minimization schedule

3.3.1 Reduction achieved during calendar year 2009 (volume or mass)

0.000 m3

3.3.2 Projected future waste volume reductions

Year	m^3	and/or	kg
2010	0.00		0.00
2011	0.00		0.00
2012	0.00		0.00
2013	0.00		0.00
2014	0.00		0.00
Total	0.00		0.00

3.3.3 Bases and assumptions used in above estimates:

There is no projected generation by CWC.

LDR REPORT WASTE LOCATION-SPECIFIC DATA SHEET

1.0 WASTE STREAM IDENTIFICATION AND SOURCE

1.1 Unit/Plant name: T Plant Complex **Waste Stream:** Reactive Metals

Treatabilitiy Group Name: MLLW-10 - Reactive Metals

1.2 Applicable profile number(s) for this waste stream:

1.3 Waste stream source information

1.3.1 General description of the waste (e.g., spill clean-up waste, discarded lab materials, maintenance waste):

1.3.2 History of how and where the waste was/is generated:

1.3.3 Source of the regulated constituents:

1.3.4 Source of the information (e.g., analytical data, process knowledge, document number, etc.)

1.3.5 Additional notes:

2.0 WASTE STREAM STORAGE, INVENTORY, AND GENERATION INFORMATION

(NOTE: For waste in satellite accumulation areas and 90-day accumulation areas, skip to Section 2.6.)

2.1 Current storage method

- ☒ Container (pad)
- ☒ Container (covered)
- ☐ Container (retrievably buried)
- ☐ Tank
- ☐ DST
- ☐ SST
- ☐ Other (explain):

2.1.1 How was the waste managed prior to storage?

Waste generated at the T Plant Complex and from onsite locations and also by offsite generators.

2.1.2 Timeframe when waste was placed to storage?

1995 through 2000.

2.2 Storage inventory locations:

Building/Room Number	Number of Containers/Tanks
T Plant Complex	0

LDR REPORT WASTE LOCATION-SPECIFIC DATA SHEET

2.3 Current stored inventory for this stream.

Total volume (cubic meters): 0.000

Date of inventory values: 12/31/2009

Comments on waste inventory:

Inventory will fluctuate as T Plant Complex generates waste, or performs waste storage and treatment/verification of onsite/offsite generators.

2.4 Is storage capacity at this location potentially an issue for this waste stream?

☐ Yes ☒ No

If yes, what is the total estimated storage capacity? N/A

When is this capacity expected to be reached? N/A

Bases and assumptions used:

N/A

2.5 Planned storage areas for this waste:

☒ Current Location ☒ CWC ☐ DST

☐ Other Area(s) (list): N/A

☐ None

2.6 Estimated generation projection by calendar year (includes waste in satellite and 90-day accumulation areas):

Year	m^3	and/or	kg
2010	0.000		0.000
2011	0.000		0.000
2012	0.000		0.000
2013	0.000		0.000
2014	0.000		0.000
Total	0.000		0.000

2.7 DOE Storage Compliance Assessment information:

☒ Assessment has been completed.

Document Number	Date
01-A&E-012	11/28/2000

☒ Assessment has been scheduled. Scheduled date: 3rd quarter CY2005.

☐ Other. Explain:

LDR REPORT WASTE LOCATION-SPECIFIC DATA SHEET

2.8 Applicable Tri-Party Agreement milestones related to storage at this location:

Milestone Number	Due Date
N/A	

2.9 Has there ever been any non-permitted, unauthorized release of this waste stream from this storage unit to the environment?

☐ Yes ☒ No

If yes, summarize releases and quantities and provide date:

N/A

2.10 Are there any plans to submit requests for variances or other exemptions related to storage?

☐ Yes ☒ No

If yes, explain: N/A

2.11 Characterization

2.11.1 Is further characterization needed about the waste prior to acceptance for storage?

☐ Yes ☒ No ☐ Unknown at this time

Milestone Number	Due Date
N/A	N/A

If yes or unknown, comment on characterization for storage.

N/A

2.11.2 Is further characterization needed about the waste prior to acceptance for treatment?

☒ Yes ☐ No ☐ Unknown at this time

Milestone Number	Due Date
N/A	N/A

If yes or unknown, comment on characterization for treatment.

Characterization needs are determined after the containers are opened and the contents are examined because the containers have failed verification. Once the containers are opened, the container is either reassigned to another treatability group/WSRd data sheet or it is declared non-mixed waste. Any containers declared non-mixed waste will be removed from the LDR report. Further characterization of mixed waste containers, if needed, is anticipated to be performed as necessary to support the results of the M-091 TPA settlement agreement.

2.11.3 Is further characterization needed about the waste prior to acceptance for disposal?

☒ Yes ☐ No ☐ Unknown at this time

Milestone Number	Due Date
N/A	N/A

LDR REPORT WASTE LOCATION-SPECIFIC DATA SHEET

If yes or unknown, comment on characterization for disposal.

To meet concentration based treatment standards applicable for the residues, sampling will be required after treatment. No commitment is necessary for the characterization needs on this MLLW.

2.12 Other key assumptions related to storage, inventory, and generation information:

None.

3.0 WASTE MINIMIZATION

3.1 Has a waste minimization assessment been completed for this stream?

☐ Yes ☒ No

If yes, provide date assessment conducted: N/A

If yes, provide document number or other identification:

N/A

If no, provide date assessment will be completed, or if waste stream is no longer generated, then indicate N/A:

N/A

3.2 Provide details of current and proposed methods for minimizing the generation of this stream (e.g., process changes to reduce or eliminate LDR waste, methods to reduce volume through segregation and avoidance of commingling, substitution of less-toxic materials):

Waste minimization techniques are used, where possible, during generation and treatment processing.

3.3 Waste minimization schedule

3.3.1 Reduction achieved during calendar year 2009 (volume or mass)

0.000 m3

3.3.2 Projected future waste volume reductions

Year	m^3	and/or	kg
2010	0.00		0.00
2011	0.00		0.00
2012	0.00		0.00
2013	0.00		0.00
2014	0.00		0.00
Total	0.00		0.00

3.3.3 Bases and assumptions used in above estimates:

The T Plant Complex has submitted a P2/Wmin fiscal year 2004 goal to reduce, where possible, mixed waste generation. For FY 2004 to 2008, new goals will be evaluated and identified on a year by year basis. The T Plant Complex does not track waste reduction by treatability groups. Routine and non-routine generated waste is reported quarterly to the Waste Minimization/Pollution Prevention Group.

PUREX Plant

LDR REPORT TREATABILITY GROUP DATA SHEET

1.0 WASTE STREAM IDENTIFICATION

1.1 Treatability Group Name: PUREX Plant

1.2 Description of waste (list WSRd numbers for this waste stream, as applicable)

Concrete rubble contaminated with trace chromium as a corrosion product. No additional waste will be stored at this location, as the PUREX Plant is under long term S&M.

2.0 WASTE INVENTORY AND GENERATION

2.1 Current total inventory for this waste stream (stored waste only, not accumulation areas). [Equals sum of location-specific data sheets for this treatability group.]

Total volume (cubic meters): 1.000

2.2 Estimated generation projection by calendar year: [equals annual sums of location-specfic data sheets for this treatability group].

Year	m^3	and/or	kg
2010	0.000		0.000
2011	0.000		0.000
2012	0.000		0.000
2013	0.000		0.000
2014	0.000		0.000
Total	0.000		0.000

3.0 WASTE STREAM CHARACTERIZATION

3.1 Radiological Characteristics

3.1.1 Mixed waste type: ☐ High-level ☐ Transuranic ☒ Low-level

3.1.2 Handling (as package contents would need to be handled during treatment):

☐ Contact-handled ☒ Remote-handled

3.1.3 Comments on radiological characteristics (e.g., more specific information on content, treatment concerns caused by radiation, confidence level):

The waste was generated during replacement of a vessel and renovation of the E-Cell floor. Concrete debris was placed in a metal box that is now stored in F-Cell. The chemical processing performed in E Cell was primarily treatment of disolved fuel cladding waste. Based on the Pu content and the radiological characteristics of the waste (emits approximately 500 rad/hr), it is categorized as remote-handled TRU. The confidence level is high.

LDR REPORT TREATABILITY GROUP DATA SHEET

3.2 Physical Form

3.2.1 Physical form of the waste:

☒ Solid ☐ Liquid ☐ Semi-solid ☐ Debris

☐ Other (Describe in comments.)

3.2.2 Comments on physical form:

None.

3.3 Regulated constituents and wastewater/non-wastewater category

3.3.1 Wastewater/non-wastewater under RCRA

☐ Wastewater ☒ Non-wastewater ☐ Unknown

3.3.2 Regulated constituents table including treatment requirements and UHCs, if applicable.

EPA/ State Number	Waste Description	LDR Sub-Category*	Concentration (Typical or Range)**	Basis	LDR Treatment Concentration Standard or Technology Code
D007	Chromium	N/A	~1000 ppm	Analytical results	DEBRIS MACRO

* LDR Subcategory marked N/A if no existing subcategory adequately describes this waste, or if there are no defined subcategories for the waste number (40 CFR 268.40).

** If waste is not consistent in concentration, this may not apply. Described in Section 3.3.6.

3.3.3 List any waste numbers from Section 3.3.2 for which the waste stream already meets established LDR treatment standards.

☐ List:

☐ No LDR treatment required (e.g. TRUM waste destined for WIPP, exclusion, etc.)

☒ None (i.e. all constituents/waste numbers of this waste stream still require treatment).

3.3.4 Does this waste stream contain PCBs?

☐ Yes ☒ No ☐ Unknown

If no or unknown, skip to Section 3.3.5.

3.3.4.1 Is waste stream subject to TSCA regulations for PCBs?

☐ Yes ☐ No ☐ Unknown

3.3.4.2 Indicate the PCB concentration range.

☐ < 50 ppm ☐ ≥ 50 ppm ☐ Unknown

LDR REPORT TREATABILITY GROUP DATA SHEET

3.3.5 What is the confidence level for the regulated constituents?

☐ Low ☐ Medium ☒ High

3.3.6 Comments on regulated constituents and wastewater/non-wastewater category:

Based on laboratory analysis.

4.0 WASTE STREAM TREATMENT

4.1 Is this waste stream currently being treated?

☐ Yes ☒ No

If yes, provide details: N/A

4.2 Planned treatment: Check the appropriate box indicating future plans for treating this waste stream to meet applicable regulations, including LDR treatment standards.

☐ No treatment required (skip to Section 5.0)

☐ Treating or plan to treat on site

☐ Treating or plan to treat off site

☒ Treatment options still being assessed

4.3 Planned treatment method, facility, extent of treatment capacity available:

Until a final decision is made on the Canyon Disposition Initiative, no commitments will be made for waste disposal.

4.4 Treatment schedule information:

Will be established after final decision is made on the Canyon Disposition Initiative.

4.5 Applicable Tri-Party Agreement treatment milestone numbers (including permitting):

Milestone Number	Due Date
N/A	N/A

4.6 Proposed new Tri-Party Agreement treatment milestones:

None.

4.7 If treating or planning to treat on site, was or will waste minimization be addressed in developing and/or selecting the treatment method?

☐ Yes ☐ No ☒ Unknown

If yes, describe: N/A

4.8 List or describe treatability equivalency petitions, rulemaking petitions, and case-by-case exemptions needed for treatment or already in place.

Unknown.

LDR REPORT TREATABILITY GROUP DATA SHEET

4.9 Key Assumptions:

Decommissioning of the PUREX Plant is addressed under Chapter 8 of the Tri-Party Agreement. The PUREX Plant is under long term surveillance and maintenance in accordance with Section 8.0, Facility Decommissioning Process, of the Tri-Party Agreement.

5.0 WASTE STREAM DISPOSAL

After treatment, how will the waste stream be disposed of (include locations, milestone numbers, variances required, etc. as applicable):

A decision on the Canyon Disposition Initiative will affect the final disposition of the PUREX Plant and its contents.

LDR REPORT WASTE LOCATION-SPECIFIC DATA SHEET

1.0 WASTE STREAM IDENTIFICATION AND SOURCE

1.1 Unit/Plant name: PUREX Plant **Waste Stream:** PUREX Containment Building

Treatabilitiy Group Name: PUREX Plant

1.2 Applicable profile number(s) for this waste stream:

N/A

1.3 Waste stream source information

1.3.1 General description of the waste (e.g., spill clean-up waste, discarded lab materials, maintenance waste):

Concrete rubble from the E-Cell canyon floor was placed in a metal box during the floor renovation.

1.3.2 History of how and where the waste was/is generated:

Waste was generated from renovation of the E-Cell floor.

1.3.3 Source of the regulated constituents:

Process solutions spilled to the E-Cell canyon floor..

1.3.4 Source of the information (e.g., analytical data, process knowledge, document number, etc.)

Analytical data.

1.3.5 Additional notes:

Waste was generated in September, 1989.

2.0 WASTE STREAM STORAGE, INVENTORY, AND GENERATION INFORMATION

(NOTE: For waste in satellite accumulation areas and 90-day accumulation areas, skip to Section 2.6.)

2.1 Current storage method

☐ Container (pad) ☐ Container (covered) ☐ Container (retrievably buried)

☐ Tank ☐ DST ☐ SST

☒ Other (explain): PUREX Containment Building.

2.1.1 How was the waste managed prior to storage?

It was placed into this storage configuration upon being generated.

2.1.2 Timeframe when waste was placed to storage?

Waste was generated in September 1989.

2.2 Storage inventory locations:

Building/Room Number	Number of Containers/Tanks
202A/ F-Cell	1 box

LDR REPORT WASTE LOCATION-SPECIFIC DATA SHEET

2.3 Current stored inventory for this stream.

Total volume (cubic meters): 1.000

Date of inventory values: 01/27/2010

Comments on waste inventory:

Waste is located in a single metal box on the F-Cell Canyon Floor.

2.4 Is storage capacity at this location potentially an issue for this waste stream?

☐ Yes ☒ No

If yes, what is the total estimated storage capacity? N/A

When is this capacity expected to be reached? N/A

Bases and assumptions used:

N/A

2.5 Planned storage areas for this waste:

☒ Current Location ☐ CWC ☐ DST

☐ Other Area(s) (list):

☐ None

2.6 Estimated generation projection by calendar year (includes waste in satellite and 90-day accumulation areas):

Year	m^3	and/or	kg
2010	0.000		0.000
2011	0.000		0.000
2012	0.000		0.000
2013	0.000		0.000
2014	0.000		0.000
Total	0.000		0.000

2.7 DOE Storage Compliance Assessment information:

☐ Assessment has been completed.

Document Number	Date

☐ Assessment has been scheduled. Scheduled date:

☒ Other. Explain: No assessment is required because the facility is being managed under TPA Section 8.0.

2.8 Applicable Tri-Party Agreement milestones related to storage at this location:

Milestone Number	Due Date
N/A	

LDR REPORT WASTE LOCATION-SPECIFIC DATA SHEET

2.9 Has there ever been any non-permitted, unauthorized release of this waste stream from this storage unit to the environment?

☐ Yes ☒ No

If yes, summarize releases and quantities and provide date:

N/A

2.10 Are there any plans to submit requests for variances or other exemptions related to storage?

☐ Yes ☒ No

If yes, explain: N/A

2.11 Characterization

2.11.1 Is further characterization needed about the waste prior to acceptance for storage?

☐ Yes ☒ No ☐ Unknown at this time

Milestone Number	Due Date
N/A	N/A

If yes or unknown, comment on characterization for storage.

N/A

2.11.2 Is further characterization needed about the waste prior to acceptance for treatment?

☐ Yes ☒ No ☐ Unknown at this time

Milestone Number	Due Date
N/A	N/A

If yes or unknown, comment on characterization for treatment.

N/A

2.11.3 Is further characterization needed about the waste prior to acceptance for disposal?

☐ Yes ☒ No ☐ Unknown at this time

Milestone Number	Due Date
N/A	N/A

If yes or unknown, comment on characterization for disposal.

N/A

2.12 Other key assumptions related to storage, inventory, and generation information:

LDR REPORT WASTE LOCATION-SPECIFIC DATA SHEET

The waste was generated during replacement of a vessel and renovation of the E-Cell floor. Concrete debris was placed in a metal box that is now stored in F-Cell. The chemical processing performed in E Cell was primarily treatment of disolved fuel cladding waste. Based on the Pu content and the radiological characteristics of the waste (emits approximately 500 rad/hr), it is categorized as remote-handled TRU. The confidence level is high. No additional waste will be stored at this location. PUREX is under long term surveillance and maintenance under Section 8 of the TPA.

3.0 WASTE MINIMIZATION

3.1 Has a waste minimization assessment been completed for this stream?

☐ Yes ☒ No

If yes, provide date assessment conducted: N/A

If yes, provide document number or other identification:

N/A

If no, provide date assessment will be completed, or if waste stream is no longer generated, then indicate N/A:

N/A

3.2 Provide details of current and proposed methods for minimizing the generation of this stream (e.g., process changes to reduce or eliminate LDR waste, methods to reduce volume through segregation and avoidance of commingling, substitution of less-toxic materials):

N/A - no longer generated.

3.3 Waste minimization schedule

3.3.1 Reduction achieved during calendar year 2009 (volume or mass)

0.000 m3

3.3.2 Projected future waste volume reductions

Year	m^3	and/or	kg
2010	0.00		0.00
2011	0.00		0.00
2012	0.00		0.00
2013	0.00		0.00
2014	0.00		0.00
Total	0.00		0.00

3.3.3 Bases and assumptions used in above estimates:

The facility is inactive. No additional waste will be generated.

PUREX Storage Tunnels

LDR REPORT TREATABILITY GROUP DATA SHEET

1.0 WASTE STREAM IDENTIFICATION

1.1 Treatability Group Name: PUREX Storage Tunnels

1.2 Description of waste (list WSRd numbers for this waste stream, as applicable)

Varies from very large equipment vessels with lead counterweights to very fine mixed waste powder in canisters. Waste receipt into the TSD unit began in 1960. The TSD unit waste inventory list is contained in the Hanford Facility RCRA Permit, Attachment 28, Chapter 3.0, Waste Analysis Plan. Waste is expected to contain a combination of TRU and TRUM.

2.0 WASTE INVENTORY AND GENERATION

2.1 Current total inventory for this waste stream (stored waste only, not accumulation areas). [Equals sum of location-specific data sheets for this treatability group.]

Total volume (cubic meters): 2,800.000

2.2 Estimated generation projection by calendar year: [equals annual sums of location-specfic data sheets for this treatability group].

Year	m^3	and/or	kg
2010	0.000		0.000
2011	0.000		0.000
2012	0.000		0.000
2013	0.000		0.000
2014	0.000		0.000
Total	0.000		0.000

3.0 WASTE STREAM CHARACTERIZATION

3.1 Radiological Characteristics

3.1.1 Mixed waste type: ☐ High-level ☐ Transuranic ☒ Low-level

3.1.2 Handling (as package contents would need to be handled during treatment):

☐ Contact-handled ☒ Remote-handled

3.1.3 Comments on radiological characteristics (e.g., more specific information on content, treatment concerns caused by radiation, confidence level):

Varies from medium (~1 rad/hr) to very high(>1000 rad/hr).

3.2 Physical Form

3.2.1 Physical form of the waste:

☐ Solid ☐ Liquid ☐ Semi-solid ☐ Debris

☒ Other (Describe in comments.)

3.2.2 Comments on physical form:

LDR REPORT TREATABILITY GROUP DATA SHEET

There are a number of items in the tunnels with different types of waste, but the large failed stainless steel and iron vessels and equipment constitute the bulk of the waste. All the waste is solid except for some mercury in the disolver thermowells and possibly some liquid heels in the vessels.

3.3 Regulated constituents and wastewater/non-wastewater category

3.3.1 Wastewater/non-wastewater under RCRA

☐ Wastewater ☒ Non-wastewater ☐ Unknown

3.3.2 Regulated constituents table including treatment requirements and UHCs, if applicable.

EPA/ State Number	Waste Description	LDR Sub-Category*	Concentration (Typical or Range)**	Basis	LDR Treatment Concentration Standard or Technology Code
D001	Oxidizer	Low TOC	**	Process knowledge	Deact 40 CFR 268.48 ***
D005	Barium	Barium	100-1000 ppm **	Analytical/ Process knowledge	21 mg/l TCLP & Deact 40 CFR 268.48 ***
D006	Cadmium	Cadmium	**	Analytical/ Process knowledge	0.11 mg/l TCLP & Deact 40 CFR 268.48 ***
D007	Chromium	Chromium	5-1000 ppm **	Analytical/ process knowledge	0.60 mg/l TCLP & Deact 40 CFR 268.48 ***
D008	lead	Rad lead solids	**	Process knowledge	MACRO
D009	Mercury	High Hg Inorganic	**	Process knowledge	RMERC
D010	Selenium	Selenium	**	Process knowledge	5.7 mg/l TCLP & Deact 40 CFR 268.48 ***
D011	Silver	Silver	5-1000 ppm **	Process knowledge	0.14 mg/l TCLP & Deact 40 CFR 268.48 ***
WT02	Toxic (mineral oil)		**	Process knowledge	N/A

* LDR Subcategory marked N/A if no existing subcategory adequately describes this waste, or if there are no defined subcategories for the waste number (40 CFR 268.40).

** If waste is not consistent in concentration, this may not apply. Described in Section 3.3.6.

*** UHCs must be determined for the waste in Tunnels 1 and 2 unless managed as hazardous debris. DOE expects most of the waste to be managed as hazardous debris.

3.3.3 List any waste numbers from Section 3.3.2 for which the waste stream already meets established LDR treatment standards.

☐ List:

LDR REPORT TREATABILITY GROUP DATA SHEET

☐ No LDR treatment required (e.g. TRUM waste destined for WIPP, exclusion, etc.)

☒ None (i.e. all constituents/waste numbers of this waste stream still require treatment).

3.3.4 Does this waste stream contain PCBs?

☐ Yes ☒ No ☐ Unknown

If no or unknown, skip to Section 3.3.5.

3.3.4.1 Is waste stream subject to TSCA regulations for PCBs?

☐ Yes ☐ No ☐ Unknown

3.3.4.2 Indicate the PCB concentration range.

☐ < 50 ppm ☐ ≥ 50 ppm ☐ Unknown

3.3.5 What is the confidence level for the regulated constituents?

☐ Low ☒ Medium ☐ High

3.3.6 Comments on regulated constituents and wastewater/non-wastewater category:

Confidence varies depending on waste item. Contaminants vary with different containers/equipment. (Not all of the waste would have all waste codes). D001 nitrate residue is from nitric acid. The Cd, Pb and Hg are largely present as pure materials and maybe separated and recycled when the waste is dispositioned.

4.0 WASTE STREAM TREATMENT

4.1 Is this waste stream currently being treated?

☐ Yes ☒ No

If yes, provide details: N/A

4.2 Planned treatment: Check the appropriate box indicating future plans for treating this waste stream to meet applicable regulations, including LDR treatment standards.

☐ No treatment required (skip to Section 5.0)

☐ Treating or plan to treat on site

☐ Treating or plan to treat off site

☒ Treatment options still being assessed

4.3 Planned treatment method, facility, extent of treatment capacity available:

N/A

4.4 Treatment schedule information:

Waste will be dispositioned on a schedule consistent with the PUREX Plant treatability group.

LDR REPORT TREATABILITY GROUP DATA SHEET

4.5 Applicable Tri-Party Agreement treatment milestone numbers (including permitting):

Milestone Number	Due Date
N/A	N/A

4.6 Proposed new Tri-Party Agreement treatment milestones:

None.

4.7 If treating or planning to treat on site, was or will waste minimization be addressed in developing and/or selecting the treatment method?

☐ Yes ☐ No ☒ Unknown

If yes, describe: N/A

4.8 List or describe treatability equivalency petitions, rulemaking petitions, and case-by-case exemptions needed for treatment or already in place.

None.

4.9 Key Assumptions:

Closure of the PUREX Storage Tunnels will be coordinated with disposition of the PUREX Plant.

5.0 WASTE STREAM DISPOSAL

After treatment, how will the waste stream be disposed of (include locations, milestone numbers, variances required, etc. as applicable):

Waste from the PUREX Storage Tunnels will be dispositioned in the same manner and location as the PUREX Plant. A decision on the Canyon Disposition Initiative will affect the final disposition of the PUREX Plant and its contents, including the contents of the PUREX Storage Tunnels.

LDR REPORT WASTE LOCATION-SPECIFIC DATA SHEET

1.0 WASTE STREAM IDENTIFICATION AND SOURCE

1.1 Unit/Plant name: PUREX Storage Tunnels **Waste Stream:** Tunnels 1 and 2

Treatabilitiy Group Name: PUREX Storage Tunnels

1.2 Applicable profile number(s) for this waste stream:

N/A

1.3 Waste stream source information

1.3.1 General description of the waste (e.g., spill clean-up waste, discarded lab materials, maintenance waste):

Railcars with failed pieces of processing equipment are in the tunnels. Material varies from very large equipment vessels with lead counterweights to very fine mixed waste powder in canisters from B-Cell in the 324 Building.

1.3.2 History of how and where the waste was/is generated:

The bulk of the waste is failed equipment from the PUREX Plant. The equipment was removed from its operating position in the canyon using the bridge crane and set onto a railcar prepared for the "burial". The railcar was then pushed into the tunnel. However, waste from other Hanford Facility locations, including 324 research and development laboratory, has been placed in the tunnels because it is so highly radioactive.

1.3.3 Source of the regulated constituents:

The bulk of the waste is failed equipment from the PUREX Plant. However, waste from other Hanford Facility locations, including 324 research and development laboratory, has been placed in the tunnels.

1.3.4 Source of the information (e.g., analytical data, process knowledge, document number, etc.)

Analytical data and process knowledge.

1.3.5 Additional notes:

None.

2.0 WASTE STREAM STORAGE, INVENTORY, AND GENERATION INFORMATION

(NOTE: For waste in satellite accumulation areas and 90-day accumulation areas, skip to Section 2.6.)

2.1 Current storage method

- ☐ Container (pad)
- ☐ Container (covered)
- ☐ Container (retrievably buried)
- ☐ Tank
- ☐ DST
- ☐ SST
- ☒ Other (explain): On rail cars in underground tunnel; permit issued as a final status miscellaneous TSD unit.

2.1.1 How was the waste managed prior to storage?

The equipment pieces in the PUREX Plant canyon failed and were moved to the tunnel. The waste from the 324 Building was removed from B-Cell and sent to waste storage.

LDR REPORT WASTE LOCATION-SPECIFIC DATA SHEET

2.1.2 Timeframe when waste was placed to storage?

June 1960 to June 1996.

2.2 Storage inventory locations:

Building/Room Number	Number of Containers/Tanks
Purex tunnel #1	8 rail cars
Purex tunnel #2	28 rail cars

2.3 Current stored inventory for this stream.

Total volume (cubic meters): 2,800.000

Date of inventory values: 01/27/2010

Comments on waste inventory:

Volume is estimated.

2.4 Is storage capacity at this location potentially an issue for this waste stream?

☐ Yes ☒ No

If yes, what is the total estimated storage capacity? N/A

When is this capacity expected to be reached? N/A

Bases and assumptions used:

N/A

2.5 Planned storage areas for this waste:

☒ Current Location ☐ CWC ☐ DST

☐ Other Area(s) (list):

☐ None

2.6 Estimated generation projection by calendar year (includes waste in satellite and 90-day accumulation areas):

Year	m^3	and/or	kg
2010	0.000		0.000
2011	0.000		0.000
2012	0.000		0.000
2013	0.000		0.000
2014	0.000		0.000
Total	0.000		0.000

2.7 DOE Storage Compliance Assessment information:

☒ Assessment has been completed.

LDR REPORT WASTE LOCATION-SPECIFIC DATA SHEET

Document Number	Date
A&E-SEC-01-016, Oct 2001 (DOE assessment)	10/30/2001

☐ Assessment has been scheduled. Scheduled date:

☐ Other. Explain:

2.8 Applicable Tri-Party Agreement milestones related to storage at this location:

Milestone Number	Due Date
N/A	

2.9 Has there ever been any non-permitted, unauthorized release of this waste stream from this storage unit to the environment?

☐ Yes ☒ No

If yes, summarize releases and quantities and provide date:

N/A

2.10 Are there any plans to submit requests for variances or other exemptions related to storage?

☐ Yes ☒ No

If yes, explain: N/A

2.11 Characterization

2.11.1 Is further characterization needed about the waste prior to acceptance for storage?

☐ Yes ☒ No ☐ Unknown at this time

Milestone Number	Due Date
N/A	N/A

If yes or unknown, comment on characterization for storage.

N/A

2.11.2 Is further characterization needed about the waste prior to acceptance for treatment?

☐ Yes ☒ No ☐ Unknown at this time

Milestone Number	Due Date
N/A	N/A

If yes or unknown, comment on characterization for treatment.

N/A

2.11.3 Is further characterization needed about the waste prior to acceptance for disposal?

☐ Yes ☒ No ☐ Unknown at this time

LDR REPORT WASTE LOCATION-SPECIFIC DATA SHEET

Milestone Number	Due Date
N/A	N/A

If yes or unknown, comment on characterization for disposal.

N/A

2.12 Other key assumptions related to storage, inventory, and generation information:

Waste in the tunnels mainly came from the PUREX Plant canyon. The waste from the tunnels will be handled at the same time and in the same manner as the mixed waste in the PUREX Plant treatability group and will be handled during final disposition of the PUREX canyon.

3.0 WASTE MINIMIZATION

3.1 Has a waste minimization assessment been completed for this stream?

☐ Yes ☒ No

If yes, provide date assessment conducted: N/A

If yes, provide document number or other identification:

N/A

If no, provide date assessment will be completed, or if waste stream is no longer generated, then indicate N/A:

N/A

3.2 Provide details of current and proposed methods for minimizing the generation of this stream (e.g., process changes to reduce or eliminate LDR waste, methods to reduce volume through segregation and avoidance of commingling, substitution of less-toxic materials):

N/A

3.3 Waste minimization schedule

3.3.1 Reduction achieved during calendar year 2009 (volume or mass)

0.000 m3

3.3.2 Projected future waste volume reductions

Year	m^3	and/or	kg
2010	0.00		0.00
2011	0.00		0.00
2012	0.00		0.00
2013	0.00		0.00
2014	0.00		0.00
Total	0.00		0.00

3.3.3 Bases and assumptions used in above estimates:

No waste is expected to be generated. However, the PUREX StorageTunnels do remain active as a final status TSD unit and might receive additional waste in the future.

