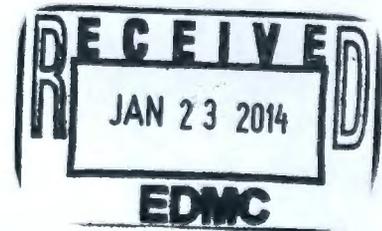


Calendar Year 2012 Hanford Site Mixed Waste Land Disposal Restrictions Summary Report

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



Attached to: 1220235
M-02601W

Calendar Year 2012 Hanford Site Mixed Waste Land Disposal Restrictions Summary Report

R. E. Piippo
Mission Support Alliance

Date Published
March 2013

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

By Janis D. Aardal at 7:43 am, Mar 21, 2013

Release Approval

Date

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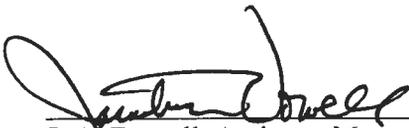
PRIMARY DOCUMENT STATEMENT

**CALENDAR YEAR 2012 HANFORD SITE MIXED WASTE LAND
DISPOSAL RESTRICTIONS SUMMARY REPORT**

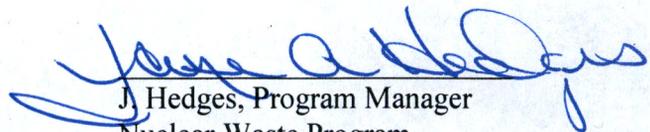
Approval of the U.S. Department of Energy's annual land disposal restriction report as a *Hanford Federal Facility Agreement and Consent Order* primary document shall be by written approval of U.S. Department of Energy and State of Washington, Department of Ecology Interagency Management Integration 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-026-01 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*.

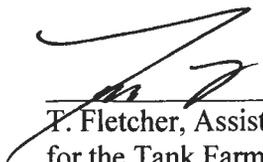
Approved and issued this 16th day of January 2013.



J. A. Dowell, Assistant Manager
for Central Plateau
U.S. Department of Energy,
Richland Operations Office



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



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

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CONTENTS

1.0	INTRODUCTION	1-1
1.1	CALENDAR YEAR 2012 LAND DISPOSAL RESTRICTIONS SUMMARY REPORT OVERVIEW	1-2
1.2	SUMMARY INVENTORY OF WASTE TREATMENT GROUPS AND FORECAST GENERATION RATES.....	1-4
1.3	POTENTIAL MIXED WASTE.....	1-4
2.0	ASSESSMENTS OF MIXED WASTE STORAGE AREAS AND POTENTIAL MIXED WASTE.....	2-1
2.1	INTRODUCTION	2-1
2.2	ASSESSMENT SCHEDULES	2-1
3.0	SUMMARY OF CHARACTERIZATION INFORMATION	3-1
4.0	SUMMARY OF TREATMENT INFORMATION.....	4-1
5.0	STORAGE VOLUME AND CONTAINER NUMBERS FOR SELECTED STORAGE LOCATIONS	5-1
6.0	REFERENCES	6-1

TABLES

Table 1-1.	Stored Volumes of Mixed Waste and Generation Projections.....	1-6
Table 1-2.	Treatability Group Summary of Storage, Characterization, and Treatment Activities	1-14
Table 1-3.	Explanation of Table 1-4, Potential Mixed Waste	1-17
Table 1-4.	Potential Mixed Waste	1-19
Table 1-5.	Historical List of Materials Deleted from Potential Mixed Waste Table.....	1-39
Table 2-1.	Summary of U.S. Department of Energy, Richland Operations Office Assessment Results.	2-1
Table 2-2.	U.S. Department of Energy, Richland Operations Office Assessments for Calendar Years 2012 through 2014.....	2-2
Table 2-3.	U.S. Department of Energy, Office of River Protection Assessments for Calendar Year 2012 through 2014.	2-2
Table 3-1.	Summary of Characterization Information for Each Treatability Group	3-1
Table 4-1.	Summary of Treatment Information for Each Treatability Group	4-2
Table 5-1.	Storage Volume and Number of Containers for Selected Hanford Locations	5-1

ACRONYMS

BDAT	Best demonstrated available technology
CERCLA	<i>Comprehensive Environmental Response, Compensation, and Liability Act of 1980</i>
CFR	Code of Federal Regulations
CH	Contact handled
CHPRC	CH2M HILL Plateau Remediation Company
CWC	Central Waste Complex
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	State of Washington, Department of Ecology
EPA	U.S. Environmental Protection Agency
ERDF	Environmental Restoration Disposal Facility
ETF	Effluent Treatment Facility
FFTF	Fast Flux Test Facility
FY	Fiscal year
HEPA	High-efficiency particulate air (filter)
HSTF	Hexone Storage and Treatment Facility
HWTU	Hazardous Waste Treatment Unit
IMUST	Inactive miscellaneous underground storage tank
ISS	Interim safe storage
LDR	Land disposal restrictions
LERF	Liquid Effluent Retention Facility
LLBG	Low-level burial ground
MLLW	Mixed low-level waste
N/A	Not applicable
O/C	Organic/carbonaceous
OU	Operable unit
PCB	Polychlorinated biphenyl
PFP	Plutonium Finishing Plant
PMW	Potential mixed waste
PMWT	Potential mixed waste table
PUREX	Plutonium-Uranium Extraction (Plant)

RADTU	Radioactive Acid Digestion Test Unit
RAWP	Removal Action Work Plan
RCRA	<i>Resource Conservation and Recovery Act of 1976</i>
RD	Remedial design
REC	Radiochemical engineering cells
REDOX	Reduction-Oxidation (S Plant)
RH	Remote handled
RI/FS	Remedial investigation/feasibility study
RLWS	Radioactive Liquid Waste System
ROD	Record of Decision
S&M	Surveillance & Maintenance
SNM	Special nuclear material
SST	Single-shell tank
TPA	<i>Hanford Federal Facility Agreement and Consent Order (Tri-Party Agreement)</i>
TRU	Transuranic (waste)
TRUM	Transuranic mixed (waste)
TRUSAF	Transuranic Waste Storage and Assay Facility (224-T)
TSCA	<i>Toxic Substances Control Act of 1976</i>
TSD	Treatment, storage, and/or disposal
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 (Carlsbad, NM)
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
WTP	Waste Treatment 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.

1.0 INTRODUCTION

The information in the *Calendar Year 2012 Hanford Site Mixed Waste Land Disposal Restrictions Summary Report* (CY 2012 LDR Summary Report) is prepared in accordance with the *Hanford Federal Facility Agreement and Consent Order* (Tri-Party Agreement) (Ecology et al. 1989) Milestone M-26-01W. The CY 2012 LDR Summary Report reports on the status of Hanford Site land disposal restricted mixed waste, other mixed waste, and other waste the U.S. Department of Energy (DOE); State of Washington, Department of Ecology (Ecology); and U.S. Environmental Protection Agency (EPA) have agreed to include in this report. The reporting period for this document is from January 1, 2012, to December 31, 2012.

The content and format for the CY 2012 LDR Summary Report was established in Tri-Party Agreement (TPA) change request M-26-06-01 following a pilot activity for the CY 2005 reporting period. The following text has been reproduced from the change request for meeting Milestone M-26-01W:

“Submit an annual Hanford Land Disposal Restrictions (LDR) Summary Report in accordance with the agreement requirements to cover the period from January 1st through December 31st of the reporting year. The Hanford Land Disposal Restrictions Summary Report will contain the following elements:

- Section 1.0: Introduction
- Section 1.1: Calendar Year 20xx Land Disposal Restrictions Summary Report Overview (where xx will be the reporting year)
- Section 1.2: Summary Inventory of Waste Treatment Groups and Forecast Generation Rates
- Section 1.3: Potential Mixed Waste
- Section 2.0: Assessments of Mixed Waste Storage Areas and Potential Mixed Waste
- Section 2.1: Introduction
- Section 2.2: Assessment Schedules
- Section 3.0: Summary of Characterization Information
- Section 4.0: Summary of Treatment Information
- Section 5.0: Storage Volume and Container Numbers for Selected Storage Locations
- Section 6.0: References
- Table 1-1: Stored Volumes of Mixed Waste and Generation Projections

- Table 1-2: Treatability Group Summary of Storage, Characterization, and Treatment Activities
- Table 1-3: Explanation of Table 1-4, Potential Mixed Waste
- Table 1-4: Potential Mixed Waste
- Table 1-5: Historical List of Materials Deleted From Potential Mixed Waste Table
- Table 2-1: Summary of U.S. Department of Energy, Richland Operations Office Assessment Results
- Table 2-2: U.S. Department of Energy, Richland Operations Office Assessments for Calendar Years 2005 Through 2007 (updated for next three years until no assessments are scheduled)
- Table 2-3: Summary of U.S. Department of Energy, Office of River Protection Assessment Results
- Table 3-1: Summary of Characterization Information for Each Treatability Group
- Table 4-1: Summary of Treatment Information for Each Treatability Group
- Table 5-1: Storage Volume and Number of Containers for Selected Hanford Locations

Table 5-1 will contain the storage volume and the number of containers reported for the following Hanford Site locations: 200 Area Effluent Treatment Facility (ETF), 222-S, 324, 325 Hazardous Waste Treatment Unit (HWTU), Central Waste Complex (CWC), Low-Level Burial Ground (LLBG), Plutonium Finishing Plant (PFP), T Plant Complex, Waste Receiving and Processing Facility (WRAP), and Waste Sampling and Characterization Facility (WSCF).

