

AR TARGET SHEET

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DOCUMENT #: DOE/RL-2003-20

TITLE: CY 2002 Hanford Site Mixed
Waste LDR Report

0059434

DOE/RL-2003-20
Rev. 0

Calendar Year 2002 Hanford Site Mixed Waste Land Disposal Restrictions Report

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

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**United States
Department of Energy**
P.O. Box 550
Richland, Washington 99352

Project Hanford Management Contractor for the
U.S. Department of Energy under Contract DE-AC06-96RL13200

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Calendar Year 2002 Hanford Site Mixed Waste Land Disposal Restrictions Report

April 2003

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



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03-RCA-0214

APR 29 2003

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FINAL CALENDAR YEAR 2002 LAND DISPOSAL RESTRICTIONS (LDR) REPORT

Enclosed is the Final Calendar Year 2002 Land Disposal Restrictions (LDR) Report in accordance with the Hanford Federal Facility Agreement and Consent Order (Tri-Party Agreement) Interim Milestone M-26-01M. Transmittal of this report to the State of Washington Department of Ecology (Ecology) completes the U.S. Department of Energy, Richland Operations Office (RL) and the U.S. Department of Energy, Office of River Protection (ORP) requirement to submit the LDR Report by April 30, 2003.

This report was developed with input and comments from each of the Hanford contractors – Fluor Hanford, Inc., Bechtel Hanford, Inc., Pacific Northwest National Laboratory, CH2M HILL Hanford Group (CHG) and Ecology. The Bechtel National Washington Group was not party to development and issuance of this report; that interface was provided by ORP and CHG. The activities described in this LDR Report update are based on the contractor's baseline as of December 31, 2002.

The enclosed LDR Report is submitted as a primary document under the Tri-party Agreement Action Plan, Section 9.0 Documents and Records. As agreed to by the LDR Report Project Managers, Revision 0 of the report will be issued to Ecology with copies provided to the U.S. Environmental Protection Agency (EPA), the Indian Nations/Tribes and the Administrative Record. The full distribution will be accomplished when the primary document comment process is complete.

Addressees
03-RCA-0214

-2-

APR 29 2003

While this process has continued to be intensive and required dedicated and concentrated resources, RL and ORP believe that the enclosed report is a further refinement from last year. Since the LDR Report is submitted as a primary document, we anticipate receipt of Ecology's comments 45 days following receipt of the document, and request that any comments be provided with adequate specificity so that DOE can make necessary changes to the document.

DOE welcomes the opportunity to meet with Ecology to discuss any concerns and provide clarification where needed. If there are any questions, please contact Mary Jarvis, RL Regulatory Compliance and Analysis Division, on (509) 376-2256; Greg Sinton, RL Waste Management Division, on (509) 373-7939; or Woody Russell, ORP Environmental Management Division, on (509) 373-5227.

Sincerely,

W. Wade Ballard

W. Wade Ballard, Assistant Manager
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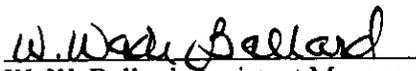
PRIMARY DOCUMENT STATEMENT

**CALENDAR YEAR 2002 HANFORD SITE MIXED WASTE LAND
DISPOSAL RESTRICTIONS REPORT**

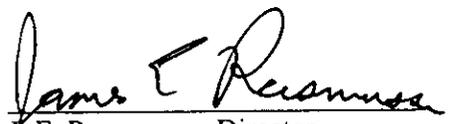
Approval of the U.S. Department of Energy's annual land disposal restriction report as a *Hanford Federal Facility Agreement and Consent Order* primary document shall be by written approval of U.S. Department of Energy and Washington State Department of Ecology Interagency Management Integration Team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

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

Approved and issued this _____ day of _____ 2003.