Purgewater

LDR REPORT TREATABILITY GROUP DATA SHEET

1.0 WASTE STREAM IDENTIFICATION

1.1 Treatability Group Name: Purgewater

1.2 Description of waste (list WSRd numbers for this waste stream, as applicable)

Groundwater contaminated with various constituents.

2.0 WASTE INVENTORY AND GENERATION

2.1 Current total inventory for this waste stream (stored waste only, not accumulation areas). [Equals sum of location-specific data sheets for this treatability group.]

Total volume (cubic meters): 3,700.000

2.2 Estimated generation projection by calendar year: [equals annual sums of location-specfic data sheets for this treatability group].

Year	m^3	and/or	kg
2010	1,000.000		0.000
2011	0.000		0.000
2012	0.000		0.000
2013	0.000		0.000
2014	0.000		0.000
Total	1,000.000		0.000

3.0 WASTE STREAM CHARACTERIZATION

3.1 Radiological Characteristics

3.1.1 Mixed waste type: ☐ High-level ☐ Transuranic ☒ Low-level

3.1.2 Handling (as package contents would need to be handled during treatment):

☒ Contact-handled ☐ Remote-handled

3.1.3 Comments on radiological characteristics (e.g., more specific information on content, treatment concerns caused by radiation, confidence level):

None.

3.2 Physical Form

3.2.1 Physical form of the waste:

☐ Solid ☒ Liquid ☐ Semi-solid ☐ Debris

☐ Other (Describe in comments.)

3.2.2 Comments on physical form:

Waste stream is generated from groundwater sampling, well maintenance, well drilling, and pump and treat operations. Waste stream is liquid although there is a small fraction of suspended solids.

LDR REPORT TREATABILITY GROUP DATA SHEET

3.3 Regulated constituents and wastewater/non-wastewater category

3.3.1 Wastewater/non-wastewater under RCRA

☒ Wastewater ☐ Non-wastewater ☐ Unknown

3.3.2 Regulated constituents table including treatment requirements and UHCs, if applicable.

EPA/ State Number	Waste Description	LDR Sub-Category*	Concentration (Typical or Range)**	Basis	LDR Treatment Concentration Standard or Technology Code
D007	Chromium	None	>5.0 mg/l	anlalytical data	2.77 mg/l and meet 268.48.
D019	Carbon Tetrachloride	N/A	**	analytical data	0.057 mg/l and meet 268.48.
F001	1,1,1-Trichloroethane	Spent Solvent	**	analytical data	0.054 mg/l
F001	Carbon Tetrachloride	Spent Solvent	**	analytical data	0.057 mg/l
F002	Methylene Chloride	Spent Solvent	**	analytical data	0.089 mg/l
F003	Methanol	Spent Solvent	**	analytical data	5.6 mg/l
F004	o-Cresol, p-cresol, m-cresol	Spent Solvent	**	analytical data	0.11 mg/l
F005	Methyl Ethyl Ketone	Spent Solvent	**	analytical data	0.28 mg/l

* LDR Subcategory marked N/A if no existing subcategory adequately describes this waste, or if there are no defined subcategories for the waste number (40 CFR 268.40).

** If waste is not consistent in concentration, this may not apply. Described in Section 3.3.6.

Waste codes are assigned based on designations made in the CERCLA Records of Decision for the 200-ZP-1 and the 100-NR-2 Operable Units.

3.3.3 List any waste numbers from Section 3.3.2 for which the waste stream already meets established LDR treatment standards.

☒ List: Annual sampling results will be vrified through characterization sampling of the sediments.

☐ No LDR treatment required (e.g. TRUM waste destined for WIPP, exclusion, etc.)

☐ None (i.e. all constituents/waste numbers of this waste stream still require treatment).

LDR REPORT TREATABILITY GROUP DATA SHEET

3.3.4 Does this waste stream contain PCBs?

☐ Yes ☒ No ☐ Unknown

If no or unknown, skip to Section 3.3.5.

3.3.4.1 Is waste stream subject to TSCA regulations for PCBs?

☐ Yes ☐ No ☐ Unknown

3.3.4.2 Indicate the PCB concentration range.

☐ < 50 ppm ☐ ≥ 50 ppm ☐ Unknown

3.3.5 What is the confidence level for the regulated constituents?

☐ Low ☐ Medium ☒ High

3.3.6 Comments on regulated constituents and wastewater/non-wastewater category:

Analytical data is available for all groundwater activities being performed on the Hanford Site. Groundwater from all across the site is managed at the PSTF.

4.0 WASTE STREAM TREATMENT

4.1 Is this waste stream currently being treated?

☒ Yes ☐ No

If yes, provide details: Treated via solar evaporation.

4.2 Planned treatment: Check the appropriate box indicating future plans for treating this waste stream to meet applicable regulations, including LDR treatment standards.

☐ No treatment required (skip to Section 5.0)

☒ Treating or plan to treat on site

☐ Treating or plan to treat off site

☐ Treatment options still being assessed

4.3 Planned treatment method, facility, extent of treatment capacity available:

Purge water with higher solids content is treated via solar evaporation at the PSTF. Purge water with lower solids content is treated at the 200 Area Effluent Treatment Facility (ETF).

4.4 Treatment schedule information:

Treatment is ongoing.

4.5 Applicable Tri-Party Agreement treatment milestone numbers (including permitting):

Milestone Number	Due Date
N/A	N/A

LDR REPORT TREATABILITY GROUP DATA SHEET

4.6 Proposed new Tri-Party Agreement treatment milestones:

N/A

4.7 If treating or planning to treat on site, was or will waste minimization be addressed in developing and/or selecting the treatment method?

☐ Yes ☒ No ☐ Unknown

If yes, describe: N/A

4.8 List or describe treatability equivalency petitions, rulemaking petitions, and case-by-case exemptions needed for treatment or already in place.

N/A

4.9 Key Assumptions:

If additional treatment is required, it will be perofrmed at another location.

5.0 WASTE STREAM DISPOSAL

After treatment, how will the waste stream be disposed of (include locations, milestone numbers, variances required, etc. as applicable):

As a result of solar evaporation, only residues and sludges remain in the modular tanks. When the PSTF is taken out of service, the residues/sludges remaining in the modular tanks will be removed, treated as necessary to meet the ERDF Waste Acceptance Criteria and disposed of at ERDF upon receipt of regulatory approval.

LDR REPORT WASTE LOCATION-SPECIFIC DATA SHEET

1.0 WASTE STREAM IDENTIFICATION AND SOURCE

1.1 Unit/Plant name: 600 Area PSTF **Waste Stream:** Purgewater Modu-Tanks

Treatabilitiy Group Name: Purgewater

1.2 Applicable profile number(s) for this waste stream:

None

1.3 Waste stream source information

1.3.1 General description of the waste (e.g., spill clean-up waste, discarded lab materials, maintenance waste):

Purgewater.

1.3.2 History of how and where the waste was/is generated:

Purgewater generated from pump and treat operations, well drilling, groundwater sampling activities, and well maintenance.

1.3.3 Source of the regulated constituents:

Groundwater is contaminated with organics, metals, and radionuclides from process water discharged to the soil during past Hanford Site operations.

1.3.4 Source of the information (e.g., analytical data, process knowledge, document number, etc.)

Analytical data and process knowledge.

1.3.5 Additional notes:

Purgewater accounted for in this stream is collected from all across the Hanford Site.

2.0 WASTE STREAM STORAGE, INVENTORY, AND GENERATION INFORMATION

(NOTE: For waste in satellite accumulation areas and 90-day accumulation areas, skip to Section 2.6.)

2.1 Current storage method

- ☐ Container (pad)
- ☐ Container (covered)
- ☐ Container (retrievably buried)
- ☐ Tank
- ☐ DST
- ☐ SST
- ☒ Other (explain): Above ground modular containment units open to the atmosphere, permitted under interim status as S99 (other storage)

2.1.1 How was the waste managed prior to storage?

Waste is generated, placed into containers or directly into tanker trucks, and transferred to the PSTF.

2.1.2 Timeframe when waste was placed to storage?

The facility is a solar evaporation unit that has been in service since 1990.

LDR REPORT WASTE LOCATION-SPECIFIC DATA SHEET

2.2 Storage inventory locations:

Building/Room Number	Number of Containers/Tanks
PSTF Unit #1	1

2.3 Current stored inventory for this stream.

Total volume (cubic meters): 3,700.000

Date of inventory values: 12/31/2009

Comments on waste inventory:

Waste is directly discharged to the purgewater storage and treatment facility.

2.4 Is storage capacity at this location potentially an issue for this waste stream?

☐ Yes ☒ No

If yes, what is the total estimated storage capacity? N/A

When is this capacity expected to be reached? N/A

Bases and assumptions used:

N/A

2.5 Planned storage areas for this waste:

☒ Current Location ☐ CWC ☐ DST

☐ Other Area(s) (list):

☐ None

2.6 Estimated generation projection by calendar year (includes waste in satellite and 90-day accumulation areas):

Year	m^3	and/or	kg
2010	1,000.000		0.000
2011	0.000		0.000
2012	0.000		0.000
2013	0.000		0.000
2014	0.000		0.000
Total	1,000.000		0.000

2.7 DOE Storage Compliance Assessment information:

☒ Assessment has been completed.

Document Number	Date
ASS-00-A&E-068 via Ltr #01-A&E-068	11/01/2000

☐ Assessment has been scheduled. Scheduled date:

☐ Other. Explain:

LDR REPORT WASTE LOCATION-SPECIFIC DATA SHEET

2.8 Applicable Tri-Party Agreement milestones related to storage at this location:

Milestone Number	Due Date
N/A	

2.9 Has there ever been any non-permitted, unauthorized release of this waste stream from this storage unit to the environment?

☐ Yes ☒ No

If yes, summarize releases and quantities and provide date:

N/A

2.10 Are there any plans to submit requests for variances or other exemptions related to storage?

☐ Yes ☒ No

If yes, explain: N/A

2.11 Characterization

2.11.1 Is further characterization needed about the waste prior to acceptance for storage?

☐ Yes ☒ No ☐ Unknown at this time

Milestone Number	Due Date
N/A	N/A

If yes or unknown, comment on characterization for storage.

N/A

2.11.2 Is further characterization needed about the waste prior to acceptance for treatment?

☐ Yes ☒ No ☐ Unknown at this time

Milestone Number	Due Date
N/A	N/A

If yes or unknown, comment on characterization for treatment.

N/A

2.11.3 Is further characterization needed about the waste prior to acceptance for disposal?

☒ Yes ☐ No ☐ Unknown at this time

Milestone Number	Due Date
N/A	N/A

If yes or unknown, comment on characterization for disposal.

To meet concentration based treatment standards applicable for the residues, sampling will be required prior to removal of sediments from the unit. No commitment is necessary for the characterization needs on this MLLW.

LDR REPORT WASTE LOCATION-SPECIFIC DATA SHEET

2.12 Other key assumptions related to storage, inventory, and generation information:

Project will remove liquids via evaporation in order to characterize the sediments.

3.0 WASTE MINIMIZATION

3.1 Has a waste minimization assessment been completed for this stream?

☐ Yes ☒ No

If yes, provide date assessment conducted: N/A

If yes, provide document number or other identification:

N/A

If no, provide date assessment will be completed, or if waste stream is no longer generated, then indicate N/A:

N/A

3.2 Provide details of current and proposed methods for minimizing the generation of this stream (e.g., process changes to reduce or eliminate LDR waste, methods to reduce volume through segregation and avoidance of commingling, substitution of less-toxic materials):

Purge water is minimized to the extent practable in ongoing field operations.

3.3 Waste minimization schedule

3.3.1 Reduction achieved during calendar year 2009 (volume or mass)

0.000 m3

3.3.2 Projected future waste volume reductions

Year	m^3	and/or	kg
2010	0.00		0.00
2011	0.00		0.00
2012	0.00		0.00
2013	0.00		0.00
2014	0.00		0.00
Total	0.00		0.00

3.3.3 Bases and assumptions used in above estimates:

No projections at this time.

SST Waste

LDR REPORT TREATABILITY GROUP DATA SHEET

1.0 WASTE STREAM IDENTIFICATION

1.1 Treatability Group Name: SST Waste

1.2 Description of waste (list WSRd numbers for this waste stream, as applicable)

Basic aqueous slurry with layers of saltcake and/or sludge. Sludge is defined as solids (i.e., hydrous metal oxides) precipitated from the neutralization of acid wastes. Saltcake is defined as the various salts formed from the evaporation of water.

2.0 WASTE INVENTORY AND GENERATION

2.1 Current total inventory for this waste stream (stored waste only, not accumulation areas). [Equals sum of location-specific data sheets for this treatability group.]

Total volume (cubic meters): 112,000.000

2.2 Estimated generation projection by calendar year: [equals annual sums of location-specfic data sheets for this treatability group].

Year	m^3	and/or	kg
2010	0.000		0.000
2011	0.000		0.000
2012	0.000		0.000
2013	0.000		0.000
2014	0.000		0.000
Total	0.000		0.000

3.0 WASTE STREAM CHARACTERIZATION

3.1 Radiological Characteristics

3.1.1 Mixed waste type: ☒ High-level ☐ Transuranic ☐ Low-level

3.1.2 Handling (as package contents would need to be handled during treatment):

☐ Contact-handled ☒ Remote-handled

3.1.3 Comments on radiological characteristics (e.g., more specific information on content, treatment concerns caused by radiation, confidence level):

The SST system waste contains radionuclides including the following: 3H, 14C, 59Ni, 60Co, 63Ni, 79Se, 90Sr, 90Y, 93Zr, 93mNb, 99Tc, 106Ru, 113mCd, 125Sb, 126Sn, 129I, 134Cs, 137Cs, 137mBa, 151Sm, 152Eu, 154Eu, 155Eu, 226Ra, 227Ac, 228Ra, 229Th, 231Pa, 232Th, 232U, 233U, 234U, 235U, 236U, 237Np, 238Pu, 238U, 239Pu, 240Pu, 241Am, 241Pu, 242Cm, 242Pu, 243Am, 243Cm, 244Cm.
As a whole, the SST wastes are managed as remote-handled, high level waste. However, some tanks may contain potential TRU mixed waste, pending a waste determination.

LDR REPORT TREATABILITY GROUP DATA SHEET

3.2 Physical Form

3.2.1 Physical form of the waste:

☐ Solid ☐ Liquid ☐ Semi-solid ☐ Debris

☒ Other (Describe in comments.)

3.2.2 Comments on physical form:

The major constituents are water and sodium salts of aluminate, nitrate, nitrite, phosphate, hydroxide, carbonate, and sulfate. Some calcium and potassium salts are also present. Chemically complexed waste in the SSTs contain sodium salts of chelating agents ethylenediamine-tetraacetic acid and n-hydroxyethylenediamine-tetraacetic acid. There may also be detectable concentrations of halogenated and nonhalogenated organic compounds and heavy metals such as lead, chromium and cadmium.

3.3 Regulated constituents and wastewater/non-wastewater category

3.3.1 Wastewater/non-wastewater under RCRA

☐ Wastewater ☒ Non-wastewater ☐ Unknown

3.3.2 Regulated constituents table including treatment requirements and UHCs, if applicable.

EPA/ State Number	Waste Description	LDR Sub-Category*	Concentration (Typical or Range)**	Basis	LDR Treatment Concentration Standard or Technology Code
D001	Ignitability	Low TOC ignitable Char. Liquid	(4)	(4)	DEACT (2); RORGS; COMBST
D002	Corosivity	(1)	(4)	(4)	HLVIT
D003	Reactivity	Reactive Cyanides	(4)	(4)	590/30 mg/kg
D004	Arsenic	(1)	(4)	(4)	HLVIT
D005	Barium	(1)	(4)	(4)	HLVIT
D006	Cadmium	(1)	(4)	(4)	HLVIT
D007	Chromium	(1)	(4)	(4)	HLVIT
D008	Lead	(1)	(4)	(4)	HLVIT
D009	Mercury	(1)	(4)	(4)	HLVIT
D010	Selenium	(1)	(4)	(4)	HLVIT
D011	Silver	(1)	(4)	(4)	HLVIT
D018	Benzene	N/A	(4)	(4)	10 mg/kg (2)
D019	Carbon Tetrachloride	N/A	(4)	(4)	6.0 mg/kg (2)
D022	Chloroform	N/A	(4)	(4)	6.0 mg/kg (2)
D028	1,2-Dichloroethane	N/A	(4)	(4)	6.0 mg/kg (2)
D029	1,1-Dichloroethylene	N/A	(4)	(4)	6.0 mg/kg (2)

LDR REPORT TREATABILITY GROUP DATA SHEET

EPA/ State Number	Waste Description	LDR Sub-Category*	Concentration (Typical or Range)**	Basis	LDR Treatment Concentration Standard or Technology Code
D030	2,4-Dinitrotoluene	N/A	(4)	(4)	140 mg/kg (2)
D033	Hexachlorobutadiene	N/A	(4)	(4)	5.6 mg/kg (2)
D034	Hexachloroethane	N/A	(4)	(4)	30 mg/kg (2)
D035	Methyl Ethyl Ketone	N/A	(4)	(4)	36 mg/kg (2)
D036	Nitrobenzene	N/A	(4)	(4)	14 mg/kg (2)
D038	Pyridine	N/A	(4)	(4)	16 mg/kg (2)
D039	Tetrachloroethylene	N/A	(4)	(4)	6.0 mg/kg (2)
D040	Trichloroethylene	N/A	(4)	(4)	6.0 mg/kg (2)
D041	2,4,5-Trichlorophenol	N/A	(4)	(4)	7.4 mg/kg (2)
D043	Vinyl Chloride	N/A	(4)	(4)	6.0 mg/kg (2)
F001	1,1,1-Trichloroethane	Spent Solvent	(4)	(4)	6.0 mg/kg
F002	Methylene Chloride	Spent Solvent	(4)	(4)	30 mg/kg
F003	Acetone	Spent Solvent	(4)	(4)	160 mg/kg
F003	Methyl Isobutyl Ketone	Spent Solvent	(4)	(4)	33 mg/kg
F004	Cresols	Spent Solvent	(4)	(4)	5.6 mg/kg (o, m, &p); 11.2 mg/kg (mixed)
F005	Methyl Ethyl Ketone	Spent Solvent	(4)	(4)	36 mg/kg
WP01	Persistent wastes, Extremely hazardous wastes	N/A	(4)	(4)	NONE (3)
WP02	Persistent Dangerous wastes	N/A	(4)	(4)	N/A
WT01	Toxic Dangerous Wastes, Extremely Hazardous Wastes	N/A	(4)	(4)	NONE (3)
WTO2	Toxic Dangerous Wastes, Dangerous Wastes	N/A	(4)	(4)	N/A

* LDR Subcategory marked N/A if no existing subcategory adequately describes this waste, or if there are no defined subcategories for the waste number (40 CFR 268.40).

** If waste is not consistent in concentration, this may not apply. Described in Section 3.3.6.

1) Radioactive high-level wastes generated during the reprocessing of fuel rods.
2) and meet 40 CFR 268.48.
3) Mixed extremely hazardous wastes can be land-disposed in Washington State in DOE facilities in accordance with RCW 70.105.050(2).
4) See Section 3.3.6.

3.3.3 List any waste numbers from Section 3.3.2 for which the waste stream already meets established LDR treatment standards.

☐ List:

LDR REPORT TREATABILITY GROUP DATA SHEET

☐ No LDR treatment required (e.g. TRUM waste destined for WIPP, exclusion, etc.)

☒ None (i.e. all constituents/waste numbers of this waste stream still require treatment).

3.3.4 Does this waste stream contain PCBs?

☒ Yes ☐ No ☐ Unknown

If no or unknown, skip to Section 3.3.5.

3.3.4.1 Is waste stream subject to TSCA regulations for PCBs?

☐ Yes ☒ No ☐ Unknown

3.3.4.2 Indicate the PCB concentration range.

☒ < 50 ppm ☐ ≥ 50 ppm ☒ Unknown

3.3.5 What is the confidence level for the regulated constituents?

☐ Low ☒ Medium ☐ High

3.3.6 Comments on regulated constituents and wastewater/non-wastewater category:

The wastes in the SSTs continues to be sampled, analyzed, and characterized. Waste was sent to the SST System prior to the enactment of LDR requirements, so pertinent LDR requirements were not documented. When SST System waste is transferred to the DST System, known LDR requirements are documented on profile sheets based on the Part A, Permit Application for the SST System. Small amounts of PCBs have been detected in some SSTs. Per the Framework Agreement fpr Management of Polychlorinated Biphenyls (PCBs) in Hanford Tank Waste (August 2000) between DOE, Ecology , and the EPA, the SSTs are not considered to be subject to TSCA at this time.

4.0 WASTE STREAM TREATMENT

4.1 Is this waste stream currently being treated?

☐ Yes ☒ No

If yes, provide details: N/A

4.2 Planned treatment: Check the appropriate box indicating future plans for treating this waste stream to meet applicable regulations, including LDR treatment standards.

☐ No treatment required (skip to Section 5.0)

☒ Treating or plan to treat on site

☐ Treating or plan to treat off site

☐ Treatment options still being assessed

4.3 Planned treatment method, facility, extent of treatment capacity available:

LDR REPORT TREATABILITY GROUP DATA SHEET

Wastes in the SST System will undergo retrieval, treatment, and will be sent to disposal through the DST System unless determined to be TRU. LDR treatment required for waste disposal will be performed external to the SST and DST systems. The LDR treatment required may include pretreatment, and vitrification, which will destroy or extract organic and cyanide constituents to below treatment standards, neutralize or deactivate dangerous waste, and immobilize toxic metals.

4.4 Treatment schedule information:

The SST Waste will be transferred to the DST System and eventually be treated and disposed of as DST waste per TPA milestones.

4.5 Applicable Tri-Party Agreement treatment milestone numbers (including permitting):

Milestone Number	Due Date
M-062-00	12/31/2028
M-062-00A	02/28/2018

4.6 Proposed new Tri-Party Agreement treatment milestones:

None.

4.7 If treating or planning to treat on site, was or will waste minimization be addressed in developing and/or selecting the treatment method?

☒ Yes ☐ No ☐ Unknown

If yes, describe: Waste generation will be minimized to the extent practical during the retrieval process via the use of available supernate from other tanks as the motivating medium as opposed to the addition of excess water.
The treatment method, high-level vitrification was chosen on the basis of the "Final Environmental Impact Statement for the Tank Waste Remediation System," (DOE/EIS-0189) and the subsequent ROD, as a matter of necessity for compliance with the regulations for this waste. Waste minimization will be considered during the design and development of the vitrification plant in accordance with federal and state laws and regulations, and DOE orders.
In addition, tank waste will be blended when possible to maximize glass loading, and minimize the amount of waste (glass logs) generated at the vitrification facility.

4.8 List or describe treatability equivalency petitions, rulemaking petitions, and case-by-case exemptions needed for treatment or already in place.

None.

4.9 Key Assumptions:

None.

5.0 WASTE STREAM DISPOSAL

After treatment, how will the waste stream be disposed of (include locations, milestone numbers, variances required, etc. as applicable):

LDR REPORT TREATABILITY GROUP DATA SHEET

In accordance with current plans, after transfer to the DST System and subsequent treatment as DST waste, the low-activity waste fraction will be disposed onsite in a retrievable form. The vitrified HLW fraction will be stored onsite until a permanent repository is available to receive wastes for disposal.

A decision for disposal at the Waste Isolation Pilot Plant (WIPP) will not be made until (1) the waste meets the WIPP Waste Acceptance Criteria, with special emphasis on waste determination; and (2) it meets the regulatory eligibility requirements for disposal as described in the WIPP Hazardous Waste Facility Permit.

LDR REPORT WASTE LOCATION-SPECIFIC DATA SHEET

1.0 WASTE STREAM IDENTIFICATION AND SOURCE

1.1 Unit/Plant name: SST System **Waste Stream:** SST System

Treatabilitiy Group Name: SST Waste

1.2 Applicable profile number(s) for this waste stream:

N/A

1.3 Waste stream source information

1.3.1 General description of the waste (e.g., spill clean-up waste, discarded lab materials, maintenance waste):

The SST System waste consists of double-shell slurry feed, non-complexed waste, concentrated phosphate waste, complexant concentrate waste, and dilute complexed waste. This waste is mostly sludge and saltcake waste, with some liquid waste layered over the solids. The 244-AR Vault contains neutralized current acid waste, sludge, and contaminated water. The 244-CR Vault contains neutralized uranium recovery waste, PUREX acidified sludge, and contaminated water. The IMUSTs and SST ancillary equipment contain mixed wastes from operational processes.

1.3.2 History of how and where the waste was/is generated:

This waste was generated as a byproduct of processing spent nuclear fuel, and from a variety of analytical, decladding, and separation processes.

1.3.3 Source of the regulated constituents:

Hazardous constituents in the SST are from maintenance, retrieval and operation of the SST as well as historical waste transfers into the SST system. These currently may include chemical products, or DST supernatant used for retrieval. Historically the SST may have received laboratory waste, R&D work and treated and recovered waste.

1.3.4 Source of the information (e.g., analytical data, process knowledge, document number, etc.)

Process knowledge, and Tank Waste Information System (TWINS), Best Basis Inventory

1.3.5 Additional notes:

None.

2.0 WASTE STREAM STORAGE, INVENTORY, AND GENERATION INFORMATION

(NOTE: For waste in satellite accumulation areas and 90-day accumulation areas, skip to Section 2.6.)

2.1 Current storage method

- ☐ Container (pad)
- ☐ Container (covered)
- ☐ Container (retrievably buried)
- ☐ Tank
- ☐ DST
- ☒ SST
- ☐ Other (explain):

2.1.1 How was the waste managed prior to storage?

Wastes were managed at the specific contributing operating facilities.

LDR REPORT WASTE LOCATION-SPECIFIC DATA SHEET

2.1.2 Timeframe when waste was placed to storage?

From 1945 to 1980.

2.2 Storage inventory locations:

Building/Room Number	Number of Containers/Tanks
241-A	6 Tanks
241-AX	4 Tanks
241-B	16 Tanks
241-BX	12 Tanks
241-BY	12 Tanks
241-C	16 Tanks
241-S	12 Tanks
241-SX	15 Tanks
241-T	16 Tanks
241-TX	18 Tanks
241-TY	6 Tanks
241-U	16 Tanks
244-AR	4 Tanks
244-CR	4 Tanks
SST system	Diversion Boxes & Catch Tanks
SST system	Valve Pits
DCRTs	4 Tanks

2.3 Current stored inventory for this stream.

Total volume (cubic meters): 112,000.000

Date of inventory values: 01/04/2010

Comments on waste inventory:

The volume is rounded to the nearest 1,000 cubic meter. Tank volumes are determined by waste level measurements, which are then converted to volumes. Actual tank volume measurements at any given time may differ from the reported values due to factors such as instrumentation errors, uneven surfaces, and calculation rounding errors. Minimal water additions occur and can increase waste volumes. Retrievals reduce SST waste volumes. All other volume changes due to Best Basis Inventory updates.

Source: Washington River Protection Solutions 2009, Tank Waste Information System (TWINS), Best Basis Inventory, Queried 01/04/09.

LDR REPORT WASTE LOCATION-SPECIFIC DATA SHEET

2.4 Is storage capacity at this location potentially an issue for this waste stream?

☐ Yes ☒ No

If yes, what is the total estimated storage capacity? N/A

When is this capacity expected to be reached? N/A

Bases and assumptions used:

N/A

2.5 Planned storage areas for this waste:

☒ Current Location ☐ CWC ☒ DST

☐ Other Area(s) (list):

☐ None

2.6 Estimated generation projection by calendar year (includes waste in satellite and 90-day accumulation areas):

Year	m^3	and/or	kg
2010	0.000		0.000
2011	0.000		0.000
2012	0.000		0.000
2013	0.000		0.000
2014	0.000		0.000
Total	0.000		0.000

2.7 DOE Storage Compliance Assessment information:

☒ Assessment has been completed.

Document Number	Date
FY2006-POPD-S-0313	11/30/2005

☐ Assessment has been scheduled. Scheduled date:

☒ Other. Explain: Also assessments A-01-EMD-TF-09, 12/2001 and A-01-MD-TF-08, 7/2001

2.8 Applicable Tri-Party Agreement milestones related to storage at this location:

Milestone Number	Due Date
N/A	

2.9 Has there ever been any non-permitted, unauthorized release of this waste stream from this storage unit to the environment?

☐ Yes ☒ No

If yes, summarize releases and quantities and provide date:

N/A

LDR REPORT WASTE LOCATION-SPECIFIC DATA SHEET

2.10 Are there any plans to submit requests for variances or other exemptions related to storage?

☐ Yes ☒ No

If yes, explain: N/A

2.11 Characterization

2.11.1 Is further characterization needed about the waste prior to acceptance for storage?

☐ Yes ☒ No ☐ Unknown at this time

Milestone Number	Due Date
N/A	N/A

If yes or unknown, comment on characterization for storage.

N/A

2.11.2 Is further characterization needed about the waste prior to acceptance for treatment?

☒ Yes ☐ No ☐ Unknown at this time

Milestone Number	Due Date
N/A	N/A

If yes or unknown, comment on characterization for treatment.

Waste will be characterized per the waste acceptance criteria of the receiving treatment unit.

2.11.3 Is further characterization needed about the waste prior to acceptance for disposal?

☒ Yes ☐ No ☐ Unknown at this time

Milestone Number	Due Date
N/A	N/A

If yes or unknown, comment on characterization for disposal.

It is anticipated that further information will be needed for disposal. Awaiting waste acceptance criteria for the disposal location or a waste determination for potential TRU waste. In addition, characterization is performed at each SST after the conclusion of retrieval efforts per TPA, Appendix I. This information will be used to determine risk to human health and the environment from SST residuals that might be left in a closed tank.

2.12 Other key assumptions related to storage, inventory, and generation information:

Waste will be sampled and characterized per applicable Data Quality Objectives.
As a whole, the SST wastes are managed as remote-handled, high level waste. However, some tanks may contain potential TRU mixed waste, pending a waste determination.