NOTE: The list for Table 5-1 may change periodically. The change will be made via approval of the applicable Project Managers Meeting minutes documented and approved on or before November 30th of each year. If no changes to the list are indicated, the list will remain unchanged.”

The last reporting location change for Table 5-1 was approved through the Project Managers Meeting on November 18, 2008. At that meeting, it was agreed to delete the entry for the 327 Building.

1.1 CALENDAR YEAR 2012 LAND DISPOSAL RESTRICTIONS SUMMARY REPORT OVERVIEW

This report presents waste stream information provided in accordance with Section 6.1 of the Tri-Party Agreement Action Plan and supporting milestones and documentation. The waste streams reported under the Tri-Party Agreement include those described in the requirements of the *Federal Facility Compliance Act of 1992* for DOE sites that prepare a Site Treatment Plan along with other waste streams required under Tri-Party Agreement documentation. Although the Hanford Site is exempt from the requirements to prepare a Site Treatment Plan, the LDR

Summary Report is considered equivalent to a Site Treatment Plan. The *Federal Facility Compliance Act of 1992* was enacted, in part, to address the inability of some mixed waste to meet requirements of the storage prohibition in Title 40 Code of Federal Regulations (CFR) Part 268.50, "Prohibitions on Storage of Restricted Wastes." Washington Administrative Code (WAC) 173-303-140, "Land Disposal Restrictions," incorporates the federal storage prohibition by reference. EPA guidance (*Guidance on the Land Disposal Restrictions' Effect on Storage and Disposal of Commercial Mixed Waste*, EPA 1990) indicates which mixed waste is subject to the storage prohibition.

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 *Comprehensive Environmental Response, Compensation, and Liability Act of 1980* (CERCLA) off-site rule (40 CFR 300.440, "Procedures for Planning and Implementing Off-site Response Actions"). 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 the Environmental Restoration Disposal Facility (ERDF).

The CY 2012 LDR Summary Report provides aggregate waste stream data based on a set of waste treatability groups and provides selected data on location-specific sources of waste as stated in the M-026-01W interim milestone description. The waste from location-specific sources is included in the appropriate treatability groups. 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 ("M-026 LDR Report Project Manager Meeting Minutes," Ecology et al. 2003). If any storage of the mixed waste occurs, or is forecasted to occur, the mixed waste must be reported. Mixed waste currently in satellite accumulation areas or in 90-day accumulation areas is not considered currently stored inventory, but is included as forecast waste generation.

Other materials and items currently on the Hanford Site that might be designated as mixed waste in the future are described in Section 1.3, and are identified as potential mixed waste.

2012 Changes

- A new treatability group, Waste Treatment Plant (WTP) Lab Complex, has been established and added to Table 1-4, Potential Mixed Waste, as the WTP Lab has forecasted the generation of waste in 2017 from methods development for equipment calibration.
- Waste/Material Transport Containers from the 100 Area Reactor Facilities (Primarily N and K Area) have been dispositioned with facility decontamination and decommissioning (D&D) in the 100 Areas and have been removed from Table 1-4, Potential Mixed Waste. Table 1-5,

Historical List of Materials Deleted from Potential Mixed Waste Table, has been updated to include the waste/material transport containers from the 100 Area reactor facilities.

1.2 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 1-1. 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 is not reported. Table 1-2 presents an overall summary of the storage, characterization, treatment, and disposal activities for the treatability groups. Table 1-2 is a collection of information from the following three tables: Table 1-1, Table 3-1, and Table 4-1. Data on waste volumes in these tables are reported from the database. 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 (Section 3.2). Retrievably Stored Waste not yet retrieved is included in Table 1-1, Table 3-1, and Table 4-1 (treatability groups MLLW-01 through MLLW-10).

The WTP is a new TSD unit being constructed to treat double-shell tank (DST) waste and single-shell tank (SST) waste. The WTP Project Management schedule projects that mixed waste will be generated at the WTP as a result of laboratory startup within the five-year forecasting window for this report.

1.3 POTENTIAL MIXED WASTE

The potential mixed waste table (PMWT) (Tables 1-3 through 1-5) 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 RCRA 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 operable units (OUs) as RCRA or CERCLA past-practice units is described in Section 3.0 of the Tri-Party Agreement Action Plan. When cleanup actions occur in the OU, 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 groups and location-specific waste streams.
- Contaminated soil sites, cribs, ponds, ditches, trenches, etc., considered engineered disposal units. (However, the materials would be included in LDR report location-specific waste streams 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, 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 2.0 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
- OUs that encompass the facility or unit
- Existing documentation and milestones or schedules that indicate plans that will address the potential mixed waste (PMW)
- Date to complete data gap plan
- Start date for major Tri-Party Agreement negotiations such as facility transition or deactivation.

Table 1-1. Stored Volumes of Mixed Waste and Generation Projections. (8 sheets)

Treatability Group Name	Description ¹	Current Inventory (m ³)	Generation Projection 2013 (m ³)	Generation Projection 2014 (m ³)	Generation Projection 2015 (m ³)	Generation Projection 2016 (m ³)	Generation Projection 2017 (m ³)
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.	58.000	0	0	0	0	0
221-T Tank System	Liquid mixed waste with settled solids/sludge (waste also contains polychlorinated biphenyls [PCBs] at <i>Toxic Substances Control Act of 1976</i> [TSCA] regulated concentrations).	0	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.	0.840	11.000	11.000	11.000	11.000	11.000
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 remote-handled (RH) mixed low-level waste (MLLW) as a result of this contact.	0.200	0	0	0	0	0
241-CX Tank System ²	Residual tank waste resulting from Reduction-Oxidation (REDOX), Plutonium Uranium Extraction (PUREX), and Semiworks processes.	6.390	0	0	0	0	0
324 Building REC Waste	Radioactive waste containing regulated quantities of toxic heavy metals. Mixed waste residue may be generated from the future radiochemical engineering cells (REC) decontamination and deactivation activities and disposed as CERCLA waste in accordance with M-094-00.	5.000	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 (WSRs) in this waste stream include PNNL-930-05 and PNNL-931-04.	5.086	9.000	9.000	9.000	9.000	9.000
400 Area WMU	Mixed waste generated from Hanford activities, primarily from the deactivation of the Fast Flux Test Facility (FFTF).	1.900	0	0	0	0	0

Table 1-1. Stored Volumes of Mixed Waste and Generation Projections. (8 sheets)

Treatability Group Name	Description ¹	Current Inventory (m ³)	Generation Projection 2013 (m ³)	Generation Projection 2014 (m ³)	Generation Projection 2015 (m ³)	Generation Projection 2016 (m ³)	Generation Projection 2017 (m ³)
B Plant Cell 4	Waste resulted from Waste Encapsulation and Storage Facility (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 surveillance and maintenance (S&M).	1.400	0	0	0	0	0
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 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.	0	0	0	0	0	0
Cesium and Strontium Capsules	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.	2.000	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. Wastes have been stored in the DST System from 1971 to the present.	98,009.043	20.000	20.000	20.000	20.000	20.000
ERDF -- Treatment	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.	145.000	37,754.860	52,960.980	25,050.000	25,000.000	25,000.000
HSTF	Residual heel content remaining from REDOX Process.	2.100	0	0	0	0	0
LERF/ETF Liquid Waste	CERCLA and RCRA wastewaters are sent to the LERF/ETF for treatment and disposal.	57,698.840	7,627.844	5,470.744	7,122.944	4,581.800	7,234.700

Table 1-1. Stored Volumes of Mixed Waste and Generation Projections. (8 sheets)