LDR REPORT WASTE LOCATION-SPECIFIC DATA SHEET

3.0 WASTE MINIMIZATION

3.1 Has a waste minimization assessment been completed for this stream?

☐ Yes ☒ No

If yes, provide date assessment conducted: N/A

If yes, provide document number or other identification:

N/A

If no, provide date assessment will be completed, or if waste stream is no longer generated, then indicate N/A:

N/A

3.2 Provide details of current and proposed methods for minimizing the generation of this stream (e.g., process changes to reduce or eliminate LDR waste, methods to reduce volume through segregation and avoidance of commingling, substitution of less-toxic materials):

N/A

3.3 Waste minimization schedule

3.3.1 Reduction achieved during calendar year 2009 (volume or mass)

0.000 m3

3.3.2 Projected future waste volume reductions

Year	m^3	and/or	kg
2010	0.00		0.00
2011	0.00		0.00
2012	0.00		0.00
2013	0.00		0.00
2014	0.00		0.00
Total	0.00		0.00

3.3.3 Bases and assumptions used in above estimates:

None.

This page intentionally left blank.

TRUM-CH Small Container

LDR REPORT TREATABILITY GROUP DATA SHEET

1.0 WASTE STREAM IDENTIFICATION

1.1 Treatability Group Name: TRUM - CH Small Container

1.2 Description of waste (list WSRd numbers for this waste stream, as applicable)

The waste came from various facilities on and off the Hanford Site. The waste contains plastic/polyurethane, rubber, iron-based metal, soil, paper, cardboard, lead, rags, cement, stainless steel, wood, styrofoam, glass, absorbent/kitty litter, filters, lead shielding, carbon steel, fiberglass, brick/firebrick, plastic liner, shielding, concrete, animal waste, paints, ceramics, sludges, asbestos, aluminum, diatomaceous earth, resins, copper metal, lead, water, floor sweepings, batteries, leather, liquid, teflon, cork, cotton, light bulbs, urethane and wax. Waste packages in this treatability group include containers that are 55 gallon drums or smaller containers even if overpacked in 85 gallon drums, and newly generated WIPP standard waste boxes. Drums in 10 drum overpacks are also counted as small containers based on the drum as the container, not the ten drum overpack. Note that some TRUM-CH small containers will be found to be TRUM-RH and need to be re-allocated to the TRUM-RH treatability group.

2.0 WASTE INVENTORY AND GENERATION

2.1 Current total inventory for this waste stream (stored waste only, not accumulation areas). [Equals sum of location-specific data sheets for this treatability group.]

Total volume (cubic meters): 5,295.251

2.2 Estimated generation projection by calendar year: [equals annual sums of location-specfic data sheets for this treatability group].

Year	m^3	and/or	kg
2010	202.400		0.000
2011	250.508		0.000
2012	165.408		0.000
2013	32.208		0.000
2014	2.208		0.000
Total	652.732		0.000

3.0 WASTE STREAM CHARACTERIZATION

3.1 Radiological Characteristics

3.1.1 Mixed waste type: ☐ High-level ☐ Transuranic ☒ Low-level

3.1.2 Handling (as package contents would need to be handled during treatment):

☒ Contact-handled ☐ Remote-handled

3.1.3 Comments on radiological characteristics (e.g., more specific information on content, treatment concerns caused by radiation, confidence level):

Each container of waste has more than 100 nCi/g of transuranic radionuclide activity.

LDR REPORT TREATABILITY GROUP DATA SHEET

3.2 Physical Form

3.2.1 Physical form of the waste:

☒ Solid ☐ Liquid ☐ Semi-solid ☒ Debris

☒ Other (Describe in comments.)

3.2.2 Comments on physical form:

While the physical characteristics of any drum vary substantially, TRUM waste in drums typically contains organic debris or heterogeneous debris. TRUM waste in drums has a higher percentage of combustible waste than TRUM waste in boxes. A number of drums are mixed because they contain lead-lined gloves.
A small percentage of drums have been identified as containing homogeneous solids.

3.3 Regulated constituents and wastewater/non-wastewater category

3.3.1 Wastewater/non-wastewater under RCRA

☐ Wastewater ☒ Non-wastewater ☐ Unknown

3.3.2 Regulated constituents table including treatment requirements and UHCs, if applicable.

EPA/ State Number	Waste Description	LDR Sub-Category*	Concentration (Typical or Range)**	Basis	LDR Treatment Concentration Standard or Technology Code
D001	Ignitable Charac.	N/A	***	***	Remove characteristic (1)
D002	Corrosive Charac.	N/A	***	***	Remove characteristic (1)
D003	Reactive	Other Reactives	***	***	Remove characteristic (1)
D004	Arsenic	N/A	***	***	Exempt (61 FR 60704)
D005	Barium	N/A	***	***	Exempt (61 FR 60704)
D006	Cadmium	N/A	***	***	Exempt (61 FR 60704)
D007	Chromium	N/A	***	***	Exempt (61 FR 60704)
D008	Lead	N/A	***	***	Exempt (61 FR 60704)
D009	Mercury	N/A	***	***	Exempt (61 FR 60704)
D010	Selenium	N/A	***	***	Exempt (61 FR 60704)
D011	Silver	N/A	***	***	Exempt (61 FR 60704)
D012	Endrin	N/A	***	***	Exempt (61 FR 60704)
D014	Methoxychlor	N/A	***	***	Remove characteristic (1)

LDR REPORT TREATABILITY GROUP DATA SHEET

EPA/ State Number	Waste Description	LDR Sub-Category*	Concentration (Typical or Range)**	Basis	LDR Treatment Concentration Standard or Technology Code
D018	Benzene	N/A	***	***	Exempt (61 FR 60704)
D019	Carbon Tetrachloride	N/A	***	***	Exempt (61 FR 60704)
D021	Chlorobenzene	N/A	***	***	Exempt (61 FR 60704)
D022	Chloroform	N/A	***	***	Exempt (61 FR 60704)
D027	1,4-Dichlorobenzene	N/A	***	***	Exempt (61 FR 60704)
D028	1,2-Dichloroethane	N/A	***	***	Exempt (61 FR 60704)
D029	1,1-Dichlorethylene	N/A	***	***	Exempt (61 FR 60704)
D030	2,4-Dinitrotoluene	N/A	***	***	Exempt (61 FR 60704)
D031	Heptachlor	N/A	***	***	Remove characteristic (1)
D032	Hexachlorobenzene	N/A	***	***	Exempt (61 FR 60704)
D033	Hexachlorobutadiene	N/A	***	***	Remove characteristic (1)
D034	Hexachloroethane	N/A	***	***	Exempt (61 FR 60704)
D035	Methyl Ethyl Ketone	N/A	***	***	Exempt (61 FR 60704)
D036	Nitrobenzene	N/A	***	***	Exempt (61 FR 60704)
D037	Pentachlorophenol	N/A	***	***	Exempt (61 FR 60704)
D038	Pyridine	N/A	***	***	Exempt (61 FR 60704)
D039	Tetrachloroethylene	N/A	***	***	Exempt (61 FR 60704)
D040	Trichloroethylene	N/A	***	***	Exempt (61 FR 60704)
D042	2,4,6-Trichlorphenol	N/A	***	***	Exempt (61 FR 60704)
D043	Vinyl chloride	N/A	***	***	Exempt (61 FR 60704)
F001	1,1,1-Trichloroethane	Spent Solvent	***	***	Exempt (61 FR 60704)
F001	Trichloroethylene	Spent Solvent	***	***	Exempt (61 FR 60704)
F002	Trichloroethylene	Spent Solvent	***	***	Exempt (61 FR 60704)

LDR REPORT TREATABILITY GROUP DATA SHEET

EPA/ State Number	Waste Description	LDR Sub-Category*	Concentration (Typical or Range)**	Basis	LDR Treatment Concentration Standard or Technology Code
F003	Acetone	Spent Solvent	***	***	Exempt (61 FR 60704)
F003	Xylene	Spent Solvent	***	***	Exempt (61 FR 60704)
F004	Cresol	Spent Solvent	***	***	Exempt (61 FR 60704)
F005	Methyl Ethyl Ketone	Spent Solvent	***	***	Exempt (61 FR 60704)
WP01	Persistent, EHW	N/A	***	***	N/A
WP02	Persistent, DW	N/A	***	***	N/A
WSC2	Solid Corrosive	N/A	***	***	N/A
WT01	Toxic, EHW	N/A	***	***	N/A
WT02	Toxic, DW	N/A	***	***	N/A

* LDR Subcategory marked N/A if no existing subcategory adequately describes this waste, or if there are no defined subcategories for the waste number (40 CFR 268.40).

** If waste is not consistent in concentration, this may not apply. Described in Section 3.3.6.

*** The concentration varies and is based on process knowledge and/or analytical data.

(1) Characteristic waste codes not currently acceptable at WIPP.

3.3.3 List any waste numbers from Section 3.3.2 for which the waste stream already meets established LDR treatment standards.

☐ List:

☒ No LDR treatment required (e.g. TRUM waste destined for WIPP, exclusion, etc.)

☐ None (i.e. all constituents/waste numbers of this waste stream still require treatment).

3.3.4 Does this waste stream contain PCBs?

☒ Yes ☐ No ☐ Unknown

If no or unknown, skip to Section 3.3.5.

3.3.4.1 Is waste stream subject to TSCA regulations for PCBs?

☒ Yes ☐ No ☐ Unknown

3.3.4.2 Indicate the PCB concentration range.

☒ < 50 ppm ☒ ≥ 50 ppm ☐ Unknown

LDR REPORT TREATABILITY GROUP DATA SHEET

3.3.5 What is the confidence level for the regulated constituents?

☐ Low ☒ Medium ☐ High

3.3.6 Comments on regulated constituents and wastewater/non-wastewater category:

The number and concentration of contaminants in TRUM drums varies substantially. Over all drums, the predominant contaminants, listed in descending order of weight quantity, are lead, silver chloride, carbon tetrachloride, lithium, cadmium, and potassium/sodium hydroxide.

4.0 WASTE STREAM TREATMENT

4.1 Is this waste stream currently being treated?

☒ Yes ☐ No

If yes, provide details: The waste is processed at WRAP, CWC, and T Plant. Future unit operations will include solidification. The unit operations are performed as necessary for the waste to meet the WIPP waste acceptance criteria.

4.2 Planned treatment: Check the appropriate box indicating future plans for treating this waste stream to meet applicable regulations, including LDR treatment standards.

☐ No treatment required (skip to Section 5.0)

☒ Treating or plan to treat on site

☐ Treating or plan to treat off site

☐ Treatment options still being assessed

4.3 Planned treatment method, facility, extent of treatment capacity available:

The waste will continue to be processed at WRAP, CWC and T Plant, as described in Sec 4.1

4.4 Treatment schedule information:

Treatment is anticipated to be performed as necessary to support the outcome of the M-091 TPA settlement agreement.

4.5 Applicable Tri-Party Agreement treatment milestone numbers (including permitting):

Milestone Number	Due Date
N/A	N/A

4.6 Proposed new Tri-Party Agreement treatment milestones:

See Section 4.4.

4.7 If treating or planning to treat on site, was or will waste minimization be addressed in developing and/or selecting the treatment method?

☒ Yes ☐ No ☐ Unknown

If yes, describe: Best management practices.

LDR REPORT TREATABILITY GROUP DATA SHEET

4.8 List or describe treatability equivalency petitions, rulemaking petitions, and case-by-case exemptions needed for treatment or already in place.

TRUM disposed of at WIPP is exempt from the LDR treatment standards.

4.9 Key Assumptions:

None.

5.0 WASTE STREAM DISPOSAL

After treatment, how will the waste stream be disposed of (include locations, milestone numbers, variances required, etc. as applicable):

TRUM is disposed of at WIPP.

LDR REPORT WASTE LOCATION-SPECIFIC DATA SHEET

1.0 WASTE STREAM IDENTIFICATION AND SOURCE

1.1 Unit/Plant name: 325 HWTU **Waste Stream:** TRUM-CH

Treatabilitiy Group Name: TRUM - CH Small Container

1.2 Applicable profile number(s) for this waste stream:

N/A

1.3 Waste stream source information

1.3.1 General description of the waste (e.g., spill clean-up waste, discarded lab materials, maintenance waste):

Subject waste was generated from PNNL laboratory operations.

1.3.2 History of how and where the waste was/is generated:

Waste is continually generated from routine laboratory operations at PNNL.

1.3.3 Source of the regulated constituents:

Waste stream may consist of different inorganic and organic solids and liquids that are contaminated with inorganic and organic regulated dangerous waste constituents. This waste stream also includes hazardous debris.

1.3.4 Source of the information (e.g., analytical data, process knowledge, document number, etc.)

Wastes are characterized as specified in PNNL Waste Stream Profiles.

1.3.5 Additional notes:

N/A

2.0 WASTE STREAM STORAGE, INVENTORY, AND GENERATION INFORMATION

(NOTE: For waste in satellite accumulation areas and 90-day accumulation areas, skip to Section 2.6.)

2.1 Current storage method

- ☐ Container (pad)
- ☒ Container (covered)
- ☐ Container (retrievably buried)
- ☐ Tank
- ☐ DST
- ☐ SST
- ☐ Other (explain):

2.1.1 How was the waste managed prior to storage?

The waste was managed in 90 day or SAA prior to being transferred to storage.

2.1.2 Timeframe when waste was placed to storage?

The wastes inventoried below and currently stored at 325 HWTU were placed in storage between 1/17/2006 and 12/2/2009.

LDR REPORT WASTE LOCATION-SPECIFIC DATA SHEET

2.2 Storage inventory locations:

Building/Room Number	Number of Containers/Tanks
325/HWTU	25
325/SAL	2

2.3 Current stored inventory for this stream.

Total volume (cubic meters): 0.251

Date of inventory values: 12/31/2009

Comments on waste inventory:

This represents the TRUM waste currently in these storage locations. TRUM wastes that fit under a separate profile may be stored in these locations in the future. Their profiles will need to be written at the time they are prepared for shipment.

2.4 Is storage capacity at this location potentially an issue for this waste stream?

☐ Yes ☒ No

If yes, what is the total estimated storage capacity? N/A

When is this capacity expected to be reached? N/A

Bases and assumptions used:

N/A

2.5 Planned storage areas for this waste:

☒ Current Location ☒ CWC ☐ DST

☐ Other Area(s) (list):

☐ None

2.6 Estimated generation projection by calendar year (includes waste in satellite and 90-day accumulation areas):

Year	m^3	and/or	kg
2010	2.000		0.000
2011	2.000		0.000
2012	2.000		0.000
2013	2.000		0.000
2014	2.000		0.000
Total	10.000		0.000

2.7 DOE Storage Compliance Assessment information:

☒ Assessment has been completed.

Document Number	Date
A&E-DWR-02-004	05/31/2002

LDR REPORT WASTE LOCATION-SPECIFIC DATA SHEET

☐ Assessment has been scheduled. Scheduled date:

☐ Other. Explain:

2.8 Applicable Tri-Party Agreement milestones related to storage at this location:

Milestone Number	Due Date
N/A	

2.9 Has there ever been any non-permitted, unauthorized release of this waste stream from this storage unit to the environment?

☐ Yes ☒ No

If yes, summarize releases and quantities and provide date:

N/A

2.10 Are there any plans to submit requests for variances or other exemptions related to storage?

☐ Yes ☒ No

If yes, explain: N/A

2.11 Characterization

2.11.1 Is further characterization needed about the waste prior to acceptance for storage?

☐ Yes ☒ No ☐ Unknown at this time

Milestone Number	Due Date
N/A	N/A

If yes or unknown, comment on characterization for storage.

N/A

2.11.2 Is further characterization needed about the waste prior to acceptance for treatment?

☐ Yes ☒ No ☐ Unknown at this time

Milestone Number	Due Date
N/A	N/A

If yes or unknown, comment on characterization for treatment.

N/A

2.11.3 Is further characterization needed about the waste prior to acceptance for disposal?

☐ Yes ☒ No ☐ Unknown at this time

Milestone Number	Due Date
N/A	N/A

LDR REPORT WASTE LOCATION-SPECIFIC DATA SHEET

If yes or unknown, comment on characterization for disposal.

N/A

2.12 Other key assumptions related to storage, inventory, and generation information:

PNNL Waste Management requests full chemical and radiological characterization from the laboratory generators prior to receiving the waste into the 325 HWTU. However, further confirmatory NDA may be perfomed on TRUM packages that are consolidated at the 325 HWTU. The inventory information is for what is currently in storage in the specified 325 HWTU location(s).

3.0 WASTE MINIMIZATION

3.1 Has a waste minimization assessment been completed for this stream?

☐ Yes ☒ No

If yes, provide date assessment conducted: N/A

If yes, provide document number or other identification:

N/A

If no, provide date assessment will be completed, or if waste stream is no longer generated, then indicate N/A:

Assessment date to be determined.

3.2 Provide details of current and proposed methods for minimizing the generation of this stream (e.g., process changes to reduce or eliminate LDR waste, methods to reduce volume through segregation and avoidance of commingling, substitution of less-toxic materials):

Laboratory staff routinely evaluate their processes to determine if less reagents or less hazardous reagents can be used in the process. The Radioactive Waste Operations Group routinely assesses the possibility of bulking and absorbing wastes to minimize the number of containers shipped to CWC.

3.3 Waste minimization schedule

3.3.1 Reduction achieved during calendar year 2009 (volume or mass)

0.000 m3

3.3.2 Projected future waste volume reductions

Year	m^3	and/or	kg
2010	0.00		0.00
2011	0.00		0.00
2012	0.00		0.00
2013	0.00		0.00
2014	0.00		0.00
Total	0.00		0.00

3.3.3 Bases and assumptions used in above estimates:

Reductions are not usually achieved through consolidation at 325 HWTU, because of minimization efforts done in the laboratory prior to packaging. Thus the reduction is in shipping volume, not generation.

LDR REPORT WASTE LOCATION-SPECIFIC DATA SHEET

1.0 WASTE STREAM IDENTIFICATION AND SOURCE

1.1 Unit/Plant name: CWC **Waste Stream:** CH TRUM

Treatabilitiy Group Name: TRUM - CH Small Container

1.2 Applicable profile number(s) for this waste stream:

A WSRd identified in the treatability group data sheet section 1.2.

1.3 Waste stream source information

1.3.1 General description of the waste (e.g., spill clean-up waste, discarded lab materials, maintenance waste):

The waste is generated from facility or equipment operation and maintenance waste, R&D laboratory waste, remediation D&D waste, and analytical laboratory waste. The waste matrix is primarily debris material such as plastic, rubber, metal, paper, cardboard, rags, cement, stainless steel, wood, Styrofoam, glass, ceramics, asbestos, and batteries. Other components of the waste include: soil, absorbent/kitty litter, filters, animal waste, paints, sludges, sand, diatomaceous earth, resins, and floor sweepings.

1.3.2 History of how and where the waste was/is generated:

The waste was generated from the PFP, PUREX Plant, Critical Mass Laboratory, Materials Engineering Laboratory, Kerr-McGee, the Chemical Engineering Building, Post-Irradiation Test Facility, REDOX facility, Radiochemistry Building, the Semi-works D&D, Radiological Calibrations Laboratory, and the Fuels Development Laboratory.

1.3.3 Source of the regulated constituents:

Hazardous constituents used during onsite and offsite radiochemical operations and D&D.

1.3.4 Source of the information (e.g., analytical data, process knowledge, document number, etc.)

Analytical data and process knowledge.

1.3.5 Additional notes:

None.

2.0 WASTE STREAM STORAGE, INVENTORY, AND GENERATION INFORMATION

(NOTE: For waste in satellite accumulation areas and 90-day accumulation areas, skip to Section 2.6.)

2.1 Current storage method

- ☐ Container (pad)
- ☒ Container (covered)
- ☐ Container (retrievably buried)
- ☐ Tank
- ☐ DST
- ☐ SST
- ☐ Other (explain):

2.1.1 How was the waste managed prior to storage?

Accumulated and packaged by waste generators prior to storage.

LDR REPORT WASTE LOCATION-SPECIFIC DATA SHEET

2.1.2 Timeframe when waste was placed to storage?

Waste storage in CWC began in 1988 and continues.

2.2 Storage inventory locations:

Building/Room Number	Number of Containers/Tanks
CWC	5342

2.3 Current stored inventory for this stream.

Total volume (cubic meters): 1,393.000

Date of inventory values: 12/31/2009

Comments on waste inventory:

Based on the inventory residing at CWC as reported in SWITS.

2.4 Is storage capacity at this location potentially an issue for this waste stream?

☐ Yes ☒ No

If yes, what is the total estimated storage capacity? N/A

When is this capacity expected to be reached? N/A

Bases and assumptions used:

No issues with CWC storage based on 20 year waste generation forecast.

2.5 Planned storage areas for this waste:

☒ Current Location ☒ CWC ☐ DST

☐ Other Area(s) (list):

☐ None

2.6 Estimated generation projection by calendar year (includes waste in satellite and 90-day accumulation areas):

Year	m^3	and/or	kg
2010	0.000		0.000
2011	0.000		0.000
2012	0.000		0.000
2013	0.000		0.000
2014	0.000		0.000
Total	0.000		0.000

2.7 DOE Storage Compliance Assessment information:

☒ Assessment has been completed.

Document Number	Date
A&E-SEC-02-001	01/21/2002

LDR REPORT WASTE LOCATION-SPECIFIC DATA SHEET

☐ Assessment has been scheduled. Scheduled date:

☐ Other. Explain:

2.8 Applicable Tri-Party Agreement milestones related to storage at this location:

Milestone Number	Due Date
N/A	

2.9 Has there ever been any non-permitted, unauthorized release of this waste stream from this storage unit to the environment?

☐ Yes ☒ No

If yes, summarize releases and quantities and provide date:

N/A

2.10 Are there any plans to submit requests for variances or other exemptions related to storage?

☐ Yes ☒ No

If yes, explain: N/A

2.11 Characterization

2.11.1 Is further characterization needed about the waste prior to acceptance for storage?

☐ Yes ☒ No ☐ Unknown at this time

Milestone Number	Due Date
N/A	N/A

If yes or unknown, comment on characterization for storage.

N/A

2.11.2 Is further characterization needed about the waste prior to acceptance for treatment?

☐ Yes ☒ No ☐ Unknown at this time

Milestone Number	Due Date
N/A	N/A

If yes or unknown, comment on characterization for treatment.

N/A

2.11.3 Is further characterization needed about the waste prior to acceptance for disposal?

☐ Yes ☒ No ☐ Unknown at this time

Milestone Number	Due Date
N/A	N/A

LDR REPORT WASTE LOCATION-SPECIFIC DATA SHEET

If yes or unknown, comment on characterization for disposal.

N/A

2.12 Other key assumptions related to storage, inventory, and generation information:

None.

3.0 WASTE MINIMIZATION

3.1 Has a waste minimization assessment been completed for this stream?

☐ Yes ☒ No

If yes, provide date assessment conducted: N/A

If yes, provide document number or other identification:

N/A

If no, provide date assessment will be completed, or if waste stream is no longer generated, then indicate N/A:

None planned - waste not generated at CWC.

3.2 Provide details of current and proposed methods for minimizing the generation of this stream (e.g., process changes to reduce or eliminate LDR waste, methods to reduce volume through segregation and avoidance of commingling, substitution of less-toxic materials):

These activities occur before the wastes are transferred/shipped to CWC. There are few opportunities to reduce waste volumes placed into storage.

3.3 Waste minimization schedule

3.3.1 Reduction achieved during calendar year 2009 (volume or mass)

0.000 m3

3.3.2 Projected future waste volume reductions

Year	m^3	and/or	kg
2010	0.00		0.00
2011	0.00		0.00
2012	0.00		0.00
2013	0.00		0.00
2014	0.00		0.00
Total	0.00		0.00

3.3.3 Bases and assumptions used in above estimates:

None.

LDR REPORT WASTE LOCATION-SPECIFIC DATA SHEET

1.0 WASTE STREAM IDENTIFICATION AND SOURCE

1.1 Unit/Plant name: LLBG **Waste Stream:** TRUM-CH Retrieval

Treatabilitiy Group Name: TRUM - CH Small Container

1.2 Applicable profile number(s) for this waste stream:

A WSRd identified in the treatability group data sheet section 1.2.

1.3 Waste stream source information

1.3.1 General description of the waste (e.g., spill clean-up waste, discarded lab materials, maintenance waste):

This waste comes from retrieval activities in the Low-Level Burial Grounds. Waste is expected to be similar to waste already in inventory in the CWC, i.e., facility or equipment operation and maintenance waste, R&D laboratory waste, remediation D&D waste, analytical laboratory waste. The waste matrix is primarily debris material such as plastic, rubber, metal, paper, cardboard, rags, cement, stainless steel, wood, Styrofoam, glass, ceramics, asbestos, and batteries. Other components of the waste include: soil, absorbent/kitty litter, filters, animal waste, paints, sludges, sand, diatomaceous earth, resins, floor sweepings.

1.3.2 History of how and where the waste was/is generated:

The waste was generated from the PFP, PUREX Plant, Critical Mass Laboratory, Materials Engineering Laboratory, Kerr-McGee, the Chemical Engineering Building, Post-Irradiation Test Facility, REDOX facility, Radiochemistry Building, the Semi-works D&D, Radiological Calibrations Laboratory, research laboratories, and the Fuels Development Laboratory. The waste was generated and retrievably buried between 1970 and 1987.

1.3.3 Source of the regulated constituents:

See 1.3.1 and 1.3.2.

1.3.4 Source of the information (e.g., analytical data, process knowledge, document number, etc.)

Analytical data and process knowledge.

1.3.5 Additional notes:

None.

2.0 WASTE STREAM STORAGE, INVENTORY, AND GENERATION INFORMATION

(NOTE: For waste in satellite accumulation areas and 90-day accumulation areas, skip to Section 2.6.)

2.1 Current storage method

- ☐ Container (pad)
- ☐ Container (covered)
- ☒ Container (retrievably buried)
- ☐ Tank
- ☐ DST
- ☐ SST
- ☒ Other (explain): Stored pursuant to M-091 TPA Milestones.

LDR REPORT WASTE LOCATION-SPECIFIC DATA SHEET

2.1.1 How was the waste managed prior to storage?

In LLBG trenches.

2.1.2 Timeframe when waste was placed to storage?

Varies from 1970 through 1987.

2.2 Storage inventory locations:

Building/Room Number	Number of Containers/Tanks
LLBG	13855

2.3 Current stored inventory for this stream.

Total volume (cubic meters): 2,906.000

Date of inventory values: 12/31/2009

Comments on waste inventory:

Projected TRUM volumes based on waste inventory disposed of (buried) between 1970-1987 and assumptions regarding the fraction of TRUM retrievably stored waste.

2.4 Is storage capacity at this location potentially an issue for this waste stream?

☐ Yes ☒ No

If yes, what is the total estimated storage capacity? N/A

When is this capacity expected to be reached? N/A

Bases and assumptions used:

No issues with CWC storage based on life cycle waste generation forecast.

2.5 Planned storage areas for this waste:

☐ Current Location ☒ CWC ☐ DST

☐ Other Area(s) (list):

☐ None

2.6 Estimated generation projection by calendar year (includes waste in satellite and 90-day accumulation areas):

Year	m^3	and/or	kg
2010	0.000		0.000
2011	0.000		0.000
2012	0.000		0.000
2013	0.000		0.000
2014	0.000		0.000
Total	0.000		0.000

LDR REPORT WASTE LOCATION-SPECIFIC DATA SHEET

2.7 DOE Storage Compliance Assessment information:

☒ Assessment has been completed.

Document Number	Date
A&E-SEC-02-003	03/28/2002

☐ Assessment has been scheduled. Scheduled date:

☐ Other. Explain:

2.8 Applicable Tri-Party Agreement milestones related to storage at this location:

Milestone Number	Due Date
N/A	

2.9 Has there ever been any non-permitted, unauthorized release of this waste stream from this storage unit to the environment?

☐ Yes ☒ No

If yes, summarize releases and quantities and provide date:

N/A

2.10 Are there any plans to submit requests for variances or other exemptions related to storage?

☐ Yes ☒ No

If yes, explain: N/A

2.11 Characterization

2.11.1 Is further characterization needed about the waste prior to acceptance for storage?

☐ Yes ☐ No ☒ Unknown at this time

Milestone Number	Due Date
N/A	N/A

If yes or unknown, comment on characterization for storage.

Waste will be assayed as it is retrieved to verify that it is TRU and will subsequently designate as TRUM. Waste that is sent to WIPP will need to be characterized to ensure that it meets the WIPP Waste Acceptance Criteria. No commitment is necessary for the characterization needs on this TRUM because it will occur as part of ongoing operations.

2.11.2 Is further characterization needed about the waste prior to acceptance for treatment?

☐ Yes ☐ No ☒ Unknown at this time

Milestone Number	Due Date
N/A	N/A

LDR REPORT WASTE LOCATION-SPECIFIC DATA SHEET

If yes or unknown, comment on characterization for treatment.

Waste could potentially be sent to CWC for storage without further characterization, however, further characterization and/or treatment will be necessary prior to disposal.

2.11.3 Is further characterization needed about the waste prior to acceptance for disposal?

☐ Yes ☐ No ☒ Unknown at this time

Milestone Number	Due Date
N/A	N/A

If yes or unknown, comment on characterization for disposal.

Waste could potentially be sent to CWC for storage without further characterization, however, further characterization and/or treatment will be necessary prior to disposal.

2.12 Other key assumptions related to storage, inventory, and generation information:

Waste generation projections are based on current baseline retrieval rates and assumptions of what percentage of retrieved waste will designate as TRUM.

3.0 WASTE MINIMIZATION

3.1 Has a waste minimization assessment been completed for this stream?

☐ Yes ☒ No

If yes, provide date assessment conducted: N/A

If yes, provide document number or other identification:

N/A

If no, provide date assessment will be completed, or if waste stream is no longer generated, then indicate N/A:

None planned.

3.2 Provide details of current and proposed methods for minimizing the generation of this stream (e.g., process changes to reduce or eliminate LDR waste, methods to reduce volume through segregation and avoidance of commingling, substitution of less-toxic materials):

No waste minimization assessment is planned because the process is not generating and packaging new waste, it is retrieving waste that already exists. TRUM waste will be minimized by assaying the suspect-TRU drums in the trench. Per TPA Milestone M-91-40 all retrieved waste is suspect of being mixed waste.