Treatability Group Name	Description ¹	Current Inventory (m ³)	Generation Projection 2013 (m ³)	Generation Projection 2014 (m ³)	Generation Projection 2015 (m ³)	Generation Projection 2016 (m ³)	Generation Projection 2017 (m ³)
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.	60.600	255.000	247.000	263.000	247.000	250.000
MLLW-01 - LDR Compliant Waste	This waste consists 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 LDR requirements) 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 WSRds include 930 and 931. This waste can consist of soils, immobilized waste, stabilized/solidified waste, thermal treatment residues, etc.	0.210	0.300	0.560	0	0.260	0.260
MLLW-02 - Inorganic Non-Debris	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 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, 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.	0.208	2.900	2.900	3.870	2.900	2.900

Table 1-1. Stored Volumes of Mixed Waste and Generation Projections. (8 sheets)

Treatability Group Name	Description ¹	Current Inventory (m ³)	Generation Projection 2013 (m ³)	Generation Projection 2014 (m ³)	Generation Projection 2015 (m ³)	Generation Projection 2016 (m ³)	Generation Projection 2017 (m ³)
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 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.	1.154	0	0.260	0	1.280	6.180
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 (O/C) waste constituents in excess of 10% as defined in WAC 173-303-040 (e.g., plastic, paper, wood, rubber, etc.) and as defined in WAC 173-303-140(3)(c). The associated State Only O/C LDR (ref: WAC 173-303-140(4)(d)) does not apply to Hanford generated MLLW O/C debris based on the certification obtained under WAC 173-303-140(4)(d)(iii)."	18.696	12.260	0.260	0.260	47.050	527.050

Table 1-1. Stored Volumes of Mixed Waste and Generation Projections. (8 sheets)

Treatability Group Name	Description ¹	Current Inventory (m ³)	Generation Projection 2013 (m ³)	Generation Projection 2014 (m ³)	Generation Projection 2015 (m ³)	Generation Projection 2016 (m ³)	Generation Projection 2017 (m ³)
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, and 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 on-site generating organizations.	0	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 10m 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.	47.269	0	0	0	0	0

Table 1-1. Stored Volumes of Mixed Waste and Generation Projections. (8 sheets)

Treatability Group Name	Description ¹	Current Inventory (m ³)	Generation Projection 2013 (m ³)	Generation Projection 2014 (m ³)	Generation Projection 2015 (m ³)	Generation Projection 2016 (m ³)	Generation Projection 2017 (m ³)
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 PCBs, 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.	0.040	0	0	0	0	0
MLLW-09 - Radioactive Batteries	This treatability group is for waste that is, or contains, radioactively contaminated batteries that have 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	0.100	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.	0	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.	1.000	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 transuranic (TRU) and transuranic mixed (TRUM) waste.	2,800.000	0	0	0	0	0

Table 1-1. Stored Volumes of Mixed Waste and Generation Projections. (8 sheets)

Treatability Group Name	Description ¹	Current Inventory (m ³)	Generation Projection 2013 (m ³)	Generation Projection 2014 (m ³)	Generation Projection 2015 (m ³)	Generation Projection 2016 (m ³)	Generation Projection 2017 (m ³)
SST Waste ³	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.	108,000.000	0	0	0	0	0
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").	7,022.200	0	0	0	0	0
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 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.	4,313.549	2.600	2.600	17.600	17.860	2.360

Table 1-1. Stored Volumes of Mixed Waste and Generation Projections. (8 sheets)

Treatability Group Name	Description ¹	Current Inventory (m ³)	Generation Projection 2013 (m ³)	Generation Projection 2014 (m ³)	Generation Projection 2015 (m ³)	Generation Projection 2016 (m ³)	Generation Projection 2017 (m ³)
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.	413.424	1.300	1.300	1.300	1.300	1.300
WTP Lab Complex	This waste stream is assumed to consist of different inorganic and organic solids and liquids that are RCRA regulated or have been contaminated with inorganic and organic regulated dangerous waste constituents. This waste stream also includes hazardous compactable debris.	0	0	0	0	0	17.800

¹ WSRd indicates waste treatment and/or disposal pathway.

² The stored volume reported contains uncertainty as to the actual volume (*Calendar Year 2004 Land Disposal Restrictions Report Comment Responses* [Klein 2005]).

³ As a whole, the SST wastes are managed as RH high-level waste. However, the tank systems contain potential TRU mixed waste, pending a waste determination.

Table 1-2. Treatability Group Summary of Storage, Characterization, and Treatment Activities. (3 sheets)

Treatability Group Name	Current Inventory (m ³)	Projected Generation Volume 2013 through 2017 (m ³)	Planned Characterization Schedule	Treatment Process	Projected Volume to be Treated 2013 through 2017 (m ³)
221-T Containment Building	58.000	0	Completed	Not yet determined	0
221-T Tank System	0	0	Will be done in conjunction with T Plant Complex Canyon disposition.	Not yet determined	0
222-S Laboratory Complex	0.840	55.000	Ongoing	Commercial - Stabilization, Commercial - Thermal	55.840
222-S T8 Tunnel	0.200	0	Will be done in conjunction with 222-S Laboratory building disposition.	Not yet determined	0
241-CX Tank System ¹	6.390	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	5.000	0	Completed	As necessary, ERDF stabilization or macroencapsulation	0
325 HWTU	5.086	45.000	Ongoing	HWTU, Commercial - Stabilization, Commercial - Thermal	50.086
400 Area WMU	1.900	0	Completed	Deactivation and conversion to sodium hydroxide	0
B Plant Cell 4	1.400	0	To be determined via Tri-Party Agreement Action Plan, Section 8.0. M-085-00 TBD.	Not yet determined	0

Table 1-2. Treatability Group Summary of Storage, Characterization, and Treatment Activities. (3 sheets)

Treatability Group Name	Current Inventory (m ³)	Projected Generation Volume 2013 through 2017 (m ³)	Planned Characterization Schedule	Treatment Process	Projected Volume to be Treated 2013 through 2017 (m ³)
B Plant Containment Building	0	0	To be determined via Tri-Party Agreement Action Plan, Section 8.0. M-085-00 TBD.	Not yet determined	0
Cesium and Strontium Capsules	2.000	0	Completed	Not yet determined	0
DST Waste	98,009.043	60.000	Ongoing	WTP vitrification	0
ERDF—Treatment	145.000	165,765.840	Ongoing	ERDF treatment	165,910.840
HSTF	2.100	0	Completed	Not yet determined	0
LERF/ETF Liquid Waste	57,698.840	32,038.032	Ongoing	ETF	89,736.870
LERF/ETF Solid Waste	60.600	1,262.000	Not required	ERDF treatment expected to be needed for some solid wastes	TBD
MLLW-01 - LDR Compliant Waste	0.210	1.380	Completed	No treatment required	No treatment required.
MLLW-02 - Inorganic Non-Debris	0.208	15.470	M-091-42 ²	Stabilization	15.680 ²
MLLW-03 - Organic Non-Debris	1.154	7.720	M-091-42 ²	Thermal	8.870 ²
MLLW-04 - Hazardous Debris	18.696	586.880	M-091-42 ²	Macroencapsulation	605.580 ²
MLLW-05 - Radioactive Lead Solids	0	0	M-091-42 ²	Macroencapsulation	0
MLLW-06 - Mercury Wastes	0	0	M-091-42 ²	Amalgamation	0
MLLW-07 - RH and Large Container	47.269	0	M-091-43 ²	M-091-43	0
MLLW-08 - Unique Waste	0.040	0	M-091-42 ²	To be determined	0
MLLW-09 - Radioactive Batteries	0	0.100	M-091-42 ²	Macroencapsulation	0
MLLW-10 - Reactive Metals	0	0	M-091-42 ²	Deactivation with selected stablization	0

Table 1-2. Treatability Group Summary of Storage, Characterization, and Treatment Activities. (3 sheets)

Treatability Group Name	Current Inventory (m ³)	Projected Generation Volume 2013 through 2017 (m ³)	Planned Characterization Schedule	Treatment Process	Projected Volume to be Treated 2013 through 2017 (m ³)
PUREX Plant	1,000	0	To be determined via Tri-Party Agreement Action Plan, Section 8.0. M-085-00 TBD.	Not yet determined	1,000 ²
PUREX Storage Tunnel	2,800,000	0	To be determined in conjunction with the PUREX Plant per Tri-Party Agreement Action Plan, Section 8.0. M-085-00 TBD.	Not yet determined	0
SST Waste	108,000,000	0	Ongoing	WTP vitrification	0
TRUM-CH Large Container	7,022,200	0	M-091-44 ²	M-091-01 and/or off-site	TBD ²
TRUM-CH Small Container	4,313,549	43,020	M-091-46 ²	WRAP Facility and/or T Plant Complex and/or off-site	TBD ²
TRUM-RH	413,424	6,500	M-091-44 ²	M-091-01	TBD ²
WTP Lab Complex	0	17,800	Not yet determined	Not yet determined	TBD

¹ The stored volume reported contains uncertainty as to the actual volume (Klein 2005).