3.3 Waste minimization schedule

3.3.1 Reduction achieved during calendar year 2009 (volume or mass)

0.000 m3

LDR REPORT WASTE LOCATION-SPECIFIC DATA SHEET

3.3.2 Projected future waste volume reductions

Year	m^3	and/or	kg
2010	0.00		0.00
2011	0.00		0.00
2012	0.00		0.00
2013	0.00		0.00
2014	0.00		0.00
Total	0.00		0.00

3.3.3 Bases and assumptions used in above estimates:

None.

LDR REPORT WASTE LOCATION-SPECIFIC DATA SHEET

1.0 WASTE STREAM IDENTIFICATION AND SOURCE

1.1 Unit/Plant name: PFP **Waste Stream:** Legacy Holdup Waste

Treatabilitiy Group Name: TRUM - CH Small Container

1.2 Applicable profile number(s) for this waste stream:

To Be Determined

1.3 Waste stream source information

1.3.1 General description of the waste (e.g., spill clean-up waste, discarded lab materials, maintenance waste):

Plutonium-bearing holdup consists of materials that have gradually accumulated as a result of facility operations and operational upsets.

1.3.2 History of how and where the waste was/is generated:

Plutonium in ductwork, process vacuum system piping, gloveboxes/hoods, and on the PRF canyon floor that is readily removable will be removed and evaluated for retention or disposal as waste.

1.3.3 Source of the regulated constituents:

Introduced during processing of material as part of process feed.

1.3.4 Source of the information (e.g., analytical data, process knowledge, document number, etc.)

Analytical data, process knowledge.

1.3.5 Additional notes:

None.

2.0 WASTE STREAM STORAGE, INVENTORY, AND GENERATION INFORMATION

(NOTE: For waste in satellite accumulation areas and 90-day accumulation areas, skip to Section 2.6.)

2.1 Current storage method

- ☐ Container (pad)
- ☐ Container (covered)
- ☐ Container (retrievably buried)
- ☐ Tank
- ☐ DST
- ☐ SST
- ☐ Other (explain):

2.1.1 How was the waste managed prior to storage?

N/A

2.1.2 Timeframe when waste was placed to storage?

N/A

2.2 Storage inventory locations:

Building/Room Number	Number of Containers/Tanks
N/A	N/A

LDR REPORT WASTE LOCATION-SPECIFIC DATA SHEET

2.3 Current stored inventory for this stream.

Total volume (cubic meters): 0.000

Date of inventory values: 12/31/2009

Comments on waste inventory:

Waste contained in POC's and billet cans is placed in CERCLA storage upone generation.

2.4 Is storage capacity at this location potentially an issue for this waste stream?

☐ Yes ☒ No

If yes, what is the total estimated storage capacity? N/A

When is this capacity expected to be reached? N/A

Bases and assumptions used:

None.

2.5 Planned storage areas for this waste:

☐ Current Location ☒ CWC ☐ DST

☐ Other Area(s) (list):

☐ None

2.6 Estimated generation projection by calendar year (includes waste in satellite and 90-day accumulation areas):

Year	m^3	and/or	kg
2010	2.000		0.000
2011	2.000		0.000
2012	1.000		0.000
2013	0.000		0.000
2014	0.000		0.000
Total	5.000		0.000

2.7 DOE Storage Compliance Assessment information:

☒ Assessment has been completed.

Document Number	Date
PFP Compl. Assess.; Ltr. #01-A&E-129	09/13/2001

☐ Assessment has been scheduled. Scheduled date:

☐ Other. Explain:

2.8 Applicable Tri-Party Agreement milestones related to storage at this location:

Milestone Number	Due Date
N/A	

LDR REPORT WASTE LOCATION-SPECIFIC DATA SHEET

2.9 Has there ever been any non-permitted, unauthorized release of this waste stream from this storage unit to the environment?

☐ Yes ☒ No

If yes, summarize releases and quantities and provide date:

N/A

2.10 Are there any plans to submit requests for variances or other exemptions related to storage?

☐ Yes ☒ No

If yes, explain: N/A

2.11 Characterization

2.11.1 Is further characterization needed about the waste prior to acceptance for storage?

☒ Yes ☐ No ☐ Unknown at this time

Milestone Number	Due Date
N/A	N/A

If yes or unknown, comment on characterization for storage.

Radiological characterization required prior to storage.

2.11.2 Is further characterization needed about the waste prior to acceptance for treatment?

☐ Yes ☒ No ☐ Unknown at this time

Milestone Number	Due Date
N/A	N/A

If yes or unknown, comment on characterization for treatment.

N/A

2.11.3 Is further characterization needed about the waste prior to acceptance for disposal?

☐ Yes ☒ No ☐ Unknown at this time

Milestone Number	Due Date
N/A	N/A

If yes or unknown, comment on characterization for disposal.

2.12 Other key assumptions related to storage, inventory, and generation information:

None.

LDR REPORT WASTE LOCATION-SPECIFIC DATA SHEET

3.0 WASTE MINIMIZATION

3.1 Has a waste minimization assessment been completed for this stream?

☐ Yes ☒ No

If yes, provide date assessment conducted: N/A

If yes, provide document number or other identification:

N/A

If no, provide date assessment will be completed, or if waste stream is no longer generated, then indicate N/A:

See 3.2 below.

3.2 Provide details of current and proposed methods for minimizing the generation of this stream (e.g., process changes to reduce or eliminate LDR waste, methods to reduce volume through segregation and avoidance of commingling, substitution of less-toxic materials):

There are no production operations planned to generate additional legacy holdup.

3.3 Waste minimization schedule

3.3.1 Reduction achieved during calendar year 2009 (volume or mass)

0.000 m3

3.3.2 Projected future waste volume reductions

Year	m^3	and/or	kg
2010	0.00		0.00
2011	0.00		0.00
2012	0.00		0.00
2013	0.00		0.00
2014	0.00		0.00
Total	0.00		0.00

3.3.3 Bases and assumptions used in above estimates:

N/A

LDR REPORT WASTE LOCATION-SPECIFIC DATA SHEET

1.0 WASTE STREAM IDENTIFICATION AND SOURCE

1.1 Unit/Plant name: PFP **Waste Stream:** TRUM Debris

Treatabilitiy Group Name: TRUM - CH Small Container

1.2 Applicable profile number(s) for this waste stream:

To Be Determined

1.3 Waste stream source information

1.3.1 General description of the waste (e.g., spill clean-up waste, discarded lab materials, maintenance waste):

Primarily debris materials such as plastic, wood, rubber, metal, glass, concrete, equipment such as PCB capacitors, etc.

1.3.2 History of how and where the waste was/is generated:

Debris is generated from facility or equipment operations and maintenance waste and D&D activities.

1.3.3 Source of the regulated constituents:

Materials/debris contaminated with hazardous constituents from operations, construction, and D&D activities.

1.3.4 Source of the information (e.g., analytical data, process knowledge, document number, etc.)

Analytical data, process knowledge.

1.3.5 Additional notes:

None

2.0 WASTE STREAM STORAGE, INVENTORY, AND GENERATION INFORMATION

(NOTE: For waste in satellite accumulation areas and 90-day accumulation areas, skip to Section 2.6.)

2.1 Current storage method

- ☐ Container (pad)
- ☐ Container (covered)
- ☐ Container (retrievably buried)
- ☐ Tank
- ☐ DST
- ☐ SST
- ☐ Other (explain):

2.1.1 How was the waste managed prior to storage?

N/A

2.1.2 Timeframe when waste was placed to storage?

N/A

2.2 Storage inventory locations:

Building/Room Number	Number of Containers/Tanks
N/A	N/A

LDR REPORT WASTE LOCATION-SPECIFIC DATA SHEET

2.3 Current stored inventory for this stream.

Total volume (cubic meters): 0.000

Date of inventory values: 12/31/2009

Comments on waste inventory:

When generated, the TRUM is be placed into a CERCLA waste storage area.

2.4 Is storage capacity at this location potentially an issue for this waste stream?

☐ Yes ☒ No

If yes, what is the total estimated storage capacity? N/A

When is this capacity expected to be reached? N/A

Bases and assumptions used:

None.

2.5 Planned storage areas for this waste:

☐ Current Location ☒ CWC ☐ DST

☐ Other Area(s) (list):

☐ None

2.6 Estimated generation projection by calendar year (includes waste in satellite and 90-day accumulation areas):

Year	m^3	and/or	kg
2010	172.700		0.000
2011	220.600		0.000
2012	162.200		0.000
2013	30.000		0.000
2014	0.000		0.000
Total	585.500		0.000

2.7 DOE Storage Compliance Assessment information:

☒ Assessment has been completed.

Document Number	Date
PFP Env. Compliance Assess.; Ltr. #01-A&E-129	09/13/2001

☐ Assessment has been scheduled. Scheduled date:

☐ Other. Explain:

LDR REPORT WASTE LOCATION-SPECIFIC DATA SHEET

2.8 Applicable Tri-Party Agreement milestones related to storage at this location:

Milestone Number	Due Date
N/A	

2.9 Has there ever been any non-permitted, unauthorized release of this waste stream from this storage unit to the environment?

☐ Yes ☒ No

If yes, summarize releases and quantities and provide date:

N/A

2.10 Are there any plans to submit requests for variances or other exemptions related to storage?

☐ Yes ☒ No

If yes, explain: N/A

2.11 Characterization

2.11.1 Is further characterization needed about the waste prior to acceptance for storage?

☒ Yes ☐ No ☐ Unknown at this time

Milestone Number	Due Date
N/A	N/A

If yes or unknown, comment on characterization for storage.

Will be completed during activities to facilitate transfer of the container to CWC. No commitment is necessary for the characterization needs on this TRUM.

2.11.2 Is further characterization needed about the waste prior to acceptance for treatment?

☐ Yes ☒ No ☐ Unknown at this time

Milestone Number	Due Date
N/A	N/A

If yes or unknown, comment on characterization for treatment.

N/A

2.11.3 Is further characterization needed about the waste prior to acceptance for disposal?

☐ Yes ☒ No ☐ Unknown at this time

Milestone Number	Due Date
N/A	N/A

If yes or unknown, comment on characterization for disposal.

Will be completed during activities to facilitate transfer of the container to CWC. No commitment is necessary for the characterization needs on this TRUM.

LDR REPORT WASTE LOCATION-SPECIFIC DATA SHEET

2.12 Other key assumptions related to storage, inventory, and generation information:

None

3.0 WASTE MINIMIZATION

3.1 Has a waste minimization assessment been completed for this stream?

☐ Yes ☒ No

If yes, provide date assessment conducted: N/A

If yes, provide document number or other identification:

N/A

If no, provide date assessment will be completed, or if waste stream is no longer generated, then indicate N/A:

See section 3.2 below.

3.2 Provide details of current and proposed methods for minimizing the generation of this stream (e.g., process changes to reduce or eliminate LDR waste, methods to reduce volume through segregation and avoidance of commingling, substitution of less-toxic materials):

PFP is currently in a MinSafe and clean up mode. Clean up operations tend to increase production of waste. During D&D PFP's waste minimization program will seek to minimize waste production as much as possible.

3.3 Waste minimization schedule

3.3.1 Reduction achieved during calendar year 2009 (volume or mass)

0.000 m3

3.3.2 Projected future waste volume reductions

Year	m^3	and/or	kg
2010	0.00		0.00
2011	0.00		0.00
2012	0.00		0.00
2013	0.00		0.00
2014	0.00		0.00
Total	0.00		0.00

3.3.3 Bases and assumptions used in above estimates:

N/A

LDR REPORT WASTE LOCATION-SPECIFIC DATA SHEET

1.0 WASTE STREAM IDENTIFICATION AND SOURCE

1.1 Unit/Plant name: T Plant Complex **Waste Stream:** TRUM-CH

Treatabilitiy Group Name: TRUM - CH Small Container

1.2 Applicable profile number(s) for this waste stream:

200, 230

1.3 Waste stream source information

1.3.1 General description of the waste (e.g., spill clean-up waste, discarded lab materials, maintenance waste):

TRU mixed waste generated from past operations. Waste constitiuents are highly variable.

1.3.2 History of how and where the waste was/is generated:

TRU mixed waste was generated from many onsite and offsite locations.

1.3.3 Source of the regulated constituents:

See 1.3.1 and 1.3.2

1.3.4 Source of the information (e.g., analytical data, process knowledge, document number, etc.)

Process knowledge and/or analytical data.

1.3.5 Additional notes:

None.

2.0 WASTE STREAM STORAGE, INVENTORY, AND GENERATION INFORMATION

(NOTE: For waste in satellite accumulation areas and 90-day accumulation areas, skip to Section 2.6.)

2.1 Current storage method

- ☒ Container (pad)
- ☒ Container (covered)
- ☐ Container (retrievably buried)
- ☐ Tank
- ☐ DST
- ☐ SST
- ☐ Other (explain):

2.1.1 How was the waste managed prior to storage?

Waste was generated from numerous onsite and/or offsite locations. Waste was either stored at the CWC and/or WRAP and from retrieval operations at the LLBG.

2.1.2 Timeframe when waste was placed to storage?

2004 to present.

2.2 Storage inventory locations:

Building/Room Number	Number of Containers/Tanks
T Plant Complex	576

LDR REPORT WASTE LOCATION-SPECIFIC DATA SHEET

2.3 Current stored inventory for this stream.

Total volume (cubic meters): 152.000

Date of inventory values: 12/31/2009

Comments on waste inventory:

The TRU repackaging campaign at T Plant will generate TRU-M drums filled with the used glovebags. T Plant Operations estimates that up to 50 of these drums could be generated per year. Additionally, discrepant items will be removed from the original waste and remediated/repackaged into new drums. Zero waste is forecasted in 2013 because of the planning basis to have another entity perform repackaging.

2.4 Is storage capacity at this location potentially an issue for this waste stream?

☐ Yes ☒ No

If yes, what is the total estimated storage capacity? N/A

When is this capacity expected to be reached? N/A

Bases and assumptions used:

2.5 Planned storage areas for this waste:

☒ Current Location ☒ CWC ☐ DST

☒ Other Area(s) (list): WRAP and eventual shipment for disposal at WIPP

☐ None

2.6 Estimated generation projection by calendar year (includes waste in satellite and 90-day accumulation areas):

Year	m^3	and/or	kg
2010	25.700		0.000
2011	25.700		0.000
2012	0.000		0.000
2013	0.000		0.000
2014	0.000		0.000
Total	51.400		0.000

2.7 DOE Storage Compliance Assessment information:

☒ Assessment has been completed.

Document Number	Date
01-A&E-012	11/28/2000

☒ Assessment has been scheduled. Scheduled date: 3rd quarter CY2005

☐ Other. Explain:

LDR REPORT WASTE LOCATION-SPECIFIC DATA SHEET

2.8 Applicable Tri-Party Agreement milestones related to storage at this location:

Milestone Number	Due Date
N/A	

2.9 Has there ever been any non-permitted, unauthorized release of this waste stream from this storage unit to the environment?

☐ Yes ☒ No

If yes, summarize releases and quantities and provide date:

2.10 Are there any plans to submit requests for variances or other exemptions related to storage?

☐ Yes ☒ No

If yes, explain:

2.11 Characterization

2.11.1 Is further characterization needed about the waste prior to acceptance for storage?

☐ Yes ☒ No ☐ Unknown at this time

Milestone Number	Due Date
N/A	N/A

If yes or unknown, comment on characterization for storage.

2.11.2 Is further characterization needed about the waste prior to acceptance for treatment?

☐ Yes ☒ No ☐ Unknown at this time

Milestone Number	Due Date
N/A	N/A

If yes or unknown, comment on characterization for treatment.

2.11.3 Is further characterization needed about the waste prior to acceptance for disposal?

☐ Yes ☒ No ☐ Unknown at this time

Milestone Number	Due Date
N/A	N/A

If yes or unknown, comment on characterization for disposal.

LDR REPORT WASTE LOCATION-SPECIFIC DATA SHEET

2.12 Other key assumptions related to storage, inventory, and generation information:

None.

3.0 WASTE MINIMIZATION

3.1 Has a waste minimization assessment been completed for this stream?

☐ Yes ☒ No

If yes, provide date assessment conducted:

If yes, provide document number or other identification:

If no, provide date assessment will be completed, or if waste stream is no longer generated, then indicate N/A:

See Section 3.3.3.

3.2 Provide details of current and proposed methods for minimizing the generation of this stream (e.g., process changes to reduce or eliminate LDR waste, methods to reduce volume through segregation and avoidance of commingling, substitution of less-toxic materials):

All efforts will be pursued when processing TRU mixed to avoid the generation of additional waste. NOTE: Addtional waste generated could consist of PPE (e.g., gloves, etc).

3.3 Waste minimization schedule

3.3.1 Reduction achieved during calendar year 2009 (volume or mass)

0.000 m3

3.3.2 Projected future waste volume reductions

Year	m^3	and/or	kg
2010	0.00		0.00
2011	0.00		0.00
2012	0.00		0.00
2013	0.00		0.00
2014	0.00		0.00
Total	0.00		0.00

3.3.3 Bases and assumptions used in above estimates:

T Plant Complex does not track waste reduction by treatability groups. Routine and nonroutine generated waste is reported quarterly to the Waste Minimization/Pollution Prevention Group.

LDR REPORT WASTE LOCATION-SPECIFIC DATA SHEET

1.0 WASTE STREAM IDENTIFICATION AND SOURCE

1.1 Unit/Plant name: WRAP **Waste Stream:** TRUM-CH

Treatabilitiy Group Name: TRUM - CH Small Container

1.2 Applicable profile number(s) for this waste stream:

A WSRd identified in the treatability group data sheet section 1.2.

1.3 Waste stream source information

1.3.1 General description of the waste (e.g., spill clean-up waste, discarded lab materials, maintenance waste):

Waste is drummed CH TRUM that consists of plastics, paper/cardboard, filters, rubber, wood, cloth/rags, metal, soil/rocks, chemicals, and glass.

1.3.2 History of how and where the waste was/is generated:

The waste was generated from the PFP, PUREX Plant, Critical Mass Laboratory, Materials Engineering Laboratory, Kerr-McGee, PNL, Post-Irradiation Test Facility, REDOX facility, Radiochemistry Building, the Semi-works D&D, Radiological Calibrations Laboratory, research laboratories, and the Fuels Development Laboratory. The waste was generated and placed into storage from 1987-1999. In addition, some waste in this stream will be from future 200 Area D&D activities (has yet to be generated). This waste is in WRAP for certification to be sent to WIPP.

1.3.3 Source of the regulated constituents:

Radiochemical operations around the site using hazardous chemicals, and D&D of such operations as noted in Section 1.3.2 of this data sheet.

1.3.4 Source of the information (e.g., analytical data, process knowledge, document number, etc.)

Analytical data, process knowledge.

1.3.5 Additional notes:

Waste at WRAP comes from various generators and generating processes around the Hanford Site due to WRAP's verification and repackaging mission. TRUM destined for WIPP is exempt from LDRs.

2.0 WASTE STREAM STORAGE, INVENTORY, AND GENERATION INFORMATION

(NOTE: For waste in satellite accumulation areas and 90-day accumulation areas, skip to Section 2.6.)

2.1 Current storage method

- ☐ Container (pad)
- ☒ Container (covered)
- ☒ Container (retrievably buried)
- ☐ Tank
- ☐ DST
- ☐ SST
- ☐ Other (explain):

2.1.1 How was the waste managed prior to storage?

Waste was generated and packaged at various locations around the Hanford Site.

LDR REPORT WASTE LOCATION-SPECIFIC DATA SHEET

2.1.2 Timeframe when waste was placed to storage?

Waste was placed into storage between 1987 and present. Drums at WRAP are undergoing verification and repackaging to meet WIPP WAC.

2.2 Storage inventory locations:

Building/Room Number	Number of Containers/Tanks
WRAP	3001

2.3 Current stored inventory for this stream.

Total volume (cubic meters): 844.000

Date of inventory values: 12/31/2009

Comments on waste inventory:

Inventory fluctuates on a daily basis to support WRAP's mission of waste verification and repackaging. Inventory based on Solid Waste Information Tracking System (SWITS) printout dated 12/31/2009.

2.4 Is storage capacity at this location potentially an issue for this waste stream?

☐ Yes ☒ No

If yes, what is the total estimated storage capacity? N/A

When is this capacity expected to be reached? N/A

Bases and assumptions used:

Due to proximity to and interchange with CWC, there is no storage capacity issue at WRAP.

2.5 Planned storage areas for this waste:

☒ Current Location ☒ CWC ☐ DST

☐ Other Area(s) (list):

☐ None

2.6 Estimated generation projection by calendar year (includes waste in satellite and 90-day accumulation areas):

Year	m^3	and/or	kg
2010	0.000		0.000
2011	0.208		0.000
2012	0.208		0.000
2013	0.208		0.000
2014	0.208		0.000
Total	0.832		0.000

2.7 DOE Storage Compliance Assessment information:

☒ Assessment has been completed.

LDR REPORT WASTE LOCATION-SPECIFIC DATA SHEET

Document Number	Date
DE-AC06-96RL13200	09/26/2001

☐ Assessment has been scheduled. Scheduled date:

☐ Other. Explain:

2.8 Applicable Tri-Party Agreement milestones related to storage at this location:

Milestone Number	Due Date
N/A	

2.9 Has there ever been any non-permitted, unauthorized release of this waste stream from this storage unit to the environment?

☐ Yes ☒ No

If yes, summarize releases and quantities and provide date:

N/A

2.10 Are there any plans to submit requests for variances or other exemptions related to storage?

☐ Yes ☒ No

If yes, explain: N/A

2.11 Characterization

2.11.1 Is further characterization needed about the waste prior to acceptance for storage?

☐ Yes ☒ No ☐ Unknown at this time

Milestone Number	Due Date
N/A	N/A

If yes or unknown, comment on characterization for storage.

The waste at WRAP is processed through WRAP and transferred on to another TSD unit or Atomic Energy Act disposal location. A commitment is not necessary to complete this characterization because it is part of WRAP's ongoing activities.

2.11.2 Is further characterization needed about the waste prior to acceptance for treatment?

☐ Yes ☒ No ☐ Unknown at this time

Milestone Number	Due Date
N/A	N/A

If yes or unknown, comment on characterization for treatment.

N/A

LDR REPORT WASTE LOCATION-SPECIFIC DATA SHEET

2.11.3 Is further characterization needed about the waste prior to acceptance for disposal?

☐ Yes ☒ No ☐ Unknown at this time

Milestone Number	Due Date
N/A	N/A

If yes or unknown, comment on characterization for disposal.

N/A

2.12 Other key assumptions related to storage, inventory, and generation information:

None.

3.0 WASTE MINIMIZATION

3.1 Has a waste minimization assessment been completed for this stream?

☐ Yes ☒ No

If yes, provide date assessment conducted: N/A

If yes, provide document number or other identification:

N/A

If no, provide date assessment will be completed, or if waste stream is no longer generated, then indicate N/A:

None currently scheduled -- see Section 3.2.

3.2 Provide details of current and proposed methods for minimizing the generation of this stream (e.g., process changes to reduce or eliminate LDR waste, methods to reduce volume through segregation and avoidance of commingling, substitution of less-toxic materials):

This is waste generated at other locations. However, to the extent practical, all mixed waste is segregated and packaged separately from LLW or TRU wastes. To minimize the generation of mixed waste, generators actively seek nondangerous alternatives for the dangerous constituents in their processes. Minimization goals are set annually, and waste treatment is used to destroy the hazardous constituents, as allowable.

3.3 Waste minimization schedule

3.3.1 Reduction achieved during calendar year 2009 (volume or mass)

0.000 m3

3.3.2 Projected future waste volume reductions

Year	m^3	and/or	kg
2010	0.21		0.00
2011	0.21		0.00
2012	0.21		0.00
2013	0.21		0.00
2014	0.21		0.00
Total	1.04		0.00

LDR REPORT WASTE LOCATION-SPECIFIC DATA SHEET

3.3.3 Bases and assumptions used in above estimates:

Since subject waste has already been generated, no additional waste minimization activities are planned.

TRUM-CH Large
Container

LDR REPORT TREATABILITY GROUP DATA SHEET

1.0 WASTE STREAM IDENTIFICATION

1.1 Treatability Group Name: TRUM - CH Large Container

1.2 Description of waste (list WSRd numbers for this waste stream, as applicable)

TRUM waste is from various generating activities around the Hanford Site. The waste contains metals including steel shielding, plastic/polyurethane, wood, paper/cardboard, glass, filters, soil, miscellaneous/unknown/other, rags, lead and lead shielding, plexiglas, styrofoam, asbestos, rubber, glass, sorbents/kitty litter, cement and concrete. Package size includes any CH TRUM waste that is not in a small container (as described in "TRUM-CH Small Container").

2.0 WASTE INVENTORY AND GENERATION

2.1 Current total inventory for this waste stream (stored waste only, not accumulation areas). [Equals sum of location-specific data sheets for this treatability group.]

Total volume (cubic meters): 7,531.000

2.2 Estimated generation projection by calendar year: [equals annual sums of location-specfic data sheets for this treatability group].

Year	m^3	and/or	kg
2010	0.000		0.000
2011	0.000		0.000
2012	0.000		0.000
2013	0.000		0.000
2014	0.000		0.000
Total	0.000		0.000

3.0 WASTE STREAM CHARACTERIZATION

3.1 Radiological Characteristics

3.1.1 Mixed waste type: ☐ High-level ☐ Transuranic ☒ Low-level

3.1.2 Handling (as package contents would need to be handled during treatment):

☒ Contact-handled ☐ Remote-handled

3.1.3 Comments on radiological characteristics (e.g., more specific information on content, treatment concerns caused by radiation, confidence level):

Each container of waste has more than 100 nCi/g of transuranic radionuclide activity. The waste as packaged is considered contact handled (i.e., less than or equal to 200 mrem/hr on the outside of the package surface), however, the dose rate of some waste inside the package may exceed 200 mrem/hr.

LDR REPORT TREATABILITY GROUP DATA SHEET

3.2 Physical Form

3.2.1 Physical form of the waste:

☒ Solid ☐ Liquid ☐ Semi-solid ☒ Debris

☐ Other (Describe in comments.)

3.2.2 Comments on physical form:

Waste in boxes typically contains metal debris as the primary physical form. The metal will need to be cut into smaller pieces to fit in a container acceptable to the WIPP. Most of the waste is TRUM contaminated metals which are also contaminated with di-n-octyl phthalate.

3.3 Regulated constituents and wastewater/non-wastewater category

3.3.1 Wastewater/non-wastewater under RCRA

☐ Wastewater ☒ Non-wastewater ☐ Unknown

3.3.2 Regulated constituents table including treatment requirements and UHCs, if applicable.

EPA/ State Number	Waste Description	LDR Sub-Category*	Concentration (Typical or Range)**	Basis	LDR Treatment Concentration Standard or Technology Code
D001	Ignitable Charac.	N/A	***	***	Remove characteristic (1)
D002	Corrosive Charac.	N/A	***	***	Remove characteristic (1)
D004	Arsenic	N/A	***	***	Exempt (61 FR 60704)
D005	Barium	N/A	***	***	Exempt (61 FR 60704)
D006	Cadmium	N/A	***	***	Exempt (61 FR 60704)
D007	Chromium	N/A	***	***	Exempt (61 FR 60704)
D008	Lead	N/A	***	***	Exempt (61 FR 60704)
D009	Mercury	N/A	***	***	Exempt (61 FR 60704)
D010	Selenium	N/A	***	***	Exempt (61 FR 60704)
D011	Silver	N/A	***	***	Exempt (61 FR 60704)
D012	Endrin	N/A	***	***	Exempt (61 FR 60704)
D014	Methoxychlor	N/A	***	***	Remove characteristic (1)
D018	Benzene	N/A	***	***	Exempt (61 FR 60704)

LDR REPORT TREATABILITY GROUP DATA SHEET

EPA/ State Number	Waste Description	LDR Sub-Category*	Concentration (Typical or Range)**	Basis	LDR Treatment Concentration Standard or Technology Code
D019	Carbon Tetrachloride	N/A	***	***	Exempt (61 FR 60704)
D021	Chlorobenzene	N/A	***	***	Exempt (61 FR 60704)
D022	Chloroform	N/A	***	***	Exempt (61 FR 60704)
D027	1,4-Dichlorobenzene	N/A	***	***	Exempt (61 FR 60704)
D028	1,2-Dichloroethane	N/A	***	***	Exempt (61 FR 60704)
D029	1,1-Dichlorethylene	N/A	***	***	Exempt (61 FR 60704)
D030	2,4-Dinitrotoluene	N/A	***	***	Exempt (61 FR 60704)
D031	Heptachlor	N/A	***	***	Remove characteristic (1)
D032	Hexachlorobenzene	N/A	***	***	Exempt (61 FR 60704)
D033	Hexachlorobutadiene	N/A	***	***	Remove characteristic (1)
D034	Hexachloroethane	N/A	***	***	Exempt (61 FR 60704)
D035	Methyl Ethyl Ketone	N/A	***	***	Exempt (61 FR 60704)
D036	Nitrobenzene	N/A	***	***	Exempt (61 FR 60704)
D037	Pentachlorophenol	N/A	***	***	Exempt (61 FR 60704)
D038	Pyridine	N/A	***	***	Exempt (61 FR 60704)
D039	Tetrachloroethylene	N/A	***	***	Exempt (61 FR 60704)
D040	Trichloroethylene	N/A	***	***	Exempt (61 FR 60704)
D042	2,4,6-Trichlorphenol	N/A	***	***	Exempt (61 FR 60704)
D043	Vinyl chloride	N/A	***	***	Exempt (61 FR 60704)
F001	1,1,1-Trichloroethane	Spent Solvent	***	***	Exempt (61 FR 60704)
F001	Trichloroethylene	Spent Solvent	***	***	Exempt (61 FR 60704)
F002	Trichloroethylene	Spent Solvent	***	***	Exempt (61 FR 60704)
F003	Acetone	Spent Solvent	***	***	Exempt (61 FR 60704)

LDR REPORT TREATABILITY GROUP DATA SHEET

EPA/ State Number	Waste Description	LDR Sub-Category*	Concentration (Typical or Range)**	Basis	LDR Treatment Concentration Standard or Technology Code
F003	Xylene	Spent Solvent	***	***	Exempt (61 FR 60704)
F004	Cresol	Spent Solvent	***	***	Exempt (61 FR 60704)
F005	Methyl Ethyl Ketone	Spent Solvent	***	***	Exempt (61 FR 60704)
WP01	Persistent, EHW	N/A	***	***	N/A
WP02	Persistent, DW	N/A	***	***	N/A
WSC2	Solid Corrosive	N/A	***	***	N/A
WT01	Toxic, EHW	N/A	***	***	N/A
WT02	Toxic, DW	N/A	***	***	N/A

* LDR Subcategory marked N/A if no existing subcategory adequately describes this waste, or if there are no defined subcategories for the waste number (40 CFR 268.40).