² 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.

Table 1-3. Explanation of Table 1-4, Potential Mixed Waste. (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 or recycled)	“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, 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 1-3. Explanation of Table 1-4, Potential Mixed Waste. (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, records of decision [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 PMW, 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 1-4. Potential Mixed Waste. (20 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 Fuel Storage Basins	105-KE and 105-KW	105-KE: Old electrical equipment 105-KW: None	105-KE: Oil drained from equipment 105-KW: Underwater lead	Completed 4 th quarter CY 2007.	<p>Data gap Plan: Completed 2nd quarter CY 2005.</p> <p>Starting TPA negotiations: not applicable (N/A) (completed).</p> <p>105-KE basin structure has been decontaminated and decommissioned and disposed at ERDF. During 2011 portions of the 105-KE Reactor Building were demolished and disposed at ERDF (e.g., electrical equipment room, outer ROD room, miscellaneous storage room, supply fan room, metal storage room, control room, and administrative support rooms) in preparation for transition interim safe storage (ISS) configuration. ISS activities will continue for this facility.</p> <p>105-KW: Anticipated to be dispositioned by the end of fiscal year (FY) 2018.</p>	None

Table 1-4. Potential Mixed Waste. (20 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 S&M activities.	None	DOE assessment: Completed 06/15/2004. Assessment excludes reactor.	Waste will be generated as part of the ISS activities. Data gap plan: Completed 06/15/2004. 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 ISS, is anticipated in FY 2018. Core sampling of the 105-KE reactor has been completed.	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 3 rd 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 1-4. Potential Mixed Waste. (20 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	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 special nuclear material (SNM) solids	DOE assessment: Completed 3 rd 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 September 30, 2015. Data gap plan: N/A Starting TPA negotiations: N/A (completed).	None

Table 1-4. Potential Mixed Waste. (20 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). Chemical 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 3 rd quarter CY 2001.	To be dispositioned as CERCLA non-time critical removal action. Tri Party Agreement milestone M-083-00A, Complete PFP Facility Transition and Selected Disposition Activities (due date: September 30, 2016). Data gap plan: N/A Starting TPA negotiations: N/A (completed).	None

Table 1-4. Potential Mixed Waste. (20 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	PFP Settling Tank	241-Z-361	Tank containing waste from past practices and piping.	None	DOE assessment: Completed 2 nd quarter CY 2009.	To be dispositioned as CERCLA remedial action in accordance with schedule to be developed in the 200-PW-1/3/6 and 200-CW-5 Remedial Design/Remedial Action Work Plan (TPA Milestone M-016-125, due September 30, 2015). Data gap plan: 2 nd quarter CY 2009 completed. 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-1/3/6 and 200-CW-5 OU.

Table 1-4. Potential Mixed Waste. (20 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-083-00A, Complete PFP Facility Transition and Selected Disposition Activities (due date: September 30, 2016). Data gap plan: N/A. Starting TPA negotiations: N/A (completed).	None

Table 1-4. Potential Mixed Waste. (20 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, S&M	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 2 nd quarter CY 2006 (see Table 2-1).	Data gap plan: 4th quarter CY 2012 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 1-4. Potential Mixed Waste. (20 sheets)

A Company, Project	B Common Name or Description	C Facility Number	D Solid Waste, with Potential for Mixed Waste, Not Integral to the Building or Structure (No Use)	E Materials, with Potential to Become Solid Waste and Subsequently Mixed Waste (in Standby, Possible Use, or Recycled)	F DOE Assessment of Storage Methods	G Schedule Information	H Integrating Factors
CHPRC, D&D and Infrastructure Project, S&M	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 1 st quarter CY 2002.	D1 and D2: Data gap plan: Completed 4 th quarter CY 2002. Starting TPA negotiations: Negotiations are not needed.	The potential for mixed waste 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, <i>Action Memorandum for the Non-Time-Critical Removal Action for the 224-T Plutonium Concentration Facility</i>).
CHPRC, D&D Project, S&M	231-Z	231-Z	Potential for liquid in vessels.	None	DOE assessment: Completed 2 nd quarter CY 2009.	Data gap plan 2 nd quarter CY 2009 completed. Starting TPA negotiations: Negotiations are not needed.	The potential for mixed waste to be present is a former Silver List issue that has not been closed out. Media that might designate as mixed waste, if present, are expected to be contained in stainless steel vessels.
CHPRC, D&D Project, S&M	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: N/A (Singleton 2011)	Data gap plan: N/A (Singleton 2011) Starting TPA negotiations: Negotiations are not needed.	None

Table 1-4. Potential Mixed Waste. (20 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, S&M	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, <i>Surveillance and Maintenance Plan for the 221-B Facility (B-Plant)</i> , 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 8.0. M-085-00, TBD.	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.
CHPRC, D&D Project, S&M	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: See external letter, "Waste Storage Assessment of 224-B, 242-B/BL, 270-W, and IMUSTs Not Associated With a Building," (Singleton 2011). Initiated 4 th quarter CY 2006 (see Table 2-1).	Data gap plan: review on the status of mixed waste storage areas 1 st quarter CY 2011. (Singleton 2011). Starting TPA negotiations: Negotiations are not needed.	Facility decommissioning is being addressed in DOE/RL-2004-36, <i>Action Memorandum for the Non-Time Critical Removal Action for the 224-B Plutonium Concentration Facility</i> .

Table 1-4. Potential Mixed Waste. (20 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, S&M	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, <i>Surveillance and Maintenance Plan for the Plutonium-Uranium Extraction (PUREX) Facility</i> , 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 8.0.	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 1-4. Potential Mixed Waste. (20 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, S&M	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, <i>Surveillance and Maintenance Plan for the 202-S Reduction Oxidation (REDOX) Facility</i> , 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 8.0.	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, S&M	U Plant	221-U, 276-U, 291-U, 292-U, 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.	DOE/RL-2006-21, <i>Remedial Design/Remedial Action Work Plan for the 221-U Facility</i> , addresses the hazardous materials in the facility.	Remedial Design/Removal Action Work Plan (RD/RAWP) for the 221-U Facility, DOE/RL-2006-21, addresses the hazardous materials 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 8.0.	The U Plant facility is being dispositioned under RD/RAWP, DOE/RL-2006-21, approved in February 2009. The equipment on deck was consolidated in the cells and efforts are under way to grout the cells and galleries.
CHPRC, D&D Project, S&M	UO ₃ Facility	270-W and slab foundations	Potential mixed waste in the underground tank.	Although no specific matrix can be identified at this time, a possibility exists that matrices could be found which would qualify as potential mixed waste.	DOE assessment: N/A (Singleton 2011).	Data gap plan: N/A (Singleton 2011). Starting TPA negotiations: Complete. Any additional negotiations will be completed in accordance with the Tri-Party Agreement Action Plan Section 8.0.	All of the above ground structures have been dispositioned under RAWP (DOE/RL-2004-83, <i>U-Plant Ancillary facilities Removal Action Work Plan, Phase II</i>).