** If waste is not consistent in concentration, this may not apply. Described in Section 3.3.6.

*** The concentration varies and is based on process knowledge and/or analytical data.

(1) Characteristic waste code not currently acceptable at WIPP.

3.3.3 List any waste numbers from Section 3.3.2 for which the waste stream already meets established LDR treatment standards.

☐ List: N/A

☒ No LDR treatment required (e.g. TRUM waste destined for WIPP, exclusion, etc.)

☐ None (i.e. all constituents/waste numbers of this waste stream still require treatment).

3.3.4 Does this waste stream contain PCBs?

☒ Yes ☐ No ☐ Unknown

If no or unknown, skip to Section 3.3.5.

3.3.4.1 Is waste stream subject to TSCA regulations for PCBs?

☒ Yes ☐ No ☐ Unknown

3.3.4.2 Indicate the PCB concentration range.

☒ < 50 ppm ☒ ≥ 50 ppm ☐ Unknown

3.3.5 What is the confidence level for the regulated constituents?

☐ Low ☒ Medium ☐ High

3.3.6 Comments on regulated constituents and wastewater/non-wastewater category:

LDR REPORT TREATABILITY GROUP DATA SHEET

The number and concentration of contaminants varies greatly among the boxes. One box contains F003 and F005 listed contaminants because it contains the remains of HLW tank core samples. One box contains trace quantities of carbon tetrachloride and several metals. A few boxes contain substantial quantities of lead.

4.0 WASTE STREAM TREATMENT

4.1 Is this waste stream currently being treated?

☐ Yes ☒ No

If yes, provide details: N/A

4.2 Planned treatment: Check the appropriate box indicating future plans for treating this waste stream to meet applicable regulations, including LDR treatment standards.

☐ No treatment required (skip to Section 5.0)

☐ Treating or plan to treat on site

☐ Treating or plan to treat off site

☒ Treatment options still being assessed

4.3 Planned treatment method, facility, extent of treatment capacity available:

Waste is planned to be treated at a variety of facilities with M-91 capabilities that may or may not be on-site. The primary objective of treatment is to cut metal debris into smaller pieces so that it can be placed in a smaller box. WIPP can currently only accept a box up to a size of approximately 1.9 cubic meters. If larger containers are accepted at WIPP in the future, size reduction might not be required.

4.4 Treatment schedule information:

Treatment is anticipated to be performed as necessary to support the outcome of the M-091 TPA settlement agreement.

4.5 Applicable Tri-Party Agreement treatment milestone numbers (including permitting):

Milestone Number	Due Date
N/A	N/A

4.6 Proposed new Tri-Party Agreement treatment milestones:

See Section 4.4.

4.7 If treating or planning to treat on site, was or will waste minimization be addressed in developing and/or selecting the treatment method?

☐ Yes ☐ No ☒ Unknown

If yes, describe: For those containers that require on-site M-91 capabilities, waste minimization techniques will be considered.

4.8 List or describe treatability equivalency petitions, rulemaking petitions, and case-by-case exemptions needed for treatment or already in place.

TRUM disposed of at WIPP is exempt from the LDR treatment standards.

LDR REPORT TREATABILITY GROUP DATA SHEET

4.9 Key Assumptions:

None.

5.0 WASTE STREAM DISPOSAL

After treatment, how will the waste stream be disposed of (include locations, milestone numbers, variances required, etc. as applicable):

TRUM is disposed of at WIPP.

LDR REPORT WASTE LOCATION-SPECIFIC DATA SHEET

1.0 WASTE STREAM IDENTIFICATION AND SOURCE

1.1 Unit/Plant name: CWC **Waste Stream:** TRUM Boxes

Treatabilitiy Group Name: TRUM - CH Large Container

1.2 Applicable profile number(s) for this waste stream:

A WSRd identified in the treatability group data sheet section 1.2.

1.3 Waste stream source information

1.3.1 General description of the waste (e.g., spill clean-up waste, discarded lab materials, maintenance waste):

The waste consists of metals, plastic, lead shielding, steel shielding, glass, paper/cardboard, cement, and sorbents. The material was contaminated with transuranic radionuclides from facility operations and R&D processes. The primary component in the boxes is metal that will probably need to be cut in order to fit in containers destined for WIPP.

1.3.2 History of how and where the waste was/is generated:

The waste was generated from the PFP, PUREX Plant, Radiochemistry Building, Critical Mass Storage, and Materials Engineering Laboratory.

1.3.3 Source of the regulated constituents:

Radiochemical operations around the site and D&D activities.

1.3.4 Source of the information (e.g., analytical data, process knowledge, document number, etc.)

Analytical data and process knowledge.

1.3.5 Additional notes:

None.

2.0 WASTE STREAM STORAGE, INVENTORY, AND GENERATION INFORMATION

(NOTE: For waste in satellite accumulation areas and 90-day accumulation areas, skip to Section 2.6.)

2.1 Current storage method

- ☐ Container (pad)
- ☒ Container (covered)
- ☐ Container (retrievably buried)
- ☐ Tank
- ☐ DST
- ☐ SST
- ☐ Other (explain):

2.1.1 How was the waste managed prior to storage?

Accumulated and packaged by waste generators prior to storage.

2.1.2 Timeframe when waste was placed to storage?

Waste storage at CWC began in 1988 and continues.

LDR REPORT WASTE LOCATION-SPECIFIC DATA SHEET

2.2 Storage inventory locations:

Building/Room Number	Number of Containers/Tanks
CWC	412

2.3 Current stored inventory for this stream.

Total volume (cubic meters): 6,023.000

Date of inventory values: 12/31/2009

Comments on waste inventory:

Based on the inventory residing at CWC as reported in SWITS.

2.4 Is storage capacity at this location potentially an issue for this waste stream?

☐ Yes ☒ No

If yes, what is the total estimated storage capacity? N/A

When is this capacity expected to be reached? N/A

Bases and assumptions used:

No issues with CWC storage based on 20 year waste generation forecast.

2.5 Planned storage areas for this waste:

☒ Current Location ☒ CWC ☐ DST

☐ Other Area(s) (list):

☐ None

2.6 Estimated generation projection by calendar year (includes waste in satellite and 90-day accumulation areas):

Year	m^3	and/or	kg
2010	0.000		0.000
2011	0.000		0.000
2012	0.000		0.000
2013	0.000		0.000
2014	0.000		0.000
Total	0.000		0.000

2.7 DOE Storage Compliance Assessment information:

☒ Assessment has been completed.

Document Number	Date
A&E-SEC-02-001	01/21/2002

☐ Assessment has been scheduled. Scheduled date:

☐ Other. Explain:

LDR REPORT WASTE LOCATION-SPECIFIC DATA SHEET

2.8 Applicable Tri-Party Agreement milestones related to storage at this location:

Milestone Number	Due Date
N/A	

2.9 Has there ever been any non-permitted, unauthorized release of this waste stream from this storage unit to the environment?

☐ Yes ☒ No

If yes, summarize releases and quantities and provide date:

N/A

2.10 Are there any plans to submit requests for variances or other exemptions related to storage?

☐ Yes ☒ No

If yes, explain: N/A

2.11 Characterization

2.11.1 Is further characterization needed about the waste prior to acceptance for storage?

☐ Yes ☒ No ☐ Unknown at this time

Milestone Number	Due Date
N/A	N/A

If yes or unknown, comment on characterization for storage.

N/A

2.11.2 Is further characterization needed about the waste prior to acceptance for treatment?

☐ Yes ☒ No ☐ Unknown at this time

Milestone Number	Due Date
N/A	N/A

If yes or unknown, comment on characterization for treatment.

N/A

2.11.3 Is further characterization needed about the waste prior to acceptance for disposal?

☐ Yes ☒ No ☐ Unknown at this time

Milestone Number	Due Date
N/A	N/A

If yes or unknown, comment on characterization for disposal.

N/A

LDR REPORT WASTE LOCATION-SPECIFIC DATA SHEET

2.12 Other key assumptions related to storage, inventory, and generation information:

None.

3.0 WASTE MINIMIZATION

3.1 Has a waste minimization assessment been completed for this stream?

☐ Yes ☒ No

If yes, provide date assessment conducted: N/A

If yes, provide document number or other identification:

N/A

If no, provide date assessment will be completed, or if waste stream is no longer generated, then indicate N/A:

None planned - waste not generated at CWC.

3.2 Provide details of current and proposed methods for minimizing the generation of this stream (e.g., process changes to reduce or eliminate LDR waste, methods to reduce volume through segregation and avoidance of commingling, substitution of less-toxic materials):

These activities occur before the wastes are transferred/shipped to CWC. There are few opportunities to reduce waste volumes placed into storage.

3.3 Waste minimization schedule

3.3.1 Reduction achieved during calendar year 2009 (volume or mass)

0.000 m3

3.3.2 Projected future waste volume reductions

Year	m^3	and/or	kg
2010	0.00		0.00
2011	0.00		0.00
2012	0.00		0.00
2013	0.00		0.00
2014	0.00		0.00
Total	0.00		0.00

3.3.3 Bases and assumptions used in above estimates:

There is no projected generation by CWC.

LDR REPORT WASTE LOCATION-SPECIFIC DATA SHEET

1.0 WASTE STREAM IDENTIFICATION AND SOURCE

1.1 Unit/Plant name: LLBG **Waste Stream:** TRUM Retrieval Boxes

Treatabilitiy Group Name: TRUM - CH Large Container

1.2 Applicable profile number(s) for this waste stream:

A WSRd identified in the treatability group data sheet section 1.2.

1.3 Waste stream source information

1.3.1 General description of the waste (e.g., spill clean-up waste, discarded lab materials, maintenance waste):

This waste is generated from retrieval activities in the Low-Level Burial Grounds. Waste is expected to be similar to waste already in inventory in the CWC, i.e., facility or equipment operation and maintenance waste, R&D laboratory waste, remediation D&D waste , analytical laboratory waste. The primary waste type is heterogeneous debris from onsite and offsite operations and could include debris material such as plastic, rubber, metal, paper, cardboard, rags, cement, stainless steel, wood, Styrofoam, glass, ceramics, asbestos and batteries. Other components of the waste could include: soil, absorbent/kitty litter, filters, animal waste, paints, sludges, sand, diatomaceous earth, resins and floor sweepings.

1.3.2 History of how and where the waste was/is generated:

The waste was generated from the PFP, PUREX Plant, Critical Mass Laboratory, Materials Engineering Laboratory, Kerr-McGee, the Chemical Engineering Building, Post-Irradiation Test Facility, REDOX Facility Radiochemicstry Building, the Semi-works D&D, Radiological Calibrations Laboratory, research laboratoriesand the Fuels Development Laboratory.

1.3.3 Source of the regulated constituents:

See 1.3.1 and 1.3.2.

1.3.4 Source of the information (e.g., analytical data, process knowledge, document number, etc.)

Analytical data and process knowledge.

1.3.5 Additional notes:

None.

2.0 WASTE STREAM STORAGE, INVENTORY, AND GENERATION INFORMATION

(NOTE: For waste in satellite accumulation areas and 90-day accumulation areas, skip to Section 2.6.)

2.1 Current storage method

- ☐ Container (pad)
- ☐ Container (covered)
- ☒ Container (retrievably buried)
- ☐ Tank
- ☐ DST
- ☐ SST
- ☒ Other (explain): Stored pursuant to TPA M-091 milestones.

2.1.1 How was the waste managed prior to storage?

In LLBG trenches.

LDR REPORT WASTE LOCATION-SPECIFIC DATA SHEET

2.1.2 Timeframe when waste was placed to storage?

Varies from 1970 through 1987.

2.2 Storage inventory locations:

Building/Room Number	Number of Containers/Tanks
LLBG	234

2.3 Current stored inventory for this stream.

Total volume (cubic meters): 1,472.000

Date of inventory values: 12/31/2009

Comments on waste inventory:

Waste is stored pursuant to TPA M-091 milestones.

2.4 Is storage capacity at this location potentially an issue for this waste stream?

☐ Yes ☒ No

If yes, what is the total estimated storage capacity? N/A

When is this capacity expected to be reached? N/A

Bases and assumptions used:

No issues with CWC storage based on life cycle waste generation forecast.

2.5 Planned storage areas for this waste:

☐ Current Location ☒ CWC ☐ DST

☐ Other Area(s) (list):

☐ None

2.6 Estimated generation projection by calendar year (includes waste in satellite and 90-day accumulation areas):

Year	m^3	and/or	kg
2010	0.000		0.000
2011	0.000		0.000
2012	0.000		0.000
2013	0.000		0.000
2014	0.000		0.000
Total	0.000		0.000

2.7 DOE Storage Compliance Assessment information:

☒ Assessment has been completed.

Document Number	Date
A&E-SEC-02-003	03/28/2002

LDR REPORT WASTE LOCATION-SPECIFIC DATA SHEET

☐ Assessment has been scheduled. Scheduled date:

☐ Other. Explain:

2.8 Applicable Tri-Party Agreement milestones related to storage at this location:

Milestone Number	Due Date
N/A	

2.9 Has there ever been any non-permitted, unauthorized release of this waste stream from this storage unit to the environment?

☐ Yes ☒ No

If yes, summarize releases and quantities and provide date:

N/A

2.10 Are there any plans to submit requests for variances or other exemptions related to storage?

☐ Yes ☒ No

If yes, explain: N/A

2.11 Characterization

2.11.1 Is further characterization needed about the waste prior to acceptance for storage?

☐ Yes ☐ No ☒ Unknown at this time

Milestone Number	Due Date
N/A	N/A

If yes or unknown, comment on characterization for storage.

Waste may be assayed after retrieval to verify that the waste is TRU or process knowledge will be used confirm it's identity and acceptability for storage. Per draft Settlement Agreement (M-91-03-01) between DOE-RL and the Washington State Department of Ecology all retrievably stored waste is suspected of being mixed waste.

2.11.2 Is further characterization needed about the waste prior to acceptance for treatment?

☐ Yes ☐ No ☒ Unknown at this time

Milestone Number	Due Date
N/A	N/A

If yes or unknown, comment on characterization for treatment.

Waste could potentially be sent to CWC for storage without further characterization, however, further characterization and/or treatment will be necessary prior to disposal.

LDR REPORT WASTE LOCATION-SPECIFIC DATA SHEET

2.11.3 Is further characterization needed about the waste prior to acceptance for disposal?

☐ Yes ☐ No ☒ Unknown at this time

Milestone Number	Due Date
N/A	N/A

If yes or unknown, comment on characterization for disposal.

Waste could potentially be sent to CWC for storage without further characterization, however, further characterization and/or treatment will be necessary prior to disposal.

2.12 Other key assumptions related to storage, inventory, and generation information:

None.

3.0 WASTE MINIMIZATION

3.1 Has a waste minimization assessment been completed for this stream?

☐ Yes ☒ No

If yes, provide date assessment conducted: N/A

If yes, provide document number or other identification:

N/A

If no, provide date assessment will be completed, or if waste stream is no longer generated, then indicate N/A:

None planned.

3.2 Provide details of current and proposed methods for minimizing the generation of this stream (e.g., process changes to reduce or eliminate LDR waste, methods to reduce volume through segregation and avoidance of commingling, substitution of less-toxic materials):

No waste minimization assessment is planned because the process is not generating and packaging new waste, it is retrieving waste that already exists. TRUM waste will be minimized by assaying the suspect-TRU drums in the trench. Per TPA Milestone M-91-40 all retrieved waste is suspect of being mixed waste.

3.3 Waste minimization schedule

3.3.1 Reduction achieved during calendar year 2009 (volume or mass)

0.000 m3

3.3.2 Projected future waste volume reductions

Year	m^3	and/or	kg
2010	0.00		0.00
2011	0.00		0.00
2012	0.00		0.00
2013	0.00		0.00
2014	0.00		0.00
Total	0.00		0.00

LDR REPORT WASTE LOCATION-SPECIFIC DATA SHEET

3.3.3 Bases and assumptions used in above estimates:

None.

LDR REPORT WASTE LOCATION-SPECIFIC DATA SHEET

1.0 WASTE STREAM IDENTIFICATION AND SOURCE

1.1 Unit/Plant name: T Plant Complex **Waste Stream:** TRUM Box

Treatabilitiy Group Name: TRUM - CH Large Container

1.2 Applicable profile number(s) for this waste stream:

250

1.3 Waste stream source information

1.3.1 General description of the waste (e.g., spill clean-up waste, discarded lab materials, maintenance waste):

PFP - 232-Z glovebox.

1.3.2 History of how and where the waste was/is generated:

PFP D+D of the 232-Z Bldg

1.3.3 Source of the regulated constituents:

The 232-Z has TSCA level PCBs from the glovebox.paint. Samples ~220 ppm PCBs. Lead comes from glovebox components; leaded glass and lead shielding.

1.3.4 Source of the information (e.g., analytical data, process knowledge, document number, etc.)

Lead - glovebox information
PCBs - analytical sampling.

1.3.5 Additional notes:

2.0 WASTE STREAM STORAGE, INVENTORY, AND GENERATION INFORMATION

(NOTE: For waste in satellite accumulation areas and 90-day accumulation areas, skip to Section 2.6.)

2.1 Current storage method

- ☒ Container (pad)
- ☐ Container (covered)
- ☐ Container (retrievably buried)
- ☐ Tank
- ☐ DST
- ☐ SST
- ☐ Other (explain):

2.1.1 How was the waste managed prior to storage?

The 232-Z glovebox was packaged in the IP-2 Container at PFP.

2.1.2 Timeframe when waste was placed to storage?

The 232-Z glovebox arrived at the T Plant on 8/5/05.

2.2 Storage inventory locations:

Building/Room Number	Number of Containers/Tanks
2706 TSP	1

LDR REPORT WASTE LOCATION-SPECIFIC DATA SHEET

2.3 Current stored inventory for this stream.

Total volume (cubic meters): 35.000

Date of inventory values: 12/31/2009

Comments on waste inventory:

2.4 Is storage capacity at this location potentially an issue for this waste stream?

☐ Yes ☒ No

If yes, what is the total estimated storage capacity? N/A

When is this capacity expected to be reached? N/A

Bases and assumptions used:

2.5 Planned storage areas for this waste:

☒ Current Location ☐ CWC ☐ DST

☐ Other Area(s) (list):

☐ None

2.6 Estimated generation projection by calendar year (includes waste in satellite and 90-day accumulation areas):

Year	m^3	and/or	kg
2010	0.000		0.000
2011	0.000		0.000
2012	0.000		0.000
2013	0.000		0.000
2014	0.000		0.000
Total	0.000		0.000

2.7 DOE Storage Compliance Assessment information:

☒ Assessment has been completed.

Document Number	Date
01-A&E-012	11/28/2000

☒ Assessment has been scheduled. Scheduled date: 3rd Quarter CY2005

☐ Other. Explain:

2.8 Applicable Tri-Party Agreement milestones related to storage at this location:

Milestone Number	Due Date
N/A	

LDR REPORT WASTE LOCATION-SPECIFIC DATA SHEET

2.9 Has there ever been any non-permitted, unauthorized release of this waste stream from this storage unit to the environment?

☐ Yes ☒ No

If yes, summarize releases and quantities and provide date:

N/A

2.10 Are there any plans to submit requests for variances or other exemptions related to storage?

☐ Yes ☒ No

If yes, explain: N/A

2.11 Characterization

2.11.1 Is further characterization needed about the waste prior to acceptance for storage?

☐ Yes ☒ No ☐ Unknown at this time

Milestone Number	Due Date
N/A	N/A

If yes or unknown, comment on characterization for storage.

2.11.2 Is further characterization needed about the waste prior to acceptance for treatment?

☐ Yes ☒ No ☐ Unknown at this time

Milestone Number	Due Date
N/A	N/A

If yes or unknown, comment on characterization for treatment.

N/A

2.11.3 Is further characterization needed about the waste prior to acceptance for disposal?

☐ Yes ☒ No ☐ Unknown at this time

Milestone Number	Due Date
N/A	N/A

If yes or unknown, comment on characterization for disposal.

N/A

2.12 Other key assumptions related to storage, inventory, and generation information:

LDR REPORT WASTE LOCATION-SPECIFIC DATA SHEET

3.0 WASTE MINIMIZATION

3.1 Has a waste minimization assessment been completed for this stream?

☐ Yes ☒ No

If yes, provide date assessment conducted: N/A

If yes, provide document number or other identification:

N/A

If no, provide date assessment will be completed, or if waste stream is no longer generated, then indicate N/A:

See Section 3.3.3 for discussion on waste minimization.

3.2 Provide details of current and proposed methods for minimizing the generation of this stream (e.g., process changes to reduce or eliminate LDR waste, methods to reduce volume through segregation and avoidance of commingling, substitution of less-toxic materials):

Waste minimization is and will continue to be incorporated to the extent practical during canyon deck cleanoff, cell cleanout as well as from other activities. Attempts will be made to segregate low-level from mixed and from TRU.

3.3 Waste minimization schedule

3.3.1 Reduction achieved during calendar year 2009 (volume or mass)

0.000 m3

3.3.2 Projected future waste volume reductions

Year	m^3	and/or	kg
2010	0.00		0.00
2011	0.00		0.00
2012	0.00		0.00
2013	0.00		0.00
2014	0.00		0.00
Total	0.00		0.00

3.3.3 Bases and assumptions used in above estimates:

The T Plant Complex has submitted a P2/Wmin fiscal year 2004 goal to reduce, where possible, mixed waste generation. For FY 2004 to 2008, new goals will be evaluated and identified on a year-by-year basis. The T Plant Complex does not track waste reduction by treatability groups. Routine and non-routine generated waste is reported quarterly to the Waste Minimization/Pollution Prevention Group.

LDR REPORT WASTE LOCATION-SPECIFIC DATA SHEET

1.0 WASTE STREAM IDENTIFICATION AND SOURCE

1.1 Unit/Plant name: WRAP **Waste Stream:** TRUM Large Container

Treatabilitiy Group Name: TRUM - CH Large Container

1.2 Applicable profile number(s) for this waste stream:

A WSRd identified in the treatability group data sheet section 1.2.

1.3 Waste stream source information

1.3.1 General description of the waste (e.g., spill clean-up waste, discarded lab materials, maintenance waste):

The waste consists of metals, plastic, lead shielding, steel shielding, glass, paper/cardboard, cement, and sorbents. The material was contaminated with transuranic radionuclides from facility operations and R&D processes.

1.3.2 History of how and where the waste was/is generated:

The waste was generated from the PFP, PUREX Plant, Critical Mass Laboratory, Materials Engineering Laboratory, Kerr-McGee, and PNL.

1.3.3 Source of the regulated constituents:

Radiochemical operations around the site and D&D activities.

1.3.4 Source of the information (e.g., analytical data, process knowledge, document number, etc.)

Analytical data, process knowledge.

1.3.5 Additional notes:

Waste at WRAP comes from various generators and generating processes around the Hanford Site due to WRAP's verification and repackaging mission. TRUM destined for WIPP is exempt from LDRs.

2.0 WASTE STREAM STORAGE, INVENTORY, AND GENERATION INFORMATION

(NOTE: For waste in satellite accumulation areas and 90-day accumulation areas, skip to Section 2.6.)

2.1 Current storage method

- ☐ Container (pad)
- ☒ Container (covered)
- ☐ Container (retrievably buried)
- ☐ Tank
- ☐ DST
- ☐ SST
- ☐ Other (explain):

2.1.1 How was the waste managed prior to storage?

Waste was generated and packaged at various locations around the Hanford Site.

2.1.2 Timeframe when waste was placed to storage?

Waste was placed into storage between 1987 and present. Drums at WRAP are undergoing verification and repackaging to meet WIPP WAC.

LDR REPORT WASTE LOCATION-SPECIFIC DATA SHEET

2.2 Storage inventory locations:

Building/Room Number	Number of Containers/Tanks
WRAP	3

2.3 Current stored inventory for this stream.

Total volume (cubic meters): 1.000

Date of inventory values: 12/31/2009

Comments on waste inventory:

Inventory based on Solid Waste Information Tracking System (SWITS) printout dated 12/31/2009.

2.4 Is storage capacity at this location potentially an issue for this waste stream?

☐ Yes ☒ No

If yes, what is the total estimated storage capacity? N/A

When is this capacity expected to be reached? N/A

Bases and assumptions used:

2.5 Planned storage areas for this waste:

☒ Current Location ☒ CWC ☐ DST

☐ Other Area(s) (list):

☐ None

2.6 Estimated generation projection by calendar year (includes waste in satellite and 90-day accumulation areas):

Year	m^3	and/or	kg
2010	0.000		0.000
2011	0.000		0.000
2012	0.000		0.000
2013	0.000		0.000
2014	0.000		0.000
Total	0.000		0.000

2.7 DOE Storage Compliance Assessment information:

☒ Assessment has been completed.

Document Number	Date
DE-AC06-96RL13200	09/26/2001

☐ Assessment has been scheduled. Scheduled date:

☐ Other. Explain:

LDR REPORT WASTE LOCATION-SPECIFIC DATA SHEET

2.8 Applicable Tri-Party Agreement milestones related to storage at this location:

Milestone Number	Due Date
N/A	

2.9 Has there ever been any non-permitted, unauthorized release of this waste stream from this storage unit to the environment?

☐ Yes ☒ No

If yes, summarize releases and quantities and provide date:

N/A

2.10 Are there any plans to submit requests for variances or other exemptions related to storage?

☐ Yes ☒ No

If yes, explain: N/A

2.11 Characterization

2.11.1 Is further characterization needed about the waste prior to acceptance for storage?

☐ Yes ☒ No ☐ Unknown at this time

Milestone Number	Due Date
N/A	N/A

If yes or unknown, comment on characterization for storage.

2.11.2 Is further characterization needed about the waste prior to acceptance for treatment?

☐ Yes ☒ No ☐ Unknown at this time

Milestone Number	Due Date
N/A	N/A

If yes or unknown, comment on characterization for treatment.

N/A

2.11.3 Is further characterization needed about the waste prior to acceptance for disposal?

☐ Yes ☒ No ☐ Unknown at this time

Milestone Number	Due Date
N/A	N/A

If yes or unknown, comment on characterization for disposal.

N/A

LDR REPORT WASTE LOCATION-SPECIFIC DATA SHEET

2.12 Other key assumptions related to storage, inventory, and generation information:

None

3.0 WASTE MINIMIZATION

3.1 Has a waste minimization assessment been completed for this stream?

☐ Yes ☒ No

If yes, provide date assessment conducted: N/A

If yes, provide document number or other identification:

N/A

If no, provide date assessment will be completed, or if waste stream is no longer generated, then indicate N/A:

N/A

3.2 Provide details of current and proposed methods for minimizing the generation of this stream (e.g., process changes to reduce or eliminate LDR waste, methods to reduce volume through segregation and avoidance of commingling, substitution of less-toxic materials):

These activities occur before the wastes are transferred/shipped to WRAP. There are few opportunities to reduce waste volumes placed into storage.

3.3 Waste minimization schedule

3.3.1 Reduction achieved during calendar year 2009 (volume or mass)

0.000 m3

3.3.2 Projected future waste volume reductions

Year	m^3	and/or	kg
2010	0.00		0.00
2011	0.00		0.00
2012	0.00		0.00
2013	0.00		0.00
2014	0.00		0.00
Total	0.00		0.00

3.3.3 Bases and assumptions used in above estimates:

Since subject waste has already been generated, no additional waste minimization activities are planned.

This page intentionally left blank.

TRUM-RH

LDR REPORT TREATABILITY GROUP DATA SHEET

1.0 WASTE STREAM IDENTIFICATION

1.1 Treatability Group Name: TRUM - RH

1.2 Description of waste (list WSRd numbers for this waste stream, as applicable)

The waste consists of inner container, iron-based metals, lead, soil, lead shielding, and steel shielding. Waste is from the clean-out of hot cells from research/development laboratories and demolition activities. The relative waste quantity is small, because the waste matrix contains a large percentage of lead and steel shielding materials. TRUM is considered remote handled if the waste container has a contact dose rate >200 mrem/hr. In addition, in order to provide an estimate of what might be remote handled, TRUM will be reported as remote handled if the package is known to contain lead, concrete or steel shielding.

2.0 WASTE INVENTORY AND GENERATION

2.1 Current total inventory for this waste stream (stored waste only, not accumulation areas). [Equals sum of location-specific data sheets for this treatability group.]

Total volume (cubic meters): 408.123

2.2 Estimated generation projection by calendar year: [equals annual sums of location-specfic data sheets for this treatability group].

Year	m^3	and/or	kg
2010	3.000		0.000
2011	4.400		0.000
2012	1.000		0.000
2013	1.000		0.000
2014	1.000		0.000
Total	10.400		0.000

3.0 WASTE STREAM CHARACTERIZATION

3.1 Radiological Characteristics

3.1.1 Mixed waste type: ☐ High-level ☐ Transuranic ☒ Low-level

3.1.2 Handling (as package contents would need to be handled during treatment):

☐ Contact-handled ☒ Remote-handled

3.1.3 Comments on radiological characteristics (e.g., more specific information on content, treatment concerns caused by radiation, confidence level):

The waste contains transuranic radionuclides greater than 100 nCi/g. The waste also contains non-tranuranic radioactivity. Typical concentrations exceed 1,000 Ci/m3 for Sr90, 1,000 Ci/m3 for Y90, 1,000 Ci/m3 for Cs137, and 950 Ci/m3 for Ba137m.

LDR REPORT TREATABILITY GROUP DATA SHEET

3.2 Physical Form

3.2.1 Physical form of the waste:

☒ Solid ☐ Liquid ☐ Semi-solid ☒ Debris

☐ Other (Describe in comments.)

3.2.2 Comments on physical form:

Waste is from the clean-out of hot cells from research/development laboratories. The relative waste quantity is small, because the waste matrix contains a large percentage of shielding materials.

3.3 Regulated constituents and wastewater/non-wastewater category

3.3.1 Wastewater/non-wastewater under RCRA

☐ Wastewater ☒ Non-wastewater ☐ Unknown

3.3.2 Regulated constituents table including treatment requirements and UHCs, if applicable.

EPA/ State Number	Waste Description	LDR Sub-Category*	Concentration (Typical or Range)**	Basis	LDR Treatment Concentration Standard or Technology Code
D002	Corrosive Charac.	N/A	***	***	Remove Characteristic (1)
D004	Arsenic	N/A	***	***	Exempt (61 FR 60704)
D005	Barium	N/A	***	***	Exempt (61 FR 60704)
D006	Cadmium	N/A	***	***	Exempt (61 FR 60704)
D007	Chromium	N/A	***	***	Exempt (61 FR 60704)
D008	Lead	N/A	***	***	Exempt (61 FR 60704)
D009	Mercury	N/A	***	***	Exempt (61 FR 60704)
D010	Selenium	N/A	***	***	Exempt (61 FR 60704)
D011	Silver	N/A	***	***	Exempt (61 FR 60704)
D019	Carbon Tetrachloride	N/A	***	***	Exempt (61 FR 60704)
D030	2,4-Dinitrotoluene	N/A	***	***	Exempt (61 FR 60704)
F001	1,1,1-Trichloroethane	Spent Solvent	***	***	Exempt (61 FR 60704)
F001	Trichloroethylene	Spent Solvent	***	***	Exempt (61 FR 60704)
F002	Trichloroethylene	Spent Solvent	***	***	Exempt (61 FR 60704)

LDR REPORT TREATABILITY GROUP DATA SHEET

EPA/ State Number	Waste Description	LDR Sub-Category*	Concentration (Typical or Range)**	Basis	LDR Treatment Concentration Standard or Technology Code
F003	Acetone	Spent Solvent	***	***	Exempt (61 FR 60704)
F004	Cresol	Spent Solvent	***	***	Exempt (61 FR 60704)
F005	Methyl Ethyl Ketone	Spent Solvent	***	***	Exempt (61 FR 60704)
WP02	Persistent, DW	N/A	***	***	N/A
WSC2	Solid Corrosive	N/A	***	***	N/A
WT02	Toxic, DW	N/A	***	***	N/A

* LDR Subcategory marked N/A if no existing subcategory adequately describes this waste, or if there are no defined subcategories for the waste number (40 CFR 268.40).

** If waste is not consistent in concentration, this may not apply. Described in Section 3.3.6.

*** The concentration varies and is based on process knowledge and/or analytical data.
(1) Characteristic waste codes not currently acceptable at WIPP.

3.3.3 List any waste numbers from Section 3.3.2 for which the waste stream already meets established LDR treatment standards.

☐ List:

☒ No LDR treatment required (e.g. TRUM waste destined for WIPP, exclusion, etc.)

☐ None (i.e. all constituents/waste numbers of this waste stream still require treatment).

3.3.4 Does this waste stream contain PCBs?

☐ Yes ☐ No ☒ Unknown

If no or unknown, skip to Section 3.3.5.

3.3.4.1 Is waste stream subject to TSCA regulations for PCBs?

☐ Yes ☐ No ☐ Unknown

3.3.4.2 Indicate the PCB concentration range.

☐ < 50 ppm ☐ ≥ 50 ppm ☐ Unknown

3.3.5 What is the confidence level for the regulated constituents?

☐ Low ☒ Medium ☐ High

3.3.6 Comments on regulated constituents and wastewater/non-wastewater category:

None.

LDR REPORT TREATABILITY GROUP DATA SHEET

4.0 WASTE STREAM TREATMENT

4.1 Is this waste stream currently being treated?

☐ Yes ☒ No

If yes, provide details: N/A

4.2 Planned treatment: Check the appropriate box indicating future plans for treating this waste stream to meet applicable regulations, including LDR treatment standards.

☐ No treatment required (skip to Section 5.0)

☒ Treating or plan to treat on site

☐ Treating or plan to treat off site

☒ Treatment options still being assessed

4.3 Planned treatment method, facility, extent of treatment capacity available:

Wastes are planned to be treated under the proposed M-091 capability, as needed to meet the applicable waste acceptance criteria at WIPP. The extent of the treatment and technologies has yet to be determined, but the techniques will likely include segregation, decontamination, solidification, and repackaging. The treatment technologies and capacity have yet to be determined.

4.4 Treatment schedule information:

Treatment will be performed in accordance with M-91 milestones and target dates after they have been finalized.

4.5 Applicable Tri-Party Agreement treatment milestone numbers (including permitting):

Milestone Number	Due Date
N/A	N/A

4.6 Proposed new Tri-Party Agreement treatment milestones:

See Section 4.4.

4.7 If treating or planning to treat on site, was or will waste minimization be addressed in developing and/or selecting the treatment method?

☒ Yes ☐ No ☐ Unknown

If yes, describe: N/A

4.8 List or describe treatability equivalency petitions, rulemaking petitions, and case-by-case exemptions needed for treatment or already in place.

TRUM disposed of at WIPP is exempt from the LDR treatment standards.

4.9 Key Assumptions:

None.

LDR REPORT TREATABILITY GROUP DATA SHEET

5.0 WASTE STREAM DISPOSAL

After treatment, how will the waste stream be disposed of (include locations, milestone numbers, variances required, etc. as applicable):

TRUM is disposed of at WIPP.

LDR REPORT WASTE LOCATION-SPECIFIC DATA SHEET

1.0 WASTE STREAM IDENTIFICATION AND SOURCE

1.1 Unit/Plant name: 325 HWTU **Waste Stream:** TRUM-RH

Treatabilitiy Group Name: TRUM - RH

1.2 Applicable profile number(s) for this waste stream:

N/A

1.3 Waste stream source information

1.3.1 General description of the waste (e.g., spill clean-up waste, discarded lab materials, maintenance waste):

Subject waste was generated from PNNL laboratory operations.

1.3.2 History of how and where the waste was/is generated:

Waste is generated from routine laboratory operations and hot cell clean outs at PNNL.

1.3.3 Source of the regulated constituents:

Waste stream may consist of different inorganic and organic solids and liquids that are contaminated with inorganic and organic regulated dangerous waste constituents. This waste stream also includes hazardous debris.

1.3.4 Source of the information (e.g., analytical data, process knowledge, document number, etc.)

Wastes are characterized as specified in PNNL Waste Stream Profiles.

1.3.5 Additional notes:

N/A

2.0 WASTE STREAM STORAGE, INVENTORY, AND GENERATION INFORMATION

(NOTE: For waste in satellite accumulation areas and 90-day accumulation areas, skip to Section 2.6.)

2.1 Current storage method

- ☐ Container (pad)
- ☒ Container (covered)
- ☐ Container (retrievably buried)
- ☐ Tank
- ☐ DST
- ☐ SST
- ☐ Other (explain):

2.1.1 How was the waste managed prior to storage?

The waste was managed in 90-day or Satellite Accumulation areas prior to being transferred to storage.

2.1.2 Timeframe when waste was placed to storage?

The wastes inventoried and currently stored at the 325 HWTU were placed in storage between 11/26/07 and 5/26/09.

LDR REPORT WASTE LOCATION-SPECIFIC DATA SHEET

2.2 Storage inventory locations:

Building/Room Number	Number of Containers/Tanks
325/528	1
325/SAL	4

2.3 Current stored inventory for this stream.

Total volume (cubic meters): 0.123

Date of inventory values: 12/31/2009

Comments on waste inventory:

None.

2.4 Is storage capacity at this location potentially an issue for this waste stream?

☐ Yes ☒ No

If yes, what is the total estimated storage capacity? N/A

When is this capacity expected to be reached? N/A

Bases and assumptions used:

N/A

2.5 Planned storage areas for this waste:

☒ Current Location ☒ CWC ☐ DST

☐ Other Area(s) (list):

☐ None

2.6 Estimated generation projection by calendar year (includes waste in satellite and 90-day accumulation areas):

Year	m^3	and/or	kg
2010	1.000		0.000
2011	1.000		0.000
2012	1.000		0.000
2013	1.000		0.000
2014	1.000		0.000
Total	5.000		0.000

2.7 DOE Storage Compliance Assessment information:

☒ Assessment has been completed.

Document Number	Date
A&E-DWR-02-004	05/31/2002

LDR REPORT WASTE LOCATION-SPECIFIC DATA SHEET

☐ Assessment has been scheduled. Scheduled date:

☐ Other. Explain:

2.8 Applicable Tri-Party Agreement milestones related to storage at this location:

Milestone Number	Due Date
N/A	

2.9 Has there ever been any non-permitted, unauthorized release of this waste stream from this storage unit to the environment?

☐ Yes ☒ No

If yes, summarize releases and quantities and provide date:

N/A

2.10 Are there any plans to submit requests for variances or other exemptions related to storage?

☐ Yes ☒ No

If yes, explain: N/A

2.11 Characterization

2.11.1 Is further characterization needed about the waste prior to acceptance for storage?

☐ Yes ☒ No ☐ Unknown at this time

Milestone Number	Due Date
N/A	N/A

If yes or unknown, comment on characterization for storage.

N/A

2.11.2 Is further characterization needed about the waste prior to acceptance for treatment?

☐ Yes ☒ No ☐ Unknown at this time

Milestone Number	Due Date
N/A	N/A

If yes or unknown, comment on characterization for treatment.

N/A

2.11.3 Is further characterization needed about the waste prior to acceptance for disposal?

☐ Yes ☒ No ☐ Unknown at this time

Milestone Number	Due Date
N/A	N/A

LDR REPORT WASTE LOCATION-SPECIFIC DATA SHEET

If yes or unknown, comment on characterization for disposal.

N/A

2.12 Other key assumptions related to storage, inventory, and generation information:

PNNL Waste Management requests full chemical and radiological characterization from the laboratory generators prior to receiving the waste into the 325 HWTU. The inventory information is for what is currently in storage in the specified 325 HWTU location(s).

3.0 WASTE MINIMIZATION

3.1 Has a waste minimization assessment been completed for this stream?

☐ Yes ☒ No

If yes, provide date assessment conducted: N/A

If yes, provide document number or other identification:

N/A

If no, provide date assessment will be completed, or if waste stream is no longer generated, then indicate N/A:

Assessment Date to be determined.

3.2 Provide details of current and proposed methods for minimizing the generation of this stream (e.g., process changes to reduce or eliminate LDR waste, methods to reduce volume through segregation and avoidance of commingling, substitution of less-toxic materials):

Laboratory staff routinely evaluate their processes to determine if less reagents or less hazardous reagents can be used in the process. The Radioactive Waste Operations Group routinely assess the possibility of consolidating items for shipment to CWC.

3.3 Waste minimization schedule

3.3.1 Reduction achieved during calendar year 2009 (volume or mass)

0.000 m3

3.3.2 Projected future waste volume reductions

Year	m^3	and/or	kg
2010	0.00		0.00
2011	0.00		0.00
2012	0.00		0.00
2013	0.00		0.00
2014	0.00		0.00
Total	0.00		0.00

3.3.3 Bases and assumptions used in above estimates:

Projects generating wastes usually have strict requirements for process outcomes. Hence, it is not possible to project specific volume reductions. As noted in Section 3.2, each project generating this type of waste is reviewed to assure that waste volumes generated are minimized.

LDR REPORT WASTE LOCATION-SPECIFIC DATA SHEET

1.0 WASTE STREAM IDENTIFICATION AND SOURCE

1.1 Unit/Plant name: CWC **Waste Stream:** RH TRUM

Treatabilitiy Group Name: TRUM - RH

1.2 Applicable profile number(s) for this waste stream:

A WSRd identified in the treatability group data sheet section 1.2.

1.3 Waste stream source information

1.3.1 General description of the waste (e.g., spill clean-up waste, discarded lab materials, maintenance waste):

The waste consists of plastics, metals, lead shielding, steel shielding, glass, paper/cardboard, cement, and absorbents that are contaminated with hazardous constituents. The current RH waste is packaged in shielded containers, so that it can be stored as CH waste.

1.3.2 History of how and where the waste was/is generated:

The waste was generated from the PFP, PUREX Plant, Critical Mass Laboratory, Materials Engineering Laboratory, Kerr-McGee, the Chemical Engineering Building, Post-Irradiation Test Facility, REDOX facility, Radiochemistry Building, the Semi-works D&D, Radiological Calibrations Laboratory, and the Fuels Development Laboratory.

1.3.3 Source of the regulated constituents:

See 1.3.1 and 1.3.2.

1.3.4 Source of the information (e.g., analytical data, process knowledge, document number, etc.)

Analytical data and process knowledge.

1.3.5 Additional notes:

None.

2.0 WASTE STREAM STORAGE, INVENTORY, AND GENERATION INFORMATION

(NOTE: For waste in satellite accumulation areas and 90-day accumulation areas, skip to Section 2.6.)

2.1 Current storage method

- ☐ Container (pad)
- ☒ Container (covered)
- ☐ Container (retrievably buried)
- ☐ Tank
- ☐ DST
- ☐ SST
- ☐ Other (explain):

2.1.1 How was the waste managed prior to storage?

Accumulated and packaged at various locations prior to storage.

2.1.2 Timeframe when waste was placed to storage?

Waste storage in CWC began in 1988 and continues.

LDR REPORT WASTE LOCATION-SPECIFIC DATA SHEET

2.2 Storage inventory locations:

Building/Room Number	Number of Containers/Tanks
CWC	273

2.3 Current stored inventory for this stream.

Total volume (cubic meters): 206.000

Date of inventory values: 12/31/2009

Comments on waste inventory:

Based on the inventory residing at CWC as reported in SWITS.

2.4 Is storage capacity at this location potentially an issue for this waste stream?

☐ Yes ☒ No

If yes, what is the total estimated storage capacity? N/A

When is this capacity expected to be reached? N/A

Bases and assumptions used:

No issues with CWC storage based on 20 year waste generation forecast.

2.5 Planned storage areas for this waste:

☒ Current Location ☒ CWC ☐ DST

☐ Other Area(s) (list):

☐ None

2.6 Estimated generation projection by calendar year (includes waste in satellite and 90-day accumulation areas):

Year	m^3	and/or	kg
2010	0.000		0.000
2011	0.000		0.000
2012	0.000		0.000
2013	0.000		0.000
2014	0.000		0.000
Total	0.000		0.000

2.7 DOE Storage Compliance Assessment information:

☒ Assessment has been completed.

Document Number	Date
A&E-SEC-02-001	01/21/2002

☐ Assessment has been scheduled. Scheduled date:

☐ Other. Explain:

LDR REPORT WASTE LOCATION-SPECIFIC DATA SHEET

2.8 Applicable Tri-Party Agreement milestones related to storage at this location:

Milestone Number	Due Date
N/A	

2.9 Has there ever been any non-permitted, unauthorized release of this waste stream from this storage unit to the environment?

☐ Yes ☒ No

If yes, summarize releases and quantities and provide date:

N/A

2.10 Are there any plans to submit requests for variances or other exemptions related to storage?

☐ Yes ☒ No

If yes, explain: N/A

2.11 Characterization

2.11.1 Is further characterization needed about the waste prior to acceptance for storage?

☐ Yes ☒ No ☐ Unknown at this time

Milestone Number	Due Date
N/A	N/A

If yes or unknown, comment on characterization for storage.

N/A

2.11.2 Is further characterization needed about the waste prior to acceptance for treatment?

☐ Yes ☒ No ☐ Unknown at this time

Milestone Number	Due Date
N/A	N/A

If yes or unknown, comment on characterization for treatment.

N/A

2.11.3 Is further characterization needed about the waste prior to acceptance for disposal?

☐ Yes ☒ No ☐ Unknown at this time

Milestone Number	Due Date
N/A	N/A

If yes or unknown, comment on characterization for disposal.

N/A

LDR REPORT WASTE LOCATION-SPECIFIC DATA SHEET

2.12 Other key assumptions related to storage, inventory, and generation information:

None.

3.0 WASTE MINIMIZATION

3.1 Has a waste minimization assessment been completed for this stream?

☐ Yes ☒ No

If yes, provide date assessment conducted: N/A

If yes, provide document number or other identification:

N/A

If no, provide date assessment will be completed, or if waste stream is no longer generated, then indicate N/A:

None planned - waste not generated at CWC.

3.2 Provide details of current and proposed methods for minimizing the generation of this stream (e.g., process changes to reduce or eliminate LDR waste, methods to reduce volume through segregation and avoidance of commingling, substitution of less-toxic materials):

These activities occur before the wastes are transferred/shipped to CWC. There are few opportunities to reduce waste volumes placed into storage.

3.3 Waste minimization schedule

3.3.1 Reduction achieved during calendar year 2009 (volume or mass)

0.000 m3

3.3.2 Projected future waste volume reductions

Year	m^3	and/or	kg
2010	0.00		0.00
2011	0.00		0.00
2012	0.00		0.00
2013	0.00		0.00
2014	0.00		0.00
Total	0.00		0.00

3.3.3 Bases and assumptions used in above estimates:

None.

LDR REPORT WASTE LOCATION-SPECIFIC DATA SHEET

1.0 WASTE STREAM IDENTIFICATION AND SOURCE

1.1 Unit/Plant name: LLBG **Waste Stream:** RH TRUM

Treatabilitiy Group Name: TRUM - RH

1.2 Applicable profile number(s) for this waste stream:

A WSRd identified in the treatability group data sheet section 1.2.

1.3 Waste stream source information

1.3.1 General description of the waste (e.g., spill clean-up waste, discarded lab materials, maintenance waste):

This waste is generated from retrieval activities in the Low-Level Burial Grounds. Waste is expected to be similar to waste already in inventory in the CWC, i.e., facility or equipment operation and maintenance waste, R&D laboratory waste, remediation D&D waste, analytical laboratory waste. The waste matrix is primarily debris material such as plastic, rubber, metal, paper, cardboard, rags, cement, stainless steel, wood, Styrofoam, glass, ceramics, asbestos, and batteries. Other components of the waste include: soil, absorbent/kitty litter, filters, animal waste, paints, sludges, sand, diatomaceous earth, resins, floor sweepings.

1.3.2 History of how and where the waste was/is generated:

The waste was generated from the PFP, PUREX Plant, Critical Mass Laboratory, Materials Engineering Laboratory, Kerr-McGee, the Chemical Engineering Building, Post-Irradiation Test Facility, REDOX facility, Radiochemistry Building, the Semi-works D&D, Radiological Calibrations Laboratory, research laboratories, and the Fuels Development Laboratory. The waste was generated and retrievably buried between 1970 and 1987.

1.3.3 Source of the regulated constituents:

See 1.3.1 and 1.3.2.

1.3.4 Source of the information (e.g., analytical data, process knowledge, document number, etc.)

Analytical data and process knowledge.

1.3.5 Additional notes:

None.

2.0 WASTE STREAM STORAGE, INVENTORY, AND GENERATION INFORMATION

(NOTE: For waste in satellite accumulation areas and 90-day accumulation areas, skip to Section 2.6.)

2.1 Current storage method

- ☐ Container (pad)
- ☐ Container (covered)
- ☒ Container (retrievably buried)
- ☐ Tank
- ☐ DST
- ☐ SST
- ☒ Other (explain): Stored pursuant to M-091 TPA Milestones.

LDR REPORT WASTE LOCATION-SPECIFIC DATA SHEET

2.1.1 How was the waste managed prior to storage?

In LLBG trenches.

2.1.2 Timeframe when waste was placed to storage?

Varies from 1970 through 1987.

2.2 Storage inventory locations:

Building/Room Number	Number of Containers/Tanks
LLBG	5712

2.3 Current stored inventory for this stream.

Total volume (cubic meters): 188.000

Date of inventory values: 12/31/2009

Comments on waste inventory:

Projected TRUM volumes based on waste inventory disposed of (buried) between 1970-1987 and assumptions regarding the fraction of TRUM retrievably stored waste.

2.4 Is storage capacity at this location potentially an issue for this waste stream?

☐ Yes ☒ No

If yes, what is the total estimated storage capacity? N/A

When is this capacity expected to be reached? N/A

Bases and assumptions used:

No issues with CWC storage based on 20 year waste generation forecast.

2.5 Planned storage areas for this waste:

☐ Current Location ☒ CWC ☐ DST

☐ Other Area(s) (list):

☐ None

2.6 Estimated generation projection by calendar year (includes waste in satellite and 90-day accumulation areas):

Year	m^3	and/or	kg
2010	0.000		0.000
2011	0.000		0.000
2012	0.000		0.000
2013	0.000		0.000
2014	0.000		0.000
Total	0.000		0.000

LDR REPORT WASTE LOCATION-SPECIFIC DATA SHEET

2.7 DOE Storage Compliance Assessment information:

☒ Assessment has been completed.

Document Number	Date
A&E-SEC-02-003	03/28/2002

☐ Assessment has been scheduled. Scheduled date:

☐ Other. Explain:

2.8 Applicable Tri-Party Agreement milestones related to storage at this location:

Milestone Number	Due Date
N/A	

2.9 Has there ever been any non-permitted, unauthorized release of this waste stream from this storage unit to the environment?

☐ Yes ☒ No

If yes, summarize releases and quantities and provide date:

N/A

2.10 Are there any plans to submit requests for variances or other exemptions related to storage?

☐ Yes ☒ No

If yes, explain: N/A

2.11 Characterization

2.11.1 Is further characterization needed about the waste prior to acceptance for storage?

☐ Yes ☐ No ☒ Unknown at this time

Milestone Number	Due Date
N/A	N/A

If yes or unknown, comment on characterization for storage.

N/A

2.11.2 Is further characterization needed about the waste prior to acceptance for treatment?

☐ Yes ☐ No ☒ Unknown at this time

Milestone Number	Due Date
N/A	N/A

If yes or unknown, comment on characterization for treatment.

Waste could potentially be sent to CWC for storage without further characterization, however, further characterization and/or treatment will be necessary prior to disposal.

LDR REPORT WASTE LOCATION-SPECIFIC DATA SHEET

2.11.3 Is further characterization needed about the waste prior to acceptance for disposal?

☐ Yes ☐ No ☒ Unknown at this time

Milestone Number	Due Date
N/A	N/A

If yes or unknown, comment on characterization for disposal.

Waste could potentially be sent to CWC for storage without further characterization, however, further characterization and/or treatment will be necessary prior to disposal.

2.12 Other key assumptions related to storage, inventory, and generation information:

Waste generation projections are based on current baseline retrieval rates and assumptions.

3.0 WASTE MINIMIZATION

3.1 Has a waste minimization assessment been completed for this stream?

☐ Yes ☒ No

If yes, provide date assessment conducted: N/A

If yes, provide document number or other identification:

N/A

If no, provide date assessment will be completed, or if waste stream is no longer generated, then indicate N/A:

None planned - waste not generated at CWC.

3.2 Provide details of current and proposed methods for minimizing the generation of this stream (e.g., process changes to reduce or eliminate LDR waste, methods to reduce volume through segregation and avoidance of commingling, substitution of less-toxic materials):

No waste minimization assessment is planned because the process is not generating and packaging new waste, it is retrieving waste that already exists. Per TPA milestone M91-40, all retrieved waste is suspect of being mixed waste.

3.3 Waste minimization schedule

3.3.1 Reduction achieved during calendar year 2009 (volume or mass)

0.000 m3

3.3.2 Projected future waste volume reductions

Year	m^3	and/or	kg
2010	0.00		0.00
2011	0.00		0.00
2012	0.00		0.00
2013	0.00		0.00
2014	0.00		0.00
Total	0.00		0.00

LDR REPORT WASTE LOCATION-SPECIFIC DATA SHEET

3.3.3 Bases and assumptions used in above estimates:

None.

LDR REPORT WASTE LOCATION-SPECIFIC DATA SHEET

1.0 WASTE STREAM IDENTIFICATION AND SOURCE

1.1 Unit/Plant name: PFP **Waste Stream:** TRUM-RH

Treatabilitiy Group Name: TRUM - RH

1.2 Applicable profile number(s) for this waste stream:

None

1.3 Waste stream source information

1.3.1 General description of the waste (e.g., spill clean-up waste, discarded lab materials, maintenance waste):

The waste consists of plastics, metals, lead shielding, steel shielding, glass, paper/cardboard, cement, and absorbents that are contaminated with hazardous constituents. The RH waste is waste that cannot be packaged in shielded containers, so that it can be stored as CH waste.

1.3.2 History of how and where the waste was/is generated:

The waste was generated from the PFP D&D,

1.3.3 Source of the regulated constituents:

See 1.3.1 and 1.3.2

1.3.4 Source of the information (e.g., analytical data, process knowledge, document number, etc.)

Process knowledge.

1.3.5 Additional notes:

None.

2.0 WASTE STREAM STORAGE, INVENTORY, AND GENERATION INFORMATION

(NOTE: For waste in satellite accumulation areas and 90-day accumulation areas, skip to Section 2.6.)

2.1 Current storage method

- ☐ Container (pad)
- ☒ Container (covered)
- ☐ Container (retrievably buried)
- ☐ Tank
- ☐ DST
- ☐ SST
- ☐ Other (explain):

2.1.1 How was the waste managed prior to storage?

Waste was generated and packaged at PFP on the Hanford Site.

2.1.2 Timeframe when waste was placed to storage?

N/A

2.2 Storage inventory locations:

Building/Room Number	Number of Containers/Tanks
N/A	N/A

LDR REPORT WASTE LOCATION-SPECIFIC DATA SHEET

2.3 Current stored inventory for this stream.

Total volume (cubic meters): 0.000

Date of inventory values: 12/31/2009

Comments on waste inventory:

None

2.4 Is storage capacity at this location potentially an issue for this waste stream?

☐ Yes ☒ No

If yes, what is the total estimated storage capacity? N/A

When is this capacity expected to be reached? N/A

Bases and assumptions used:

None

2.5 Planned storage areas for this waste:

☐ Current Location ☒ CWC ☐ DST

☐ Other Area(s) (list):

☐ None

2.6 Estimated generation projection by calendar year (includes waste in satellite and 90-day accumulation areas):

Year	m^3	and/or	kg
2010	1.000		0.000
2011	0.400		0.000
2012	0.000		0.000
2013	0.000		0.000
2014	0.000		0.000
Total	1.400		0.000

2.7 DOE Storage Compliance Assessment information:

☐ Assessment has been completed.

Document Number	Date

☐ Assessment has been scheduled. Scheduled date:

☒ Other. Explain: Not Applicable

2.8 Applicable Tri-Party Agreement milestones related to storage at this location:

Milestone Number	Due Date
N/A	

LDR REPORT WASTE LOCATION-SPECIFIC DATA SHEET

2.9 Has there ever been any non-permitted, unauthorized release of this waste stream from this storage unit to the environment?

☐ Yes ☒ No

If yes, summarize releases and quantities and provide date:

N/A

2.10 Are there any plans to submit requests for variances or other exemptions related to storage?

☐ Yes ☒ No

If yes, explain: N/A

2.11 Characterization

2.11.1 Is further characterization needed about the waste prior to acceptance for storage?

☐ Yes ☒ No ☐ Unknown at this time

Milestone Number	Due Date
N/A	N/A

If yes or unknown, comment on characterization for storage.

The waste at WRAP is processed through WRAP and transferred on to another TSD unit or Atomic Energy Act disposal location. A commitment is not necessary to complete this characterization because it is part of WRAP's ongoing activities.

2.11.2 Is further characterization needed about the waste prior to acceptance for treatment?

☐ Yes ☒ No ☐ Unknown at this time

Milestone Number	Due Date
N/A	N/A

If yes or unknown, comment on characterization for treatment.

N/A

2.11.3 Is further characterization needed about the waste prior to acceptance for disposal?

☐ Yes ☒ No ☐ Unknown at this time

Milestone Number	Due Date
N/A	N/A

If yes or unknown, comment on characterization for disposal.

N/A

2.12 Other key assumptions related to storage, inventory, and generation information:

None.

LDR REPORT WASTE LOCATION-SPECIFIC DATA SHEET

3.0 WASTE MINIMIZATION

3.1 Has a waste minimization assessment been completed for this stream?

☐ Yes ☒ No

If yes, provide date assessment conducted: N/A

If yes, provide document number or other identification:

N/A

If no, provide date assessment will be completed, or if waste stream is no longer generated, then indicate N/A:

None currently scheduled -- see Section 3.2.

3.2 Provide details of current and proposed methods for minimizing the generation of this stream (e.g., process changes to reduce or eliminate LDR waste, methods to reduce volume through segregation and avoidance of commingling, substitution of less-toxic materials):

To the extent practicle RH will be minimized due to ALARA concerns.

3.3 Waste minimization schedule

3.3.1 Reduction achieved during calendar year 2009 (volume or mass)

0.000 m3

3.3.2 Projected future waste volume reductions

Year	m^3	and/or	kg
2010	0.00		0.00
2011	0.00		0.00
2012	0.00		0.00
2013	0.00		0.00
2014	0.00		0.00
Total	0.00		0.00

3.3.3 Bases and assumptions used in above estimates:

None

LDR REPORT WASTE LOCATION-SPECIFIC DATA SHEET

1.0 WASTE STREAM IDENTIFICATION AND SOURCE

1.1 Unit/Plant name: T Plant Complex **Waste Stream:** TRUM-RH

Treatabilitiy Group Name: TRUM - RH

1.2 Applicable profile number(s) for this waste stream:

1.3 Waste stream source information

1.3.1 General description of the waste (e.g., spill clean-up waste, discarded lab materials, maintenance waste):

These drums are a product to the TRU repackaging process at T Plant.

1.3.2 History of how and where the waste was/is generated:

Waste from CH TRU drums, when transferred to a daughter drum, becomes RH TRU.

1.3.3 Source of the regulated constituents:

Historical AK of TRU waste streams

1.3.4 Source of the information (e.g., analytical data, process knowledge, document number, etc.)

Historical AK of TRU waste streams

1.3.5 Additional notes:

2.0 WASTE STREAM STORAGE, INVENTORY, AND GENERATION INFORMATION

(NOTE: For waste in satellite accumulation areas and 90-day accumulation areas, skip to Section 2.6.)