Table 1-4. Potential Mixed Waste. (20 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: 3 rd quarter CY 2005.	Cells with no proposed future use will be addressed when final decommissioning of the canyon takes place. Data gap plan: See July 24, 2008 T Plan Project Managers Meeting minutes. 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 1-4. Potential Mixed Waste. (20 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: 3 rd quarter CY 2005.	<p>Cell 11-L will be dispositioned along with the other RCRA-past practice process cells in the T Plant canyon.</p> <p>Data gap plan: See July 24, 2008 T Plant Project Managers Meeting minutes.</p> <p>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.</p>	<p>Any commitment date will be dependent on the outcome of the Canyon Disposition Initiative.</p> <p>Milestone M-091-01 and RCRA permitting.</p> <p>Schedules for processing and operational activities on the canyon floor will impact the schedule for disposition of this PMW.</p>

Table 1-4. Potential Mixed Waste. (20 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 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: 3 rd quarter CY 2005.	This Waste Information Data System (WIDS) site will be addressed as part of the CERCLA remediation activity. Data gap plan: See the July 24, 2008 T Plant TPA project managers meeting minutes. Starting TPA negotiations: Negotiations are not anticipated.	Tanks are part of 200-IS-1 CERCLA remediation process.
CHPRC, Waste and Fuels Management Project	GAC Vapor Extraction System	None	None	Unsalvaged components of vapor extraction system.	DOE assessment: N/A.	Data gap plan: N/A. Data for starting TPA negotiation: Negotiations are not anticipated.	None

Table 1-4. Potential Mixed Waste. (20 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 4 th quarter CY 2001.	Data gap plan: Completed 4 th 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 high-efficiency particulate air (HEPA) pre-heater.	None	DOE Assessment: Completed 4 th Quarter 2004.	Data gap plan: None. When the building is deactivated, characterization of the seal pot heel will be completed as necessary. Starting TPA negotiations: N/A.	None

Table 1-4. Potential Mixed Waste. (20 sheets)

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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 4 th Quarter 2004.	Data gap plan: The equipment will be handled in accordance with the 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 4 th Quarter 2004.	Data gap plan: The equipment will be handled per the management procedure. Starting TPA negotiations: N/A. Equipment will be taken care of on a continuous basis.	Tank Retrieval and Closure Permit Conditions.
WRPS, Tank Farms	Evaporators	242-S, T	Liquids/solids in process tanks and contaminated equipment, piping, and debris.	None	DOE Assessment: Completed 4 th 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 1-4. Potential Mixed Waste. (20 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, 3 rd 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 1-4. Potential Mixed Waste. (20 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: 2 nd Quarter 2004, 3 rd Quarter 2002, 1 st Quarter 2001.	Data gap plan: Deferred until closure of specific Waste Management Area.	SST Retrieval, WTP Construction, Permit Conditions, etc.
Washington Closure Hanford, LLC (WCH), River Corridor Closure	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 mixed waste.	None	DOE assessment: Completed 4 th quarter CY 2004.	PMW disposition will be performed in accordance with Tri-Party Agreement milestones M-094-00, Complete Disposition of 300 Area Surplus Facilities (due 09/30/2015) 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 4 th 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, <i>Changes to the Agreement</i> , of the Tri-Party Agreement Action Plan.

Table 1-4. Potential Mixed Waste. (20 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
WCH, , River Corridor Closure	100-B Reactor Facilities	105-B	Miscellaneous contaminated material remains in the facility.	None	DOE assessment: Completed 06/15/04. Assessment excludes reactor.	Data gap plan: Completed 06/15/04. Starting TPA negotiations: Approval of Tri-Party Agreement Change Request M-093-01-02 completed Tri-Party Agreement Milestone M-093-14, Initiate Negotiation of Surplus Reactor Disposition Schedules.	The reactor is a key facility under Section 8.0 of the Tri-Party Agreement.
BNI, Hanford Tank Waste Treatment and Immobilization Plant (WTP)	LAB	N/A	Hotcell prefilters	None			

Table 1-4. Potential Mixed Waste. (20 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
BNI, Hanford Tank WTP	LAB	N/A	Spent chemical/reagents (liquid lab pack). Eichrom resin columns (hotcell resins, mixed non-debris waste (organic waste stream that will require organic stabilization or thermal treatment). Rad lab miscellaneous compactable debris (lab glassware and other lab consumables, personal protective equipment, rags, and other compactable debris.) Miscellaneous hotcell compactable debris including sample bottles, ASX carriers, Isolok needles and parts, etc. Miscellaneous non-compactable hotcell debris.	None	TBD	TBD	TBD

Table 1-5. Historical List of Materials Deleted from Potential Mixed Waste Table. (8 sheets)

Common Name or Description	Facility Number	Last Calendar Year Reported in Table 1-4	"Stuff"/Material Deleted	Reason for Deletion
100 Area Waste/Material Transport Containers	100 Area Reactor Facilities (Primarily N and K Area)	2011	Containers being stored for future shipment of waste to be treated, disposed, or recycled.	Waste/material containers have been dispositioned to ERDF due to facilities D&D.
U Plant	221-U	2010	Tk-10 in Cell 30.	Tank was removed as part of the CERCLA remediation in 2011 and placed in storage at CWC.
Rail Car Staging Area	212-R Rail Spur and Purex Rail Cut	2010	Rail car and rail car components.	Rail cars were declared waste and disposed in ERDF, except four railcars were sent to B Reactor as "reusable equipment" not waste as they are being used as displays.
PFP Facilities	234-5Z	2010	Radioactive Acid Digestion Test Unit (RADTU) Gloveboxes (potential for residual contamination during cleanout)	RADTU glovebox cleanout completed.
PFP Facilities	2736-Z	2010	Residues and low grade SNM solids.	Residues and SNM solids removed.
U Plant	211-UA	2009	The 211-UA structure was demolished.	A partial deletion from the potential mixed waste table. The 211-UA structure was demolished under RAWP DOE/RL-2004-83.

Table 1-5. Historical List of Materials Deleted from Potential Mixed Waste Table. (8 sheets)

Common Name or Description	Facility Number	Last Calendar Year Reported in Table 1-4	"Stuff"/Material Deleted	Reason for Deletion
UO ₃ Facility	224-U, 203-UX, 211-U, 224-UA	2009	The above ground structures at the UO ₃ Facility were demolished.	A partial deletion from the potential mixed waste table. The aboveground structures were demolished under RAWP DOE/RL-2004-83; only the underground tank, 270-W, and slab foundations remain.
100-K Area	105 KE and 105 KW	2008	Leak blankets. Neutron detectors with boron tri-fluoride tubes. ¹	A partial deletion from the PMWT. 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	2008	212-R contained a burial box with some radiologically-contaminated equipment. 212-P used to store PCBs.	The buildings and the burial boxes have been demolished, and the waste sent to ERDF.
100-K Area	105-KE	2007	Chemicals in storage cabinets and lead used as shielding for Ion Exchange Columns and piping. ¹	A partial deletion from the PMWT. Chemicals were redispositioned for use at 105-KW or disposed of as appropriate. Lead was reused or dispositioned as waste.
231-Z	231-Z	2007	Chemicals in gloveboxes. ¹	Activities to remove chemicals from gloveboxes were completed in 2008.
U-Plant	2716-U, 2714-U	2006	Section 7.0 of the S&M plan, DOE/RL-98-20, <i>Surveillance and Maintenance Plan for the 221-U Facility (U Plant)</i> , 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.

Table 1-5. Historical List of Materials Deleted from Potential Mixed Waste Table. (8 sheets)

Common Name or Description	Facility Number	Last Calendar Year Reported in Table 1-4	"Stuff"/Material Deleted	Reason for Deletion
Mixed Waste Storage And Treatment Tanks	241Z	2006	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.	The 241-Z tank system has been clean closed, Tank D-6 heels were removed, piping was removed, and the floor was cleaned. The end point criteria requirements were addressed.
200 Area North	212-N	2006	14 wooden boxes in the transfer bay of suspected TRUM nuclear fuel fabrication equipment from the 308 Building.	A partial deletion from the PMW table. The boxes were transferred to the CWC.
327 Building	327	2005	Lead bricks.	The building deactivation and demolition was completed in 2010. The lead bricks are included in the forecasted waste volume to be treated at ERDF.
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.
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 ²	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.

Table 1-5. Historical List of Materials Deleted from Potential Mixed Waste Table. (8 sheets)

Common Name or Description	Facility Number	Last Calendar Year Reported in Table 1-4	"Stuff"/Material Deleted	Reason for Deletion
UO ₃	203-U, 2715-UA, 272-U	2004	Any matrices described in the UO ₃ S&M Plan, DOE/RL-98-22, <i>Surveillance and Maintenance Plan for the Uranium Trioxide (UO₃) Facility.</i>	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.
340 Facility Complex	340-A Above Ground Tanks, 340-B, and 300 Radioactive Liquid Waste System (RLWS)	2003	Tanks, process piping, ancillary equipment, and related equipment.	Facilities did not contain mixed waste or PMW.
100 Areas Facilities	Many	2003	Miscellaneous contaminated material.	Facilities did not contain mixed waste or PMW.
100-N Lead Storage Area	1714-N ²	2002	Lead sheeting and bricks, lead lined containers, and a lead lined survey booth.	Matrix is now included in the stored/forecasted portion of the report 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.

Table 1-5. Historical List of Materials Deleted from Potential Mixed Waste Table. (8 sheets)

Common Name or Description	Facility Number	Last Calendar Year Reported in Table 1-4	"Stuff"/Material Deleted	Reason for Deletion
314	314 ²	2002	Large equipment previously used in the facility.	LDR assessment concluded facility contained no mixed waste or PMW.
3708	3708 ²	2002	Solid obsolete laboratory equipment.	LDR assessment concluded facility contained no mixed waste or PMW.
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 ²	2001	Lead bricks.	Shipped 9/26/01 to Duratek Inc. in Memphis, TN for decontamination/lead casting.
Waste Storage Building	2724WB	2001	Radiators (from motor vehicles).	Shipped 9/26/01 to Duratek, Inc in Memphis, TN for decontamination/metal melt.
Mixed Waste Treatment and Storage Tanks	241-Z	2001	Tank D-9, Treatment chemicals.	Tank D9 is in use to mix treatment chemicals. Treatment chemicals are in use in transferring waste from the PFP to DSTs. NOTE: Only the contents noted were removed from Table C-2 (DOE/RL-2010-27, Rev. 0, <i>Calendar Year 2009 Hanford Site Mixed Waste Land Disposal Restrictions Full Report</i>). 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 stored information for the 219-S WHF.

Table 1-5. Historical List of Materials Deleted from Potential Mixed Waste Table. (8 sheets)

Common Name or Description	Facility Number	Last Calendar Year Reported in Table 1-4	"Stuff"/Material Deleted	Reason for Deletion
300-RRLWS	RRLWS	2001	Retired radioactive liquid waste sewer piping and ancillary structures might designate as mixed waste.	Below-ground structure: Does not meet reporting criteria for PMWT.
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.
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 (DOE/RL-2010-27) 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 4 th 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.

Table 1-5. Historical List of Materials Deleted from Potential Mixed Waste Table. (8 sheets)

Common Name or Description	Facility Number	Last Calendar Year Reported in Table 1-4	"Stuff"/Material Deleted	Reason for Deletion
100 K Basins	105-KW	2001	Lead bricks, sheets.	The lead has been declared CERCLA waste and reported under the stored/forecasted portion of the report.
Environmental Sciences Laboratory	3720 ²	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.
100 C Reactor Facility	105-C, 118-C-4	2001	Reactor core and equipment remaining in the facility.	Reactor core is 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, ² 190-DR ²	2001	Reactor core and equipment remaining in the facility.	Reactor core is 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 is 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, ² 1713-H	2001	Reactor core and equipment remaining in the facility.	Reactor core is part of the structure of the building. Mixed waste is removed during the reactor interim safe storage.

1-45

Table 1-5. Historical List of Materials Deleted from Potential Mixed Waste Table. (8 sheets)

Common Name or Description	Facility Number	Last Calendar Year Reported in Table 1-4	"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, <i>Surveillance and Maintenance Plan for the 100-N Area Deactivated Facilities.</i>	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.)	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.	The Hexone Storage and Treatment Facility (HSTF) treatability group was developed to account for the 276-S-141/142 tanks. See Table 1-1.
Semi Works	241-CX-70, 241-CX-71, 241-CX-72, 276-C	2001	Tanks and heel content.	The 241-CX Tank System treatability group was developed to account for the 241-CX tanks. See Table 1-1.

¹Additional potential mixed waste is identified in Table 1-4 for this location.

²Facility has been demolished subsequent to this entry.

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2.0 ASSESSMENTS OF MIXED WASTE STORAGE AREAS AND POTENTIAL MIXED WASTE

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. The LDR storage assessment provides an additional level of review to address circumstances associated with mixed waste and PMW. DOE assessments are performed in accordance with all applicable regulatory requirements, including the March 2000 Final Determination pursuant to the TPA regarding DOE's compliance with LDR requirements of Washington State's Hazardous Waste Management Act and RCRA, DOE's annual LDR Report, and TPA milestone M-26-01.

2.1 INTRODUCTION

From the activities associated with assessments in CY 2012, no indicators requiring action for LDR reporting were identified.

2.2 ASSESSMENT SCHEDULES

In CY 2011, DOE-RL contractors reviewed the current status of the mixed waste storage areas identified in Table 2-1. The contractors, in conjunction with DOE and Ecology, determined that further assessment of 224-B, 242-B/BL, and 270-W would result in little significant findings (Singleton 2011).

However, Ecology determined that IMUST assessments shall remain on the assessment list because of their complex storage conditions and, therefore, they are listed on Table 2-2 for further assessment. No additional DOE-RL assessments are currently scheduled. Any additional DOE-RL assessments will be negotiated with Ecology in LDR Project Manager Meetings and documented in related meeting minutes.

Table 2-1. Summary of U.S. Department of Energy,
Richland Operations Office Assessment Results.

Assessment Location	Assessment Start Dates	Findings and Observations
IMUSTs not associated with a building	June 2006	Continue the assessments.
224-B	December 2006	Further assessment determined to be unnecessary. (Singleton 2011)
242-B/BL	March 2007	Further assessment determined to be unnecessary. (Singleton 2011)
270-W	June 2007	Further assessment determined to be unnecessary. (Singleton 2011)

Table 2-2 shows that no new assessment activities are identified for DOE-RL in CY 2012 through 2014, however, the IMUSTs identified above require assessment. Any additional DOE-RL assessments will be negotiated with Ecology in LDR Project Manager Meetings and documented in related meeting minutes.

Table 2-2. U.S. Department of Energy, Richland Operations Office
Assessments for Calendar Years 2012 through 2014.

Facility/Location	Start Date
IMUSTs not associated with a building	In progress

In CY 2012, the U.S. Department of Energy, Office of River Protection (DOE-ORP) conducted assessments; however, no LDR assessments were completed.

Table 2-3. U.S. Department of Energy, Office of River Protection
Assessments for Calendar Year 2012 through 2014.

Facility/Location	Start Date
None	None

3.0 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.

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 3-1 summarizes the planned characterization activities for each of the treatability groups. The planned characterization schedule column from Table 3-1 is reproduced in Table 1-2.

Table 3-1. Summary of Characterization Information for Each Treatability Group. (4 sheets)

Treatability Group Name	Additional Characterization Activities	Planned Characterization Schedule	Related Tri-Party Agreement Milestone
221-T Containment Building	Completed	Completed	None
221-T Tank System	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	Characterization performed as generated.	Ongoing	None
222-S T8 Tunnel	As required to support cleanout of 222-S.	Will be done in conjunction with 222-S Laboratory building disposition.	None
241-CX Tank System	Additional characterization will be performed, as necessary, to support 200-IS-1 OU remedial decisions.	Characterization will be performed on waste in Tank 72 on a schedule determined with 200-IS-1	Major Milestone M-015-00
324 Building REC Waste	No further characterization planned for transfer to ERDF.	Completed	M-089-00, M-094-03

Table 3-1. Summary of Characterization Information for Each Treatability Group. (4 sheets)

Treatability Group Name	Additional Characterization Activities	Planned Characterization Schedule	Related Tri-Party Agreement Milestone
325 HWTU	Characterization performed as generated.	Ongoing	M-094-00
400 Area WMU	Completed	Completed	M-92-09
B Plant Cell 4	To be determined via Tri-Party Agreement Action Plan, Section 8.0.	To be determined via Tri-Party Agreement Action Plan, Section 8.0.	M-085-00
B Plant Containment Building	To be determined via Tri-Party Agreement Action Plan, Section 8.0.	To be determined via Tri-Party Agreement Action Plan, Section 8.0.	M-085-00
Cesium and Strontium Capsules	None	Completed	M-092-05
DST Waste	Additional information could be required, per TPA milestone.	Ongoing	M-062-00
ERDF – Treatment	Characterized as generated. Treatment and disposal are performed under CERCLA decision documents and treatment plans.	Ongoing	None
HSTF	Additional characterization will be performed, as necessary to support removal of the tanks as part of 200-IS-1 OU activities.	Completed	Major Milestone M-015-00
LERF/ETF Liquid Waste	Characterization performed as generated.	Ongoing	M-026-07
LERF/ETF Solid Waste	Characterization performed as generated.	Not required	None
MLLW-01 – LDR Compliant Waste	No further characterization is planned.	Completed	None
MLLW-02 – Inorganic Non-Debris	As necessary to meet treatment facility waste acceptance criteria. ¹	M-091-42 ²	M-091-42 ²

Table 3-1. Summary of Characterization Information for Each Treatability Group. (4 sheets)