2.1 Current storage method

- [x] Container (pad)
- [ ] Container (covered)
- [ ] Container (retrievably buried)
- [ ] Tank
- [ ] DST
- [ ] SST
- [ ] Other (explain):

2.1.1 How was the waste managed prior to storage?

2.1.2 Timeframe when waste was placed to storage?

2.2 Storage inventory locations:

Building/Room Number	Number of Containers/Tanks
2706 TSP	1

LDR REPORT WASTE LOCATION-SPECIFIC DATA SHEET

2.3 Current stored inventory for this stream.

Total volume (cubic meters): 9.000

Date of inventory values: 12/31/2009

Comments on waste inventory:

2.4 Is storage capacity at this location potentially an issue for this waste stream?

☐ Yes ☒ No

If yes, what is the total estimated storage capacity? N/A

When is this capacity expected to be reached? N/A

Bases and assumptions used:

2.5 Planned storage areas for this waste:

☒ Current Location ☐ CWC ☐ DST

☐ Other Area(s) (list):

☐ None

2.6 Estimated generation projection by calendar year (includes waste in satellite and 90-day accumulation areas):

Year	m^3	and/or	kg
2010	1.000		0.000
2011	1.000		0.000
2012	0.000		0.000
2013	0.000		0.000
2014	0.000		0.000
Total	2.000		0.000

2.7 DOE Storage Compliance Assessment information:

☒ Assessment has been completed.

Document Number	Date
01-A&E-012	11/28/2000

☐ Assessment has been scheduled. Scheduled date:

☐ Other. Explain:

2.8 Applicable Tri-Party Agreement milestones related to storage at this location:

Milestone Number	Due Date
N/A	

LDR REPORT WASTE LOCATION-SPECIFIC DATA SHEET

2.9 Has there ever been any non-permitted, unauthorized release of this waste stream from this storage unit to the environment?

☐ Yes ☒ No

If yes, summarize releases and quantities and provide date:

N/A

2.10 Are there any plans to submit requests for variances or other exemptions related to storage?

☐ Yes ☒ No

If yes, explain: N/A

2.11 Characterization

2.11.1 Is further characterization needed about the waste prior to acceptance for storage?

☐ Yes ☒ No ☐ Unknown at this time

Milestone Number	Due Date
N/A	N/A

If yes or unknown, comment on characterization for storage.

2.11.2 Is further characterization needed about the waste prior to acceptance for treatment?

☐ Yes ☒ No ☐ Unknown at this time

Milestone Number	Due Date
N/A	N/A

If yes or unknown, comment on characterization for treatment.

N/A

2.11.3 Is further characterization needed about the waste prior to acceptance for disposal?

☐ Yes ☒ No ☐ Unknown at this time

Milestone Number	Due Date
N/A	N/A

If yes or unknown, comment on characterization for disposal.

N/A

2.12 Other key assumptions related to storage, inventory, and generation information:

LDR REPORT WASTE LOCATION-SPECIFIC DATA SHEET

3.0 WASTE MINIMIZATION

3.1 Has a waste minimization assessment been completed for this stream?

☐ Yes ☒ No

If yes, provide date assessment conducted: N/A

If yes, provide document number or other identification:

N/A

If no, provide date assessment will be completed, or if waste stream is no longer generated, then indicate N/A:

See Section 3.3.3 for discussion on waste minimization.

3.2 Provide details of current and proposed methods for minimizing the generation of this stream (e.g., process changes to reduce or eliminate LDR waste, methods to reduce volume through segregation and avoidance of commingling, substitution of less-toxic materials):

Waste minimization is and will continue to be incorporated to the extent practical during canyon deck cleanoff, cell cleanout as well as from other activities. Attempts will be made to segregate low-level from mixed and from TRU.

3.3 Waste minimization schedule

3.3.1 Reduction achieved during calendar year 2009 (volume or mass)

0.000 m3

3.3.2 Projected future waste volume reductions

Year	m^3	and/or	kg
2010	0.00		0.00
2011	0.00		0.00
2012	0.00		0.00
2013	0.00		0.00
2014	0.00		0.00
Total	0.00		0.00

3.3.3 Bases and assumptions used in above estimates:

T Plant Complex does not track waste reduction by treatability groups. Routine and non-routine generated waste is reported quarterly to the Waste Minimization/Pollution Prevention Group.

LDR REPORT WASTE LOCATION-SPECIFIC DATA SHEET

1.0 WASTE STREAM IDENTIFICATION AND SOURCE

1.1 Unit/Plant name: U-Plant **Waste Stream:** Tank D-10 from Cell 30

Treatabilitiy Group Name: TRUM - RH

1.2 Applicable profile number(s) for this waste stream:

None

1.3 Waste stream source information

1.3.1 General description of the waste (e.g., spill clean-up waste, discarded lab materials, maintenance waste):

The waste consists of liquid and solids in the bottom of Tk-D10 in cell 30.

1.3.2 History of how and where the waste was/is generated:

The waste was generated as part of the REDOX process.

1.3.3 Source of the regulated constituents:

REDOX process

1.3.4 Source of the information (e.g., analytical data, process knowledge, document number, etc.)

Analytical results

1.3.5 Additional notes:

None.

2.0 WASTE STREAM STORAGE, INVENTORY, AND GENERATION INFORMATION

(NOTE: For waste in satellite accumulation areas and 90-day accumulation areas, skip to Section 2.6.)

2.1 Current storage method

- ☐ Container (pad)
- ☐ Container (covered)
- ☐ Container (retrievably buried)
- ☒ Tank
- ☐ DST
- ☐ SST
- ☐ Other (explain):

2.1.1 How was the waste managed prior to storage?

Waste was generated at REDOX and the failed vessel was transferred to the U Plant canyon

2.1.2 Timeframe when waste was placed to storage?

N/A

2.2 Storage inventory locations:

Building/Room Number	Number of Containers/Tanks
N/A	N/A

LDR REPORT WASTE LOCATION-SPECIFIC DATA SHEET

2.3 Current stored inventory for this stream.

Total volume (cubic meters): 0.000

Date of inventory values: 12/31/2009

Comments on waste inventory:

All other waste generated will be left in the U Plant landfill per the Record of Decision 221-U Facility (Canyon Disposition Initiative) Hanford Site, Washington, Oct 3, '05

2.4 Is storage capacity at this location potentially an issue for this waste stream?

☐ Yes ☒ No

If yes, what is the total estimated storage capacity? N/A

When is this capacity expected to be reached? N/A

Bases and assumptions used:

None

2.5 Planned storage areas for this waste:

☐ Current Location ☒ CWC ☐ DST

☒ Other Area(s) (list): The vessel will be removed from the U Plant canyon and transferred to T Plant or CWC

☐ None

2.6 Estimated generation projection by calendar year (includes waste in satellite and 90-day accumulation areas):

Year	m^3	and/or	kg
2010	0.000		0.000
2011	2.000		0.000
2012	0.000		0.000
2013	0.000		0.000
2014	0.000		0.000
Total	2.000		0.000

2.7 DOE Storage Compliance Assessment information:

☐ Assessment has been completed.

Document Number	Date

☐ Assessment has been scheduled. Scheduled date:

☒ Other. Explain: Not Applicable

LDR REPORT WASTE LOCATION-SPECIFIC DATA SHEET

2.8 Applicable Tri-Party Agreement milestones related to storage at this location:

Milestone Number	Due Date
N/A	

2.9 Has there ever been any non-permitted, unauthorized release of this waste stream from this storage unit to the environment?

☐ Yes ☒ No

If yes, summarize releases and quantities and provide date:

N/A

2.10 Are there any plans to submit requests for variances or other exemptions related to storage?

☐ Yes ☒ No

If yes, explain: N/A

2.11 Characterization

2.11.1 Is further characterization needed about the waste prior to acceptance for storage?

☐ Yes ☒ No ☐ Unknown at this time

Milestone Number	Due Date
N/A	N/A

If yes or unknown, comment on characterization for storage.

The waste at WRAP is processed through WRAP and transferred on to another TSD unit or Atomic Energy Act disposal location. A commitment is not necessary to complete this characterization because it is part of WRAP's ongoing activities.

2.11.2 Is further characterization needed about the waste prior to acceptance for treatment?

☐ Yes ☒ No ☐ Unknown at this time

Milestone Number	Due Date
N/A	N/A

If yes or unknown, comment on characterization for treatment.

N/A

2.11.3 Is further characterization needed about the waste prior to acceptance for disposal?

☐ Yes ☒ No ☐ Unknown at this time

Milestone Number	Due Date
N/A	N/A

If yes or unknown, comment on characterization for disposal.

N/A

LDR REPORT WASTE LOCATION-SPECIFIC DATA SHEET

2.12 Other key assumptions related to storage, inventory, and generation information:

None.

3.0 WASTE MINIMIZATION

3.1 Has a waste minimization assessment been completed for this stream?

☐ Yes ☒ No

If yes, provide date assessment conducted: N/A

If yes, provide document number or other identification:

N/A

If no, provide date assessment will be completed, or if waste stream is no longer generated, then indicate N/A:

The waste generation stream is no longer active. This is final disposition.

3.2 Provide details of current and proposed methods for minimizing the generation of this stream (e.g., process changes to reduce or eliminate LDR waste, methods to reduce volume through segregation and avoidance of commingling, substitution of less-toxic materials):

To the extent practicle RH will be minimized due to ALARA concerns.

3.3 Waste minimization schedule

3.3.1 Reduction achieved during calendar year 2009 (volume or mass)

0.000 m3

3.3.2 Projected future waste volume reductions

Year	m^3	and/or	kg
2010	0.00		0.00
2011	0.00		0.00
2012	0.00		0.00
2013	0.00		0.00
2014	0.00		0.00
Total	0.00		0.00

3.3.3 Bases and assumptions used in above estimates:

None

LDR REPORT WASTE LOCATION-SPECIFIC DATA SHEET

1.0 WASTE STREAM IDENTIFICATION AND SOURCE

1.1 Unit/Plant name: WRAP **Waste Stream:** TRUM-RH

Treatabilitiy Group Name: TRUM - RH

1.2 Applicable profile number(s) for this waste stream:

A WSRd identified in the treatability group data sheet section 1.2.

1.3 Waste stream source information

1.3.1 General description of the waste (e.g., spill clean-up waste, discarded lab materials, maintenance waste):

The waste consists of plastics, metals, lead shielding, steel shielding, glass, paper/cardboard, cement, and absorbents that are contaminated with hazardous constituents. The current RH waste is packaged in shielded containers, so that it can be stored as CH waste.

1.3.2 History of how and where the waste was/is generated:

The waste was generated from the PFP, PUREX Plant, Critical Mass Laboratory, Materials Engineering Laboratory, Kerr-McGee, the Chemical Engineering Building, Post-Irradiation Test Facility, REDOX facility, Radiochemistry Building, the Semi-works D&D, Radiological Calibrations Laboratory, PNL and the Fuels Development Laboratory.

1.3.3 Source of the regulated constituents:

See 1.3.1 and 1.3.2

1.3.4 Source of the information (e.g., analytical data, process knowledge, document number, etc.)

Analytical data and process knowledge.

1.3.5 Additional notes:

None.

2.0 WASTE STREAM STORAGE, INVENTORY, AND GENERATION INFORMATION

(NOTE: For waste in satellite accumulation areas and 90-day accumulation areas, skip to Section 2.6.)

2.1 Current storage method

- ☐ Container (pad)
- ☒ Container (covered)
- ☐ Container (retrievably buried)
- ☐ Tank
- ☐ DST
- ☐ SST
- ☐ Other (explain):

2.1.1 How was the waste managed prior to storage?

Waste was generated and packaged at various locations around the Hanford Site.

2.1.2 Timeframe when waste was placed to storage?

Waste was placed into storage between 1987 and present. Drums at WRAP are undergoing verification and repackaging to meet WIPP WAC.

LDR REPORT WASTE LOCATION-SPECIFIC DATA SHEET

2.2 Storage inventory locations:

Building/Room Number	Number of Containers/Tanks
WRAP	21

2.3 Current stored inventory for this stream.

Total volume (cubic meters): 5.000

Date of inventory values: 12/31/2009

Comments on waste inventory:

Inventory based on Solid Waste Information Tracking System (SWITS) printout dated 12/31/2009.

2.4 Is storage capacity at this location potentially an issue for this waste stream?

☐ Yes ☒ No

If yes, what is the total estimated storage capacity? N/A

When is this capacity expected to be reached? N/A

Bases and assumptions used:

Due to proximity to and interchange with CWC, there is no storage capacity issue at WRAP.

2.5 Planned storage areas for this waste:

☒ Current Location ☒ CWC ☐ DST

☐ Other Area(s) (list):

☐ None

2.6 Estimated generation projection by calendar year (includes waste in satellite and 90-day accumulation areas):

Year	m^3	and/or	kg
2010	0.000		0.000
2011	0.000		0.000
2012	0.000		0.000
2013	0.000		0.000
2014	0.000		0.000
Total	0.000		0.000

2.7 DOE Storage Compliance Assessment information:

☒ Assessment has been completed.

Document Number	Date
DE-AC06-96RL13200	09/26/2001

☐ Assessment has been scheduled. Scheduled date:

☐ Other. Explain:

LDR REPORT WASTE LOCATION-SPECIFIC DATA SHEET

2.8 Applicable Tri-Party Agreement milestones related to storage at this location:

Milestone Number	Due Date
N/A	

2.9 Has there ever been any non-permitted, unauthorized release of this waste stream from this storage unit to the environment?

☐ Yes ☒ No

If yes, summarize releases and quantities and provide date:

N/A

2.10 Are there any plans to submit requests for variances or other exemptions related to storage?

☐ Yes ☒ No

If yes, explain: N/A

2.11 Characterization

2.11.1 Is further characterization needed about the waste prior to acceptance for storage?

☐ Yes ☒ No ☐ Unknown at this time

Milestone Number	Due Date
N/A	N/A

If yes or unknown, comment on characterization for storage.

The waste at WRAP is processed through WRAP and transferred on to another TSD unit or Atomic Energy Act disposal location. A commitment is not necessary to complete this characterization because it is part of WRAP's ongoing activities.

2.11.2 Is further characterization needed about the waste prior to acceptance for treatment?

☐ Yes ☒ No ☐ Unknown at this time

Milestone Number	Due Date
N/A	N/A

If yes or unknown, comment on characterization for treatment.

N/A

2.11.3 Is further characterization needed about the waste prior to acceptance for disposal?

☐ Yes ☒ No ☐ Unknown at this time

Milestone Number	Due Date
N/A	N/A

If yes or unknown, comment on characterization for disposal.

N/A

LDR REPORT WASTE LOCATION-SPECIFIC DATA SHEET

2.12 Other key assumptions related to storage, inventory, and generation information:

None.

3.0 WASTE MINIMIZATION

3.1 Has a waste minimization assessment been completed for this stream?

☐ Yes ☒ No

If yes, provide date assessment conducted: N/A

If yes, provide document number or other identification:

N/A

If no, provide date assessment will be completed, or if waste stream is no longer generated, then indicate N/A:

None currently scheduled -- see Section 3.2.

3.2 Provide details of current and proposed methods for minimizing the generation of this stream (e.g., process changes to reduce or eliminate LDR waste, methods to reduce volume through segregation and avoidance of commingling, substitution of less-toxic materials):

This is waste generated at other locations. However, to the extent practical, all mixed waste is segregated and packaged separately from LLW or TRU wastes. To minimize the generation of mixed waste, generators actively seek nondangerous alternatives for the dangerous constituents in their processes. Minimization goals are set annually, and waste treatment is used to destroy the hazardous constituents, as allowable.

3.3 Waste minimization schedule

3.3.1 Reduction achieved during calendar year 2009 (volume or mass)

0.000 m3

3.3.2 Projected future waste volume reductions

Year	m^3	and/or	kg
2010	0.00		0.00
2011	0.00		0.00
2012	0.00		0.00
2013	0.00		0.00
2014	0.00		0.00
Total	0.00		0.00

3.3.3 Bases and assumptions used in above estimates:

Since subject waste has already been generated, no additional waste minimization activities are planned.

Appendix C

APPENDIX C

POTENTIAL MIXED WASTE

This page intentionally left blank.

APPENDIX C

POTENTIAL MIXED WASTE

The origin and definition of potential mixed waste is discussed in Section 2.3. The content of each column is defined here.

Table C-1. Potential Mixed Waste Table Explanation. (2 sheets)

Column	Column Title	Content Definition
A	Company, project	Self-explanatory.
B	Common name or description	Self-explanatory.
C	Facility number	Self-explanatory.
D	Solid waste with potential for mixed waste not integral to the building or structure (no use)	"Stuff" (e.g., equipment, materials) that is not currently in use and for which no future use is currently known, but for which the final disposition has not yet been determined. The "stuff" is not currently considered mixed waste and may or may not currently be contaminated, but includes items with the potential for becoming mixed waste, depending on future decisions regarding the ultimate use and disposition. "Stuff" integral to the building, e.g. walls, piping, ducting, is not to be included. "None" in this column indicates the project/facility contains no "stuff" known to be in this category.
E	Materials with potential to become solid waste and subsequently mixed waste (in standby, possible use)	"Stuff" (e.g., equipment, materials) that is currently in "standby" and may at some point, if it becomes waste, designate as mixed waste. Provide details for standby equipment/material that has a clear use or path for reuse/recycling, but may at some point, if/when it becomes waste, designate as mixed waste. A future use must be documented for material to be included in column E of the Potential Mixed Waste Table. Documentation of the future use of items in column E shall be available upon request. **Columns D and E encompass <u>contents</u> of buildings and structures only. Floor sweepings, dust, etc., are not included. The structures themselves, including contaminated walls, floors, piping, ducting, etc., are not included. Equipment and chemicals that are in use are not included.**
F	DOE assessment of storage methods	Indicate when the DOE assessment for the purpose of meeting LDR report requirements is scheduled. Provide an alternative explanation if required (e.g., the assessment completion date, key facility in surveillance and maintenance phase, further DOE LDR assessment not needed).

Table C-1. Potential Mixed Waste Table Explanation. (2 sheets)

Column	Column Title	Content Definition
G	Schedule information	Include schedule information relative to materials detailed in these columns. Include references to pertinent documents (closure plans, RODs) and identify any applicable OUs or other Tri-Party Agreement drivers for remediation. Provide a date for completing the data gap plan, if applicable. Also, for major negotiations related to the path forward for the potential mixed waste, such as the start of facility transition or deactivation, provide a date for starting the negotiations with the regulators.
H	Integrating factors	Include factors that should be considered when determining when negotiations should occur. These include factors such as relative threat to human health and the environment of no action, ties to other activities such as OU remediation, ties of action to facility missions, etc.

Table C-2. Potential Mixed Waste. (21 sheets)

A	B	C	D	E	F	G	H
Company, Project	**Common Name or Description**	**Facility Number**	**Solid Waste, with Potential for Mixed Waste, Not Integral to the Building or Structure (No Use)**	**Materials, with Potential to Become Solid Waste and Subsequently Mixed Waste (in Standby, Possible Use), or Recycled**	**DOE Assessment of Storage Methods**	**Schedule Information**	**Integrating Factors**
CH2M Hill Plateau Remediation Company (CHPRC), D&D Project 100-K	100-K Area	105-KE and 105-KW	105-KE: Old electrical equipment. 105-KW: None	105-KE: Oil drained from equipment, 105-KW: Underwater lead	Completed 4th quarter CY 2007.	Data gap Plan: Completed 2nd quarter CY 2005 Starting TPA negotiations: N/A (completed) The 105-KE structure has been D&D'd and disposed at ERDF. 105-KW: Anticipated to be dispositioned by the end of FY 2018.	None

Table C-2. Potential Mixed Waste. (21 sheets)

A	B	C	D	E	F	G	H
Company, Project	**Common Name or Description**	**Facility Number**	**Solid Waste, with Potential for Mixed Waste, Not Integral to the Building or Structure (No Use)**	**Materials, with Potential to Become Solid Waste and Subsequently Mixed Waste (in Standby, Possible Use), or Recycled**	**DOE Assessment of Storage Methods**	**Schedule Information**	**Integrating Factors**
CHPRC, D&D Project 100-K	100-KE and KW Reactor Facilities	115-KE 115-KW	Miscellaneous contaminated material in the facility is being managed as part of surveillance and maintenance activities	None	DOE assessment: Completed 6/15/2004. Assessment excludes reactor.	Waste will be generated as part of the Interim Safe Storage activities. Data gap plan: Completed 6/15/2004 Starting TPA negotiations: Completed as a part of River Corridor negotiations. Tri-Party Agreement Milestone M-093-22, Complete 105- KE and 105-KW Reactor Interim Safe Storage, is anticipated in FY 2018. Efforts are being pursued to core sample the 105-KE reactor core to obtain characterization date in support of D&D of the reactor building.	The reactor is a key facility under Section 8.0 of the Tri-Party Agreement.
CHPRC, PFP Closure Project	216-Z-9 Crib Soil Removal Glovebox (inactive)	216Z-9A, B & C	Soil Removal Glovebox and mining equipment. Air compressor (potential for regulated oil). Residual contamination within glovebox (potential for mixed wastes during cleanout). Note: Glovebox probably will function as containment when conducting facility cleanout/transition activities.	None	DOE assessment: Completed 3rd quarter CY 2001.	To be dispositioned as CERCLA non-time critical removal action or in coordination with 200-PW-1 ROD. Data gap plan: N/A Starting TPA negotiations: N/A (completed)	None

Table C-2. Potential Mixed Waste. (21 sheets)

A	B	C	D	E	F	G	H
Company, Project	**Common Name or Description**	**Facility Number**	**Solid Waste, with Potential for Mixed Waste, Not Integral to the Building or Structure (No Use)**	**Materials, with Potential to Become Solid Waste and Subsequently Mixed Waste (in Standby, Possible Use), or Recycled**	**DOE Assessment of Storage Methods**	**Schedule Information**	**Integrating Factors**
CHPRC, PFP Closure Project	Plutonium Finishing Plant	234-5Z	Radioactive Acid Digestion Test Unit (RADTU) Gloveboxes (potential for residual contamination during cleanout), tanks, piping, lead, control and processing equipment including the RMA/RMC lines. Note: Gloveboxes to be maintained and used for containment when conducting facility cleanout/transition activities.	Residues and low-grade SNM solids.	DOE assessment: Completed 3rd quarter CY 2001.	To be dispositioned as CERCLA non-time critical removal action. M-083-44, Complete Transition of the 234-5Z (Plutonium Conversion Facility) and ZA (Plutonium Conversion Support Facility), 243-Z Low Level Waste Treatment Facility, 291-Z Exhaust Building, and 291-Z-1 Exhaust Stack to support PFP Decommissioning, due 9/30/2015. Data gap plan: N/A Starting TPA negotiations: N/A (completed)	None

Table C-2. Potential Mixed Waste. (21 sheets)

A	B	C	D	E	F	G	H
Company, Project	**Common Name or Description**	**Facility Number**	**Solid Waste, with Potential for Mixed Waste, Not Integral to the Building or Structure (No Use)**	**Materials, with Potential to Become Solid Waste and Subsequently Mixed Waste (in Standby, Possible Use), or Recycled**	**DOE Assessment of Storage Methods**	**Schedule Information**	**Integrating Factors**
CHPRC, PFP Closure Project	Plutonium Reclamation Facility	236-Z	Pu nitrate reclamation tanks, piping, and control equipment. Miscellaneous treatment tanks, piping, and control equipment. Containment gloveboxes (reclamation and miscellaneous treatment). Chem. prep tanks, piping, and control equipment. Residual contamination within inactive process equipment and gloveboxes (potential for mixed waste during cleanout). Potential for liquids within inactive tanks, vessels, and piping. Miscellaneous tools and maintenance equipment located within canyon cell. Note: Gloveboxes to be maintained and used for containment when conducting facility cleanout/transition activities.	None.	DOE assessment: Completed 3rd quarter CY 2001.	To be dispositioned as CERCLA non-time critical removal action. Tri-Party Agreement milestone M-083-43, Complete Transition of the 242-Z Waste Treatment Facility and 236-Z Plutonium Reclamation Facility to Support PFP Decommissioning (due date: 9/30/2013). Data gap plan: N/A Starting TPA negotiations: N/A (completed)	None
CHPRC, PFP Closure Project	PFP Settling Tank	241-Z-361	Tank containing waste from past practices, and piping.	None	DOE assessment: Completed 2nd quarter CY 2009.	To be dispositioned as CERCLA remedial action during FY 2009 to FY 2011. Data gap plan: 2nd quarter CY 2009 Starting TPA negotiations: N/A. Characterization completed ("Tank Characterization Report for 241-Z-361", FH 0107145, 12/20/01).	RCRA/CERCLA integration is provided in the PFP Below Grade EE/CA. 200-PW-1 OU.

Table C-2. Potential Mixed Waste. (21 sheets)

A	B	C	D	E	F	G	H
Company, Project	**Common Name or Description**	**Facility Number**	**Solid Waste, with Potential for Mixed Waste, Not Integral to the Building or Structure (No Use)**	**Materials, with Potential to Become Solid Waste and Subsequently Mixed Waste (in Standby, Possible Use), or Recycled**	**DOE Assessment of Storage Methods**	**Schedule Information**	**Integrating Factors**
CHPRC, PFP Closure Project	Waste Treatment Facility (inactive)	242-Z	Miscellaneous process tanks, first floor and mezzanine level. Process piping. Containment gloveboxes. Potential for liquids within tanks, vessels, and piping. Residual contamination within gloveboxes, tanks, and piping (potential for mixed waste during cleanout).	None	No assessments. Facility is sealed currently because of high levels of radioactive contamination resulting from cation exchange column explosion, August 1976. DOE assessment: N/A.	To be dispositioned as CERCLA non-time critical removal action. Tri-Party Agreement milestone M-083-43, Complete Transition of the 242-Z Waste Treatment Facility and 236-Z Plutonium Reclamation Facility to Support PFP Decommissioning (due date: 9/30/2013). Data gap plan: N/A Starting TPA negotiations: N/A (completed)	None.
CHPRC, PFP Closure Project	SNM Storage/ Repackaging	2736-Z	None	Residues and low-grade SNM solids.	DOE assessment: Completed 3rd quarter CY 2001.	Tri-Party Agreement milestone M-083-00A, Complete PFP Facility Transition and Selected Disposition Activities (due date: 9/30/2016). Data gap plan: N/A Starting TPA negotiations: N/A (completed)	None

Table C-2. Potential Mixed Waste. (21 sheets)

A	B	C	D	E	F	G	H
Company, Project	**Common Name or Description**	**Facility Number**	**Solid Waste, with Potential for Mixed Waste, Not Integral to the Building or Structure (No Use)**	**Materials, with Potential to Become Solid Waste and Subsequently Mixed Waste (in Standby, Possible Use), or Recycled**	**DOE Assessment of Storage Methods**	**Schedule Information**	**Integrating Factors**
CHPRC, PFP Closure Project	Rail Car Staging Area	212-R Rail Spur, and PUREX Rail Cut	None	Rail cars and rail car components (lead casks, liquids within the lead casks, bearings, and lubricants)	DOE assessment: Completed 2nd quarter CY 2009.	The equipment reuse/recycling program funding is no longer available. Without future funding, these materials will likely have to be disposed of as solid waste. Disposition options are being evaluated. Data gap plan: 2nd quarter CY 2009. Starting TPA negotiations: Negotiations are not needed.	None

Table C-2. Potential Mixed Waste. (21 sheets)

A	B	C	D	E	F	G	H
Company, Project	**Common Name or Description**	**Facility Number**	**Solid Waste, with Potential for Mixed Waste, Not Integral to the Building or Structure (No Use)**	**Materials, with Potential to Become Solid Waste and Subsequently Mixed Waste (in Standby, Possible Use), or Recycled**	**DOE Assessment of Storage Methods**	**Schedule Information**	**Integrating Factors**
CHPRC, D&D Project, Balance of Site	Inactive miscellaneous underground storage tanks (IMUSTs) not associated with a building	216-BC-201, 216-BY-201, 216-TY-201, 241-B-361, 241-U-361, 241-T-361	Tank system heels in each IMUST, piping, equipment, and components.	None	DOE assessment: Initiated 2nd quarter CY 2006 (see Table 2-1).	Data gap plan: 1st quarter CY 2011 Starting TPA negotiations: Negotiations are not needed.	The IMUSTs will be dispositioned with their respective cribs. Further information regarding the remediation strategy can be found in the following OU documentation. 216-BC-201: 200-BC-1 216-BY-201: 200-TW-1 216-TY-201: 200-IS-1 241-B-361: 200-TW-2 241-U-361: 200-UW-1 241-T-361: 200-TW-2

Table C-2. Potential Mixed Waste. (21 sheets)

A	B	C	D	E	F	G	H
Company, Project	**Common Name or Description**	**Facility Number**	**Solid Waste, with Potential for Mixed Waste, Not Integral to the Building or Structure (No Use)**	**Materials, with Potential to Become Solid Waste and Subsequently Mixed Waste (in Standby, Possible Use), or Recycled**	**DOE Assessment of Storage Methods**	**Schedule Information**	**Integrating Factors**
CHPRC, D&D, and Infrastructure Project, Balance of Site	224-T	224-T	D1: Potential for liquid in vessels. The presence or absence of mixed waste in the 224-T cells is not documented and the potential for waste was identified in the Silver List D2: There is a glovebox/hood with vessels in the glovebox/hood, but mixed waste is not expected to be found in these items.	None	DOE assessment: Completed 1st quarter CY 2002.	D1 and D2: Data gap plan: Completed 4th quarter CY 2002 Starting TPA negotiations: Negotiations are not needed.	The potential for MW presence in the cells is a former Silver List issue that has not been closed out. Facility decommissioning is being planned. An Action Memorandum was completed in June 2005 (DOE/RL-2004-68).
CHPRC, D&D Project, Balance of Site	231-Z	231-Z	Liquid in vessels	None	DOE assessment: Initiated Completed 2nd quarter CY 2009.	Data gap plan: 2nd quarter CY 2009. Starting TPA negotiations: Negotiations are not needed.	The potential for MW to be present is a former Silver List issue that has not been closed out. Media that might designate as MW, if present, are expected to be contained in stainless steel vessels.