Treatability Group Name	Additional Characterization Activities	Planned Characterization Schedule	Related Tri-Party Agreement Milestone
MLLW-03 – Organic Non-Debris	As necessary to meet treatment facility waste acceptance criteria. ¹	M-091-42 ²	M-091-42 ²
MLLW-04 – Hazardous Debris	As necessary to meet treatment facility waste acceptance criteria. ¹	M-091-42 ²	M-091-42 ²
MLLW-05 – Radioactive Lead Solids	As necessary to meet treatment facility waste acceptance criteria. ¹	M-091-42 ²	M-091-42 ²
MLLW-06 –Mercury Wastes	As necessary to meet treatment facility waste acceptance criteria. ¹	M-091-42 ²	M-091-42 ²
MLLW-07 – RH and Large Container	As necessary to meet treatment facility waste acceptance criteria. ¹	M-091-43 ²	M-091-43 ²
MLLW-08 – Unique Waste	As necessary to meet treatment facility waste acceptance criteria. ¹	M-091-42 ²	M-091-42 ²
MLLW-09 – Radioactive Batteries	As necessary to meet treatment facility waste acceptance criteria. ¹	M-091-42 ²	M-091-42 ²
MLLW-10 – Reactive Metals	As necessary to meet treatment facility waste acceptance criteria. ¹	M-091-42 ²	M-091-42 ²
PUREX Plant	To be determined via Tri-Party Agreement Action Plan, Section 8.0.	To be determined via Tri-Party Agreement Action Plan, Section 8.0.	M-085-00
PUREX Storage Tunnels	To be determined in conjunction with PUREX Plant based on RCRA Permit Closure Plan.	To be determined via Tri-Party Agreement Action Plan, Section 8.0.	M-085-00
SST Waste	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	As necessary to meet WIPP waste acceptance criteria.	M-091-44 ²	M-091-44 ²

Table 3-1. Summary of Characterization Information for Each Treatability Group. (4 sheets)

Treatability Group Name	Additional Characterization Activities	Planned Characterization Schedule	Related Tri-Party Agreement Milestone
TRUM-CH Small Container	As necessary to meet WIPP waste acceptance criteria.	M-091-46 ²	M-091-46 ²
TRUM-RH	As necessary to meet WIPP waste acceptance criteria.	M-091-44 ²	M-091-44 ²
WTP Lab Complex	To be determined	To be determined	To be determined

¹Newly 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.

²Characterization is anticipated to be performed as necessary to meet M-091 milestones.

4.0 SUMMARY OF TREATMENT INFORMATION

This section summarizes the treatment information associated with the treatability groups and the volume of waste that will be treated as identified in Table 4-1. Certain information from Table 4-1 is reproduced in Table 1-2.

Table 4-1. Summary of Treatment Information for Each Treatability Group. (3 sheets)

Treatability Group Name	Treatment Process	Volume Currently Stored (m ³)	Projected Generation Volume 2013 Through 2017 (m ³)	Projected Volume to be Treated 2013 Through 2017 (m ³)	Planned Treatment Period	Tri-Party Agreement Milestone
221-T Containment Building	Not yet determined	58.000	0	0	2035 ³	None
221-T Tank System	Not yet determined	0	0	0	2035 ³	None
222-S Laboratory Complex	Commercial-Stabilization, Commercial -Thermal	0.840	55.000	55.840	2042 ³	None
222-S T8 Tunnel	Not yet determined	0.200	0	0	2047 ³	None
241-CX Tank System ¹	Not yet determined	6.390	0	0	To be determined through development of 200-IS-1 documentation.	M-015-00
324 Building REC Waste	As necessary, ERDF stabilization or macroencapsulation	5.000	0	0	In accordance with schedules established under M-089 milestone.	M-089-00, M-094-03
325 HWTU	HWTU, Commercial-Stabilization, Commercial -Thermal	5.086	45.000	50.086	Through 2028 ³	M-094-00
400 Area WMU	Deactivation and conversion to sodium hydroxide	1.900	0	0	Treatment is planned to begin after 2018 ³ .	M-092-09
B Plant Cell 4	Not yet determined	1.400	0	0	In accordance with Tri-Party Agreement Action Plan, Section 8.0.	M-085-00
B Plant Containment Building	Not yet determined	0	0	0	In accordance with Tri-Party Agreement Action Plan, Section 8.0.	M-085-00
Cesium and Strontium Capsules	Not yet determined	2.000	0	0	Treatment options are still being assessed.	M-092-05

Table 4-1. Summary of Treatment Information for Each Treatability Group. (3 sheets)

Treatability Group Name	Treatment Process	Volume Currently Stored (m ³)	Projected Generation Volume 2013 Through 2017 (m ³)	Projected Volume to be Treated 2013 Through 2017 (m ³)	Planned Treatment Period	Tri-Party Agreement Milestone
DST Waste	WTP vitrification	98,009.043	60.000	0	2018 - 2047	M-062-00
ERDF—Treatment	ERDF treatment	145.000	165,765.840	165,910.840	Through 2035 ³	None. Treatment and disposal are performed under a CERCLA decision document and treatment plans.
HSTF	Not yet determined	2.100	0	0	To be determined through development of 200-IS-1 documentation.	M-015-00
LERF/ETF Liquid Waste	ETF	57,698.840	32,038.032	89,736.870	Through 2032 ³	M-026-07B, C
LERF/ETF Solid Waste	ERDF treatment expected to be needed for some solid waste	60.600	1262.000	TBD	TBD	None
MLLW-01 - LDR Compliant Waste	No treatment required	0.210	1.380	No treatment required.	N/A	None
MLLW-02 - Inorganic Non-Debris	Stabilization	0.208	15.470	15.680 ²	M-091-42 ²	M-091-42
MLLW-03 - Organic Non-Debris	Thermal	1.154	7.720	8.870 ²	M-091-42 ²	M-091-42
MLLW-04 - Hazardous Debris	Macroencapsulation	18.696	586.880	605.580 ²	M-091-42 ²	M-091-42
MLLW-05 - Radioactive Lead Solids	Macroencapsulation	0	0	0	M-091-42 ²	M-091-42
MLLW-06 - Mercury Wastes	Amalgamation	0	0	0	M-091-42 ²	M-091-42
MLLW-07 - RH and Large Container	M-091-43	47.269	0	0	M-091-43 ²	M-091-43

Table 4-1. Summary of Treatment Information for Each Treatability Group. (3 sheets)

Treatability Group Name	Treatment Process	Volume Currently Stored (m ³)	Projected Generation Volume 2013 Through 2017 (m ³)	Projected Volume to be Treated 2013 Through 2017 (m ³)	Planned Treatment Period	Tri-Party Agreement Milestone
MLLW-08 - Unique Waste	To be determined	0.040	0	0	M-091-42 ²	M-091-42
MLLW-09 - Radioactive Batteries	Macroencapsulation	0	0.100	0	M-091-42 ²	M-091-42
MLLW-10 - Reactive Metals	Deactivation with selected stabilization	0	0	0	M-091-42 ²	M-091-42
PUREX Plant	Not yet determined	1.000	0	1.000 ²	In accordance with Tri-Party Agreement Action Plan, Section 8.0.	M-085-00
PUREX Storage Tunnel	Not yet determined	2,800.000	0	0	Coordinated with PUREX Plant waste.	M-085-00
SST Waste	WTP vitrification	108,000.000	0	0	2018 - 2047	M-050, M-051, M-061, M-062, and M-090
TRUM-CH Large Container	M-091-01 and/or off-site	7,022.200	0	TBD ²	M-091-44 ²	M-091-44
TRUM-CH Small Container	WRAP Facility and/or T Plant Complex and/or off-site	4,313.549	43.020	TBD ²	M-091-46 ²	None
TRUM-RH	M-091-01	413.424	6.500	TBD ²	M-091-44 ²	M-091-44
WTP Lab Complex	TBD	0	17.800	TBD	TBD	TBD

¹ The stored volume reported contains uncertainty as to the actual volume (Klein 2005).

² 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.

³ Dates are anticipated to change based on changes to the DOE forecasted funding profile.

5.0 STORAGE VOLUME AND CONTAINER NUMBERS FOR SELECTED STORAGE LOCATIONS

This section contains information on the volume in storage and the number of containers in storage for a number of Hanford Site locations as of December 31, 2012. These locations are identified in the Tri-Party Agreement milestone description for M-026-01W. See Section 1.0 for the agreement made at the November 2008 LDR Project Manager Meeting to modify this table.