Table C-2. Potential Mixed Waste. (21 sheets)

A	B	C	D	E	F	G	H
Company, Project	**Common Name or Description**	**Facility Number**	**Solid Waste, with Potential for Mixed Waste, Not Integral to the Building or Structure (No Use)**	**Materials, with Potential to Become Solid Waste and Subsequently Mixed Waste (in Standby, Possible Use), or Recycled**	**DOE Assessment of Storage Methods**	**Schedule Information**	**Integrating Factors**
CHPRC, D&D, Project, Balance of Site	242-B/BL	242-B/BL	None	Although no specific matrix can be identified at this time, a possibility exists that matrices could be found which would qualify as PMW.	DOE assessment: Initiated 1st quarter CY 2007 (see Table 2-1).	Data gap plan: 1st quarter CY 2011 Starting TPA negotiations: Negotiations are not needed	None.
CHPRC, D&D, Project, Balance of Site	B Plant	207-BA, 211-B, 212-B, 217-B, 221-B, 221-BB, 221-BF, 221-BG, 271-B, 276-B, 291-BA, 291-B, 291-BB, 291-BD, 291-BF, 291-BG, 292-B, 2711-B, 2715-B, 270-E-1 (IMUST)	S&M Plan, DOE/RL-99-24, identifies the hazardous material remaining in the facility. Tank heels relate to TSD tank system and 270-E-1.	S&M Plan, DOE/RL-99-24, identifies the hazardous material remaining in the facility.	DOE assessment: N/A.	See Columns D & E: As described in the S&M Plan, DOE/RL-99-24. Data gap plan: N/A Starting TPA negotiations: Complete. Any additional negotiations will be completed in accordance with the Tri-Party Agreement Action Plan Section 8.6.2.	B Plant is in the S&M phase of the facility decommissioning process, as described in Chapter 8.0 of the Tri-Party Agreement. Final disposition of the IMUST and B Plant will be scheduled such that the activities are performed concurrently. See stored/forecasted portion of the report for details regarding waste stored in Cell 4 and in the containment building.

Table C-2. Potential Mixed Waste. (21 sheets)

A	B	C	D	E	F	G	H
Company, Project	**Common Name or Description**	**Facility Number**	**Solid Waste, with Potential for Mixed Waste, Not Integral to the Building or Structure (No Use)**	**Materials, with Potential to Become Solid Waste and Subsequently Mixed Waste (in Standby, Possible Use), or Recycled**	**DOE Assessment of Storage Methods**	**Schedule Information**	**Integrating Factors**
CHPRC, D&D Project, Balance of Site	224-B Building	224-B	Chemicals associated with operations at the 224-B Building may exist as residual deposition in tanks. Potential mixed waste remains in the 224-B process cells and vessels.	None	DOE assessment: Initiated 4th quarter CY 2006 (see Table 2-1).	Data gap plan: 1st quarter CY 2011. Starting TPA negotiations: Negotiations are not needed.	Facility decommissioning is being planned

Table C-2. Potential Mixed Waste. (21 sheets)

A	B	C	D	E	F	G	H
Company, Project	**Common Name or Description**	**Facility Number**	**Solid Waste, with Potential for Mixed Waste, Not Integral to the Building or Structure (No Use)**	**Materials, with Potential to Become Solid Waste and Subsequently Mixed Waste (in Standby, Possible Use), or Recycled**	**DOE Assessment of Storage Methods**	**Schedule Information**	**Integrating Factors**
CHPRC, D&D, Project, Balance of Site	PUREX	202-A, 203-A, 204-A, 206-A, 211-A, 212-A, 213-A, 214-A/B/C/D, 215-A, 216-A, 225-EC, 271-AB, 276-A, 281-A, 291-A, 291-AB/AC/AD /AE/AG/AH/AJ /AK., 291-A-1, 292-AA/AB, 293-A, A93-AA, 294-A, 295-A, 295-AA/AB/AC /AD/AE, 296-A-1, 296-A-2, 296-A-3, 296-A-5A/5B, 296-A-6/7/8/9/ 10/14/ 24, 2711-A-1. 2712-A, 2714-A/U, 217-A, 252-AC/AB, 216-A-5 (IMUST)	S&M Plan, DOE/RL-98-35, identifies the hazardous material remaining in the facility. Tank heels relate to TSD tank system and 216-A-5.	S&M Plan, DOE/RL-98-35, identifies the hazardous material remaining in the facility.	DOE assessment: N/A.	Data gap plan: N/A Starting TPA negotiations: Complete. Any additional negotiations will be completed in accordance with the Tri-Party Agreement Action Plan Section 8.6.2.	PUREX is in the S&M phase of the facility decommissioning process described in Chapter 8.0 of the Tri-Party Agreement. Final disposition of the IMUST at PUREX will be scheduled such that the activities are performed concurrently. See the stored/ forecasted portion of the report for TSD waste storage at PUREX.

Table C-2. Potential Mixed Waste. (21 sheets)

A	B	C	D	E	F	G	H
Company, Project	**Common Name or Description**	**Facility Number**	**Solid Waste, with Potential for Mixed Waste, Not Integral to the Building or Structure (No Use)**	**Materials, with Potential to Become Solid Waste and Subsequently Mixed Waste (in Standby, Possible Use), or Recycled**	**DOE Assessment of Storage Methods**	**Schedule Information**	**Integrating Factors**
CHPRC, D&D Project, Balance of Site	REDOX	202-S, 291-S, 292-S, 293-S, 2718-S, 211-S, 2711-S, 2715-S, 2904-SA, 2710-S, 2706-S,	S&M Plan, DOE/RL-98-19, identifies the hazardous material remaining in the facility.	S&M Plan, DOE/RL-98-19, identifies the hazardous material remaining in the facility.	DOE assessment: N/A.	Data gap plan: N/A Starting TPA negotiations: Complete. Any additional negotiations will be completed in accordance with the Tri-Party Agreement Action Plan Section 8.6.2.	REDOX is in the S&M phase of the facility decommissioning process described in Chapter 8.0 of the Tri-Party Agreement.
CHPRC, D&D Project, Balance of Site	U Plant	221-U, 276-U, 211-UA, 291-U, 292-U, Tk-10 in cell 30 241-WR-001, 241-WR-002, 241-WR-003, 241-WR-004, 241-WR-005, 241-WR-006, 241-WR-007, 241-WR-008, 241-WR-009.	S&M Plan, DOE/RL-98-20, identifies the hazardous material remaining in the facility and 241-WR Vault.	S&M Plan, DOE/RL-98-20, identifies the hazardous material remaining in the facility.	DOE assessment: N/A.	Data gap plan: N/A Starting TPA negotiations: Complete. Any additional negotiations will be completed in accordance with the Tri-Party Agreement Action Plan Section 8.6.2.	The U Plant facility is being dispositioned under RD/RAWP 2006-21 approved in February 2009. Work is ongoing to consolidate equipment in cells so the portion of the canyon below the cover blocks can be grouted.

Table C-2. Potential Mixed Waste. (21 sheets)

A	B	C	D	E	F	G	H
Company, Project	**Common Name or Description**	**Facility Number**	**Solid Waste, with Potential for Mixed Waste, Not Integral to the Building or Structure (No Use)**	**Materials, with Potential to Become Solid Waste and Subsequently Mixed Waste (in Standby, Possible Use), or Recycled**	**DOE Assessment of Storage Methods**	**Schedule Information**	**Integrating Factors**
CHPRC, D&D Project, Balance of Site	UO3 Facility	224-U, 203-UX, 211-U, 224-UA, 211-UA, 270-W	S&M Plan, DOE/RL-98-22, identifies the hazardous material remaining in the facility.	S&M Plan, DOE/RL-98-22, identifies the hazardous material remaining in the facility.	DOE assessment: For 270-W, initiated 2nd quarter CY 2007 (see Table 2-1).	Data gap plan: for 270 W, 1st quarter 2011. Starting TPA negotiations: Complete. Any additional negotiations will be completed in accordance with the Tri-Party Agreement Action Plan Section 8.6.2.	The 272-U, 2715-UA, 203-U, and 2716-U, among others, were dispositioned under phase I of a CERCLA action memorandum calling for demolition of the facilities. 207-U is part of the 200-CW-5 CERCLA OU, and 270-W is part of the 200-PW-2 CERCLA OU. Phase II of the facility demolition to remove the rest of the above ground structures, including 224-U and 224-UA, is in progress under RAWP, DOE/RL-2004-83.

Table C-2. Potential Mixed Waste. (21 sheets)

A	B	C	D	E	F	G	H
Company, Project	**Common Name or Description**	**Facility Number**	**Solid Waste, with Potential for Mixed Waste, Not Integral to the Building or Structure (No Use)**	**Materials, with Potential to Become Solid Waste and Subsequently Mixed Waste (in Standby, Possible Use), or Recycled**	**DOE Assessment of Storage Methods**	**Schedule Information**	**Integrating Factors**
CHPRC, Waste and Fuels Management Project	T Plant Canyon, RR Tunnel, Head-end	221-T	Process cells containing an inventory of PMW include inaccessible cells, process cells proposed to be cleaned, and process cells with potentially no proposed future uses. Inaccessible cells include: 20R, 20L, and 16L. Proposed cells to be cleaned include (subject to change): 19R, 18R, 10R, and 7R. Cells with potentially no proposed future uses include (subject to change): 19L, 18L, 17L, 14L, 12R, 12L, 9R, 8L, 6R, 4R, 4L, and 3R. Examples of inventory are jumpers, tanks, pumps, pump racks, centrifuges, fuel racks, fuel canisters, and agitators.	Items having the potential for reuse include cover blocks, lead shielding (including portable lead walls), hand tools and tool boxes, metal ramp, chokers and slings, hoists, railroad ties, portable fences, cutters (e.g., jaws), portable pumps and hoses, impact wrenches, spill pallets, HEPA vacuums, HEPA filter and duct work, torch cart and welding cart, work bench, portable exhauster, aqueous make-up tanks, drum crusher, plasma arc cutter.	DOE assessment: 3rd quarter CY 2005.	Cells with no proposed future use will be addressed when final decommissioning of the canyon takes place. Data gap plan: 3rd quarter CY 2007. RL responded to Ecology comments in October 2007. Starting TPA negotiations: Completed. These activities have been discussed with Ecology during the T Plant Complex Dangerous Waste Permit Application Part A and Part B negotiations.	Milestone M-91-01 and RCRA permitting schedule. Schedules for processing and operational activities on the canyon floor will impact the schedule for disposition of this PMW.

Table C-2. Potential Mixed Waste. (21 sheets)

A	B	C	D	E	F	G	H
Company, Project	**Common Name or Description**	**Facility Number**	**Solid Waste, with Potential for Mixed Waste, Not Integral to the Building or Structure (No Use)**	**Materials, with Potential to Become Solid Waste and Subsequently Mixed Waste (in Standby, Possible Use), or Recycled**	**DOE Assessment of Storage Methods**	**Schedule Information**	**Integrating Factors**
CHPRC, Waste and Fuels Management Project	T Plant Canyon Cell 11-L	221-T	Tank in Cell 11-L. The cell 11-L tank contains approximately 500 gallons of a green liquid and saltcake mixture that will be designated as F001-F005, D002, D006, D007, D008, and D010 when removed from the tank.	None	DOE assessment: 3rd quarter CY 2005.	Cell 11-L will be dispositioned along with the other RCRA-past practice process cells in the T Plant canyon. Data gap plan: 3rd quarter CY 2007. Currently resolving Ecology comments. Starting TPA negotiations: Completed. These activities have been discussed with Ecology during the T Plant Complex Dangerous Waste Permit Application Part A and Part B negotiations.	Any commitment date will be dependent on the outcome of the Canyon Disposition Initiative. Milestone M-91-01 and RCRA permitting Schedules for processing and operational activities on the canyon floor will impact the schedule for disposition of this PMW.
CHPRC, Waste and Fuels Management Project	T Plant Complex IMUSTs	292-TK-1 and 292-TK-2	292-TK-1 and 292-TK-2 consist of two stainless steel 55-gallon drums encased in concrete. These units contained a mixture of irradiated fuel and nitric acid. The solutions in the tanks were then neutralized with molar equivalents of sodium hydroxide.	None	DOE assessment: 3rd quarter CY 2005.	This Waste Information Data System (WIDS) site will be addressed as part of the CERCLA remediation activity. Data gap plan: 3rd quarter CY 2007. Currently resolving Ecology comments. Starting TPA negotiations: Negotiations are not anticipated	Tanks are part of 200-IS-1 CERCLA remediation process.

Table C-2. Potential Mixed Waste. (21 sheets)

A	B	C	D	E	F	G	H
Company, Project	**Common Name or Description**	**Facility Number**	**Solid Waste, with Potential for Mixed Waste, Not Integral to the Building or Structure (No Use)**	**Materials, with Potential to Become Solid Waste and Subsequently Mixed Waste (in Standby, Possible Use), or Recycled**	**DOE Assessment of Storage Methods**	**Schedule Information**	**Integrating Factors**
CHPRC, Waste and Fuels Management Project	Waste Neutralization Facility (340-Vault Tanks)	340	340 Vault tank heels and clean out residues and associated equipment (valves, piping, pumps, light fixtures) may designate as MW.	None.	DOE assessment: Completed 4th quarter CY 2004.	Potential MW disposition will be performed in accordance with Tri-Party Agreement milestones M-094-00, Complete Disposition of 300 Area Surplus Facilities (due 9/30/2015) and M-092-16, Complete Removal and Transfer, and Initiate Storage or Phase III SCW Waste and Materials (due 9/30/2015) Data gap plan: Completed 4th quarter CY 2004. Starting TPA negotiations: Completed as part of the River Corridor negotiations	The schedule information in Column G is subject to change in accordance with Section 12.0, *Changes to the Agreement*, of the Tri-Party Agreement Action Plan.

Table C-2. Potential Mixed Waste. (21 sheets)

A	B	C	D	E	F	G	H
Company, Project	**Common Name or Description**	**Facility Number**	**Solid Waste, with Potential for Mixed Waste, Not Integral to the Building or Structure (No Use)**	**Materials, with Potential to Become Solid Waste and Subsequently Mixed Waste (in Standby, Possible Use), or Recycled**	**DOE Assessment of Storage Methods**	**Schedule Information**	**Integrating Factors**
Battelle Memorial Institute, Pacific Northwest National Laboratory	Radiochemical Processing Laboratory	325	Tank system formerly used for product materials subsequently used as feedstock for research projects. Tanks have been drained and flushed, but remain in place.	Hot cells, hoods, and gloveboxes used for radioactive materials and waste analysis and research (reused as needed for new or expanded research activities) Obsolete and no longer useable contaminated equipment and materials. Equipment containing approximately 5 tons of lead in numerous contaminated shipping containers, sample carriers, lead bricks, and other lead items.	DOE assessment: Completed 4th quarter CY 2001.	Data gap plan: Completed 4th quarter CY 2002 Starting TPA negotiations: N/A (no data gaps identified)	Part of an active facility; no special hazards known.
Washington River Protection Solutions, LLC (WRPS), Tank Farms	702-A Ventilation Building	241-A-702	Seal pot that received liquids from the HEPA pre-heater.	None	DOE Assessment: Completed 4th Quarter 2004.	Data gap plan: None, as sample analysis for similar ventilation systems indicate it is unlikely the heel in the seal pot will designate as mixed waste. Starting TPA negotiations: N/A.	None

Table C-2. Potential Mixed Waste. (21 sheets)

A	B	C	D	E	F	G	H
Company, Project	**Common Name or Description**	**Facility Number**	**Solid Waste, with Potential for Mixed Waste, Not Integral to the Building or Structure (No Use)**	**Materials, with Potential to Become Solid Waste and Subsequently Mixed Waste (in Standby, Possible Use), or Recycled**	**DOE Assessment of Storage Methods**	**Schedule Information**	**Integrating Factors**
WRPS, Tank Farms	Double-Shell Tank Farms	241-AN, AW, AP, AY, AZ, SY	Contaminated unusable equipment, e.g., ductwork, exhausters, piping, etc.	None	DOE Assessments: Completed 4th Quarter 2004.	Data gap plan: The equipment will be handled in accordance with waste management procedure as it is removed. Starting TPA negotiations: N/A. Equipment will be taken care of on a continuous basis.	Tank Retrieval and Closure, Permit Conditions.
WRPS, Tank Farms	Single-Shell Tank Farms	241-A, AX, B, BX, BY, C, T, TX, TY, S, SX, U, 244-AR, 244-CR	Contaminated unusable equipment, e.g., ductwork, exhausters, piping, ion exchange columns, etc.	None	DOE Assessments: Completed 4th Quarter 2004.	Data gap plan: The equipment will be handled in accordance with waste management procedures as it is removed. Starting TPA negotiations: N/A Equipment will be taken care of on a continuous basis.	Tank Retrieval and Closure, Permit Conditions.

Table C-2. Potential Mixed Waste. (21 sheets)

A	B	C	D	E	F	G	H
Company, Project	**Common Name or Description**	**Facility Number**	**Solid Waste, with Potential for Mixed Waste, Not Integral to the Building or Structure (No Use)**	**Materials, with Potential to Become Solid Waste and Subsequently Mixed Waste (in Standby, Possible Use), or Recycled**	**DOE Assessment of Storage Methods**	**Schedule Information**	**Integrating Factors**
WRPS, Tank Farms	Evaporators	242-S, T	Liquids/solids in process tanks and contaminated equipment, piping, and debris.	None	DOE Assessment: Completed 4th Quarter 2005.	Data gap plan: Deferred until facility enters D&D due to industrial and radiological safety concerns with entering the portions of the facility necessary to gather meaningful data. Starting TPA negotiations: N/A.	None

Table C-2. Potential Mixed Waste. (21 sheets)

A	B	C	D	E	F	G	H
Company, Project	**Common Name or Description**	**Facility Number**	**Solid Waste, with Potential for Mixed Waste, Not Integral to the Building or Structure (No Use)**	**Materials, with Potential to Become Solid Waste and Subsequently Mixed Waste (in Standby, Possible Use), or Recycled**	**DOE Assessment of Storage Methods**	**Schedule Information**	**Integrating Factors**
WRPS, Tank Farms	IMUSTs not associated with a building	200-W-7 (243-S-TK-1), 231-W-151, 240-S-302, 241-A-302B 241-B-301B, 241-B-302B, 241-BX-302A, 241-BX-302B, 241-BX-302C, 241-C-301C 241-ER-311A 241-S-302A and B, 241-SX-302, 241-T-301, 241-TX-302A and B, 241-TX-302BR, 241-TX-302X, 241-TY-302A and B, 241-Z-8, 242-T-135, 241-TA-R1, 244-BXR (Vault), 244-TXR (Vault), 244-UR (Vault)	Tank system heels and contaminated equipment associated with each IMUST	None	DOE assessment, 3rd Quarter 2001.	Data gap plan: Deferred until closure of specific Waste Management Area.	SST Retrieval, SST Permit Conditions, Tank/Waste Management Area Closure Requirements.

Table C-2. Potential Mixed Waste. (21 sheets)

A	B	C	D	E	F	G	H
Company, Project	**Common Name or Description**	**Facility Number**	**Solid Waste, with Potential for Mixed Waste, Not Integral to the Building or Structure (No Use)**	**Materials, with Potential to Become Solid Waste and Subsequently Mixed Waste (in Standby, Possible Use), or Recycled**	**DOE Assessment of Storage Methods**	**Schedule Information**	**Integrating Factors**
WRPS, Tank Farms	Miscellaneous Building	241-A-431, 241-C-801, 241-SX-401, 241-SX-402	Liquids/solids in piping and debris.	None	DOE Assessments completed: 2nd Quarter 2004, 3rd Quarter 2002, 1st Quarter 2001.	Data gap plan: Deferred until closure of specific Waste Management Area.	SST Retrieval, WTP Construction, Permit Conditions.
Washington Closure Hanford, LLC (WCH), River Corridor Closure	100-B Reactor Facilities	105-B	Miscellaneous contaminated material remains in the facility.	None	DOE assessment: Completed 6/15/2004. Assessment excludes reactor.	Data gap plan: Completed 6/15/2004 Starting TPA negotiations: Approval of Tri-Party Agreement Change Request M-093-01-02 completed Tri-Party Agreement Milestone M-093-14, Initiate Negotiations for the Remaining Surplus Reactor Disposition Schedules.	The reactor is a key facility under Section 8.0 of the Tri-Party Agreement.
WCH, River Corridor Closure	100 Area Waste/Material Transport Containers	100 Area Reactor Facilities (Primarily N and K Area)	None	Containers being stored for future shipment of waste to be treated, disposed, or recycled.	DOE assessment: N/A.	If not used, containers will be dispositioned with facility D&D in the 100 Areas. Data gap plan: N/A Starting TPA negotiations: Negotiations are not anticipated.	None.

Table C-3. Historical List of Materials Deleted from Potential Mixed Waste Table. (5 sheets)

Common Name or Description	Facility Number	Last Calendar Year Reported in Table C-2	"Stuff"/Material Deleted	Reason for Deletion
100-K Area	105 KE and 105 KW	2009	Leak blankets. Neutron detectors with boron tri-fluoride tubes.	The lead was sent to ERDF for disposal. The neutron detectors were shipped to CWC as TRUM.
200 North Area	212-N, 212-P, 212-R	2009	212-R contained a burial box with some radiologically-contaminated equipment. 212-P used to store PCBs.	The buildings and the burial box have been demolished and the waste was sent to ERDF.
100-K Area	105-KE	2008	Chemicals in storage cabinets, and lead used as shielding for Ion Exchange Columns and piping.[1]	Chemicals were redispositioned for use at 105-KW or disposed of as appropriate. Lead was reused or dispositioned as waste.
231-Z	231-Z	2008	Chemicals in gloveboxes.[1]	Activities to remove chemicals from gloveboxes were completed in 2008.
U-Plant	2716-U, 2714-U	2007	Section 7.0 of the S&M plan, DOE/RL-98-20, Revision 0 indicated that 2714-U contained eleven 55-gal drums, but is not specific on the type of hazardous materials.	A partial deletion from the potential mixed waste table. 2716-U and 2714-U, among others, were dispositioned under a CERCLA action memorandum calling for demolition of the structures.
Mixed waste storage and treatment tanks	241Z	2007	Heels, associated piping, line flushing and sludge cleanout of Tank D-6. Tank D-6 deactivated in 1972 because of failure. Waste transferred from tank and tank/piping isolated.[1]	The 241-Z tank system has been clean closed, and tank D-6 heels were removed, the piping was removed, and the floor was cleaned. The end point criteria requirements were addressed.
200 Area North	212-N	2007	14 wooden boxes in the transfer bay of suspected TRUM nuclear fuel fabrication equipment from the 308 Building.[1]	A partial deletion from the potential mixed waste table. The boxes were transferred to the Central Waste Complex.
327 Building	327	2005	Lead bricks.	The building is undergoing deactivation and demolition is planned for 2010.
333 Building	333	2005	Miscellaneous equipment, piping, and ductwork.	The building was deactivated and demolished in CY 2006. Equipment, piping, and ductwork disposed at ERDF.

Table C-3. Historical List of Materials Deleted from Potential Mixed Waste Table. (5 sheets)

Common Name or Description	Facility Number	Last Calendar Year Reported in Table C-2	"Stuff"/Material Deleted	Reason for Deletion
100-K Area	105-KW	2005	Lead in the back of a utility truck.[1]	The lead in the truck was removed from the vehicle and sent to the ERDF facility for disposal
3711 Building	3711[1]	2004	Lead cask, pipe, pipe joints and metal railing contaminated with lead.	Matrices were disposed of in 2005.
2711-E	2711-E	2004	Radiator from crane-suspect lead solder.	Matrices were disposed of in 2005.
U03	203-U, 2715-UA, 272-U	2004	Any matrices described in the UO[3] S&M Plan, DOE/RL-98-22.	203-U, 2715-UA, and 272-U have been demolished as part of the CERCLA Removal Action.
U Plant	2716-U, 275-UR	2004	Any matrices described in the U Plant S&M Plan, DOE/RL-98-20.	2714-U and 275-UR have been demolished as part of the CERCLA Removal Action.
Heavy Equipment Staging Area	4734D	2004	Heavy equipment components.	Equipment is no longer cleaned at this location.
PFP Facilities	232-Z, 236-Z, and portions of 234-5Z.	2003	Incinerator and leaching gloveboxes. Inactive process tanks, piping, and control equipment. Reclamation tanks, piping, and control equipment. Miscellaneous tools.[1]	Materials have been dispositioned, did not meet the definition of PMW, or are forecasted to be generated as MW.
340 Facility Complex	340-A, 340-B, and 300 RLWS	2003	Tanks, process piping, ancillary equipment and related equipment.[1]	Facilities did not contain MW or PMW
100 Areas Facilities	Many	2003	Miscellaneous contaminated material	Facilities did not contain MW or PMW
100-N Lead Storage Area	1714-N	2002	Lead sheeting and bricks, lead lined containers, and a lead lined survey booth.	Matrix is now included in the Location-Specific Data Sheet for CERCLA lead under the ERDF – Treatment treatability group.
242-A Evaporator	242-A	2002	Ion exchange column(s)	The ion exchange column(s) were disposed on-site.
314	314	2002	Large equipment previously used in the facility	LDR assessment concluded facility contained no MW or PMW.[2]
3708	3708	2002	Solid obsolete laboratory equipment	LDR assessment concluded facility contained no MW or PMW.[2]

Table C-3. Historical List of Materials Deleted from Potential Mixed Waste Table. (5 sheets)

Common Name or Description	Facility Number	Last Calendar Year Reported in Table C-2	"Stuff"/Material Deleted	Reason for Deletion
Heavy Equipment Staging Area	2711E	2001	Miscellaneous equipment	No material left at this location, as it was shipped off-site for reuse.
Rad. Storage Area	3711	2001	Lead bricks	Shipped 9/26/2001 to Duratek Inc. in Memphis, TN for decontamination/lead casting
Waste Storage Building	2724WB	2001	Radiators (from motor vehicles)	Shipped 9/26/2001 to Duratek, Inc in Memphis, TN for decontamination/metal melt
Plutonium Finishing Plant	234-5Z	2001	E1: Laboratory Reagents E2: Archive Laboratory Samples E3: PR cans that have lead liners. E4: Low-grade SNM solutions not run through the precipitation process, but with potential to become solid waste (e.g. the direct discard process).[1]	E1: These chemicals are in use within the laboratory. E2: Samples are archived in accordance with sample exclusion. E3 and E4: Material is now included on location-specific data sheets. Note: Only the contents noted were removed from Table C-2. Table C-2 still contains other potential waste in this location.
MW Treatment and Storage Tanks	241-Z	2001	Tank D-9, Treatment chemicals[1]	Tank D9 is in use to mix treatment chemicals. Treatment chemicals are in use in transferring waste from the Plutonium Finishing Plant to Double Shell Tanks. Note: Only the contents noted were removed from Table C-2. Table C-2 still contains other potential waste in this location.
Waste Handling Facility	219-S	2001	Tank 103 and heel content	Combined with existing location-specific data sheet for the 219-S WHF.
300-RRLWS	RRLWS	2001	Retired radioactive liquid waste sewer piping and ancillary structures might designate as MW.	Below-ground structure: Does not meet reporting criteria for Potential Mixed Waste Table.
2706-T Conex Box	Conex box CC2W0136 and CC2W137	2001	Various decontamination equipment, spill pallets, shipping coolers, carts, hoses, storage cabinets, and sampling equipment.	These conex boxes were opened and the contents visually verified and photographs taken. The photographs clearly demonstrate that the equipment is readily accessible. The equipment will be used in the future as part of the 2706-T Complex operations (e.g., decontamination, sampling, etc.). The photographs are maintained in the T Plant Complex operating record.

Table C-3. Historical List of Materials Deleted from Potential Mixed Waste Table. (5 sheets)

Common Name or Description	Facility Number	Last Calendar Year Reported in Table C-2	"Stuff"/Material Deleted	Reason for Deletion
224-T (Includes Transuranic Waste Storage and Assay Facility [TRUSAF])	224-T	2001	Liquid in the sumps and the deep cell. Two cardboard boxes in the cells.[1]	Determined to not have a hazardous component, and therefore not a mixed waste. Note: Only the contents noted were removed from Table C-2. Table C-2 still contains other potential waste in this location.
C855 (CAT) Substation	252U	2001	Transformer	The transformer has been designated and found not to have a dangerous component. Therefore, it is not mixed waste.
324	324	2001	Shielded glovebox. Potential mixed waste residue. Former Silver List Item 11.8	Glovebox was included in the 4th quarter CY 2002 LDR storage assessment and determined to contain only floor sweeps.
200 ETF	2025E	2001	Thin film dryer rotor	Rotor was rebuilt for reuse at the 200 ETF.
100 K Basins	105-KW	2001	Lead bricks, sheets	The lead has been declared CERCLA waste. A location-specific data sheet was created.
Environmental Sciences Laboratory	3720	2001	Laboratory equipment, hoods and gloveboxes used for radioactive materials and waste analysis and research (reused as needed for new or expanded research activities)	On-site inspection revealed that contaminated equipment is in use. Hoods and gloveboxes listed are part of the structure of the building.[2]
100 C Reactor Facility	105-C, 118-C-4	2001	Reactor core and equipment remaining in the facility.	Reactor core was part of the structure of the building. Mixed waste is removed during the reactor interim safe storage.
100 D/DR Reactor Facility	105-D, 105-DR, 117-DR, 190-DR	2001	Reactor core and equipment remaining in the facility.	Reactor core was part of the structure of the building. Mixed waste is removed during the reactor interim safe storage.
100 F Reactor Facility	105-F	2001	Reactor core and equipment remaining in the facility.	Reactor core was part of the structure of the building. Mixed waste is removed during the reactor interim safe storage.
100 H Reactor Facility	105-H, 1720-HA, 1713-H	2001	Reactor core and equipment remaining in the facility.	Reactor core is part of the structure of the building. Mixed waste was removed during the reactor interim safe storage.

Table C-3. Historical List of Materials Deleted from Potential Mixed Waste Table. (5 sheets)

Common Name or Description	Facility Number	Last Calendar Year Reported in Table C-2	"Stuff"/Material Deleted	Reason for Deletion
100-N Reactor Facilities	See Table 1, S&M Plan for the 100-N Deactivated Facilities, DOE/RL-98-64, Rev. 0	2001	Some remaining hazardous materials consisting of activated materials and fission products contained within the reactor block. (Further details are provided in DOE/RL-98-64, Rev. 0, S&M Plan for the 100-N Area Deactivated Facilities)	Reactor core is part of the structure of the building. Mixed waste was removed during the reactor decommissioning.
REDOX	276-S-141/142	2001	Tanks and heel content	A treatability group was developed to account for the 276-S-141/142 tanks. (See Appendix B).
Semi Works	241-CX-70, 241-CX-71, 241-CX-72, 276-C	2001	Tanks and heel content	A treatability group was developed to account for the 241-CX tanks. (See Appendix B).

[1]Additional potential mixed waste is identified in Table 1-4 for this location.
[2]Facility has been demolished subsequent to this entry.