Table 5-1. Storage Volume and Number of Containers for Selected Hanford Locations. (3 sheets)

Hanford Site Location	Treatability Group	Waste Stream	Storage Volume (m ³) ¹	Number of Containers
ETF	LERF/ETF Solid Waste	Powder Drums	42.000	202
LERF/ETF ³	LERF/ETF Solid Waste	Operations and Maintenance Waste	18.600	15
LERF/ETF	LERF/ETF Liquid Waste	ZP1-Groundwater	0	N/A
222-S	222-S Laboratory Complex	Containerized mixed waste	0.840	6
	222-S T8 Tunnel	T8 Tunnel RH-MLLW	0.200	N/A - Pile
	DST Waste/219-S	Bulk Aqueous Liquids	9.043	N/A - Tanks
324	324 Building REC Waste	Radiochemical Engineering Cells	5.000	6
325 HWTU	325 HWTU	325 HWTU	5.086	185
	MLLW-07 - RH and Large Container	MLLW-07 RH	0.269	4
	TRUM-CH Small Container	TRUM-CH	0.549	20
	TRUM - RH	TRUM-RH	0.424	8
CWC	MLLW-01 - LDR Compliant Waste	LDR compliant	0.210	1
	MLLW-02 - Inorganic Non-Debris	Inorganic Non-Debris Solids and Labpacks	0.208	1
	MLLW-03- Organic Non-Debris	Organic Non-Debris	0.530	2
	MLLW-04 - Hazardous Debris	Hazardous Debris	17.480	72
	MLLW-05 - Rad. Lead Solids	Elemental Lead	0	0
	MLLW-06 - Mercury Wastes	Elemental Mercury	0	0
	MLLW-07 - RH and Large Cont.	MLLW-07	46.680	18
	MLLW-08 - Unique Waste	Unique Waste	0	0
	MLLW-09 - Radioactive Batteries	Pb & Cd Batteries	0	0
	MLLW-10 - Reactive Metals	Alkali Metals	0	0
	TRUM-CH Large Container	TRUM Boxes	6,780.000	460
	TRUM-CH Small Container	CH TRUM	1,800.000	5,420
	TRUM - RH	RH TRUM	300.000	295

Table 5-1. Storage Volume and Number of Containers for Selected Hanford Locations. (3 sheets)

Hanford Site Location	Treatability Group	Waste Stream	Storage Volume (m ³) ¹	Number of Containers
LLBG	MLLW-03 - Organic Non-Debris	MLLW Retrieval Organic Non-Debris	0.208 ²	1 ²
	MLLW-04 - Hazardous Debris	MLLW Retrieval Debris	0.416	2
	MLLW-07 - RH and Large Container	MLLW-07	0	0
	MLLW-08 Unique Waste	Unique Waste	0	0
	TRUM-CH Large Container	TRUM Retrieval Boxes	205.000 ²	120 ²
	TRUM-CH Small Container	TRUM-CH Retrieval	2,513.000 ²	11,990 ²
	TRUM - RH	RH TRUM	113.000 ²	5,660 ²
PFP	ERDF- Treatment	D&D Hazardous Debris to ERDF	0	N/A
	LERF/ETF Liquid Waste	Aqueous Waste	0	N/A
	MLLW-01 – LDR Compliant	Laboratory Chemicals/Reagents, LDR Compliant waste	0	N/A
	TRUM-CH Small Container	Legacy Holdup Waste	0	N/A
	TRUM-CH Small Container	TRUM Debris	0	N/A
	TRUM-RH	TRUM-RH	0	N/A
T Plant Complex	221-T Containment Building	221-T Containment Building	58.000	N/A – Containment Building
	221-T Tank System	RCRA Tank System	0	6 - Tanks
	LERF/ETF Liquid Waste	2706-T Tank system	0	2 - Tanks
	MLLW-01 – LDR Compliant Waste	LDR Compliant	0	0
	MLLW-02 - Inorganic Non-Debris	Inorganic Non-Debris	0	0
	MLLW-03 – Organic Non-Debris	Organic Non-Debris	0.416	2
	MLLW-04 - Hazardous Debris	Hazardous Debris	0.800	5
	MLLW-05 – Radioactive Lead Solids	Elemental Lead	0	0
	MLLW-07 - RH and Large Container	RH and Large Container	0.320	1
	MLLW-08-Unique Waste	Mixed Waste Requiring Special Processing	0.040	1
	MLLW-09-Radioactive Batteries	Radioactive Batteries	0	0
	MLLW-10-Reactive Metals	Reactive Metals	0	0
	TRUM-CH Large Container	TRUM Box	37.200	2
	TRUM-CH Small Container	TRUM-CH	0	0
TRUM-RH	TRUM-RH	0	0	
WRAP	MLLW-01 – LDR Compliant Waste	LDR Compliant	0	0
	MLLW-02- Inorganic Non-Debris	Inorganic Non-Debris and Labpacks	0	0
	MLLW-03 - Organic Non-Debris	Organic Non-Debris	0	0
	MLLW-04 - Hazardous Debris	Hazardous Debris	0	0
	MLLW-05 – Radioactive Lead Solids	Radioactive Lead Solids	0	0
	MLLW-06- Mercury Wastes	Elemental Mercury	0	0

Table 5-1. Storage Volume and Number of Containers for Selected Hanford Locations. (3 sheets)

Hanford Site Location	Treatability Group	Waste Stream	Storage Volume (m ³) ¹	Number of Containers
	MLLW-07-RH & Large Container	MLLW-07	0	0
	MLLW-08-Unique Waste	Unique Waste	0	0
	MLLW-09 – Radioactive Batteries	Miscellaneous Heavy Metal, Batteries	0	0
	TRUM-CH Large Container	TRUM – Large Container	0	0
	TRUM-CH Small Container	TRUM-CH	0	0
	TRUM-RH	TRUM-RH	0	0
WSCF	ERDF -Treatment	Laboratory E-Waste	0	N/A
	LERF/ETF Liquid Waste	LERF/ETF	0	N/A

¹ If zero is indicated, the reported mixed waste is forecasted to be generated or is being managed in a generator location (satellite accumulation area or 90-day accumulation area).

² The storage volume for MLLW and TRUM treatability groups were estimated from retrieval activities to-date and review of burial records. The overall split between the MLLW and TRUM treatability groups is estimated as 50-50.

³ Location 200 ETF was renamed LERF/ETF in 2009 when the LERF/ETF Solid Waste Treatability Group was created.

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6.0 REFERENCES

- 40 CFR 268, "Land Disposal Restrictions," Title 40, *Code of Federal Regulations*, Part 268, as amended.
- 40 CFR 300, "National Oil and Hazardous Substances Pollution Contingency Plan," Title 40, *Code of Federal Regulations*, Part 300, as amended.
- Comprehensive Environmental Response, Compensation, and Liability Act of 1980*, Public Law 96-510.
- 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 (UO₃) 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 Operations Office, Richland, Washington.
- DOE/RL-2004-36, 2004, *Action Memorandum for the Non-Time Critical Removal Action for the 224-B Plutonium Concentration Facility*, 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 Operations Office, Richland, Washington.
- DOE/RL-2006-21, 2008, *Remedial Design/Remedial Action Work Plan for the 221-U Facility*, Rev. 0, U.S. Department of Energy, Richland Operations Office, Richland, Washington.

DOE/RL-2010-27, 2010, *Calendar Year 2009 Hanford Site Mixed Waste Land Disposal Restrictions Full Report*, Rev. 0, U.S. Department of Energy, Richland Operations Office, Richland, Washington.

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

Ecology, DOE-ORP, and DOE-RL, 2003, "M-026 LDR Report Project Manager Meeting Minutes," February 6, Washington State Department of Ecology; U.S. Department of Energy, Office of River Protection; and U.S. Department of Energy, Richland Operations Office.

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.

Federal Facility Compliance Act of 1992, Public Law 102-386.

Hanford Facility Resource Conservation and Recovery Act Permit, WA7 8900 8967, as amended, Washington State Department of Ecology.

Klein, K. A., 2005, "Calendar Year 2004 Land Disposal Restrictions Report Comment Responses" (external letter 05-AMCP-0318 to M. A. Wilson, State of Washington, Department of Ecology), U.S. Department of Energy, Richland Operations Office, Richland, Washington, July 12.

Resource Conservation and Recovery Act of 1976, Public Law 94-580.

Singleton, D., 2011, "Waste Storage Assessment of 224-B, 242-B/BL, 270-W, and IMUSTs Not Associated with a Building," (external letter to M. S. Collins, U.S. Department of Energy, Richland Operations Office), State of Washington, Department of Ecology, January 13.

WAC 173-303, "Dangerous Waste Regulations," *Washington Administrative Code*, Olympia, Washington.