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ACRONYMS

AEA	<i>Atomic Energy Act</i>
AOC	area of contamination
ATG	Allied Technology Group, Inc.
BDAT	best demonstrated available technology
BHI	Bechtel Hanford, Inc.
CDI	Canyon Disposition Initiative
CERCLA	<i>Comprehensive Environmental Response, Compensation, and Liability Act of 1980</i>
CFR	Code of Federal Regulations
CH	contact handled
CH2M Hill	CH2M HILL Hanford Group, Inc.
CWC	Central Waste Complex
CSB	Canister Storage Building
C&T	characterization & treatment
CY	calendar year
D&D	decontamination and decommissioning
DCRT	double-contained receiver tank
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
DU	depleted uranium
Ecology	Washington State Department of Ecology
EIS	environmental impact statement
EPA	U.S. Environmental Protection Agency
ERDF	Environmental Restoration Disposal Facility
ETF	200 Area Effluent Treatment Facility
FD	final determination
FFCA	<i>Federal Facilities Compliance Act</i>
FFTF	Fast Flux Test Facility
FH	Fluor Hanford
FY	fiscal year
HEPA	high-efficiency particulate air (filter)
HLV	high-level vault
HLW	high-level waste
HSTF	Hexone Storage and Treatment Facility
HVAC	heating, ventilation, and air conditioning
HWTU	Hazardous Waste Treatment Unit
IAMT	Interagency Management Integration Team
ILAW	immobilized low-activity waste
ID	identification code
IMUST	inactive miscellaneous underground storage tank

INEEL	Idaho National Engineering and Environmental Laboratory
IPMP	integrated program management plan
ISS	interim safe storage
LAW	low-activity waste
LCAM	life-cycle asset management
LDR	land disposal restrictions
LEF	Liquid Effluent Facility
LERF	Liquid Effluent Retention Facility
LLBG	Low-level Burial Grounds
LLCE	long-length contaminated equipment
LLMW	low-level mixed waste
LLW	low-level waste
LSDS	location-specific data sheet
MW	mixed waste
MLLW	mixed low-level waste
NA or N/A	not applicable
NOD	notice of deficiency
O/C	organic/carbonaceous
ORP	Office of River Protection
PCB	polychlorinated biphenyl
PFP	Plutonium Finishing Plant
PMW	potential mixed waste
PMWT	potential mixed waste table
PNNL	Pacific Northwest National Laboratory
PUREX	plutonium-uranium extraction (process)
PSTF	Purgewater Storage and Treatment Facility
RCRA	<i>Resource Conservation and Recovery Act of 1976</i>
REC	radiochemical engineering cell
REDOX	reduction-oxidation (process)
RH	remote handled
RI/FS	remedial investigation/feasibility study
RLWS	Radioactive Liquid Waste System
RPP	River Protection Project
ROD	record of decision
S&M	surveillance & maintenance
SCW	special-case waste
SNF	Spent Nuclear Fuel
SPR EIS	Surplus Reactors Environmental Impact Statement
SST	single-shell tank
STP	site treatment plan
STR	storage report
SWIFT	Solid Waste Integrated Forecast Technical (Report)
TCLP	toxicity characteristic leaching procedure
TBD	to be determined

TGDS	Treatability Group Data Sheet
Tri-Party Agreement (TPA)	<i>Hanford Federal Facility Agreement and Consent Order</i>
TRU	transuranic (waste)
TRUM	transuranic mixed (waste)
TRUSAF	224-T Transuranic Waste Storage and Assay Facility
TSCA	<i>Toxic Substances Control Act of 1976</i>
TSD	treatment, storage, and/or disposal
WAC	<i>Washington Administrative Code</i>
WESF	Waste Encapsulation and Storage Facility
WHF	waste handling facility
WIDS	Waste Information Data System
WIPP	Waste Isolation Pilot Plant
WMP	Waste Management Project
WRAP	Waste Receiving and Processing Facility
WSCF	Waste Sampling and Characterization Facility
WSRd	waste specification record
WSS	waste specification system

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.

CALENDAR YEAR 2001 HANFORD SITE MIXED WASTE LAND DISPOSAL RESTRICTIONS STORAGE REPORT VOLUME 1, STORAGE REPORT

1.0 INTRODUCTION

Volume 1 presents information concerning the storage and minimization of mixed waste and the potential sources for the generation of additional mixed waste. This information, presented in accordance with *Hanford Federal Facility Agreement and Consent Order* (Tri-Party Agreement) (Ecology et al. 2001) Milestone M-26-01M, is Volume 1 of a two-volume report on the status of Hanford Site land disposal restricted mixed waste, other mixed waste, and other waste that the U.S. Department of Energy (DOE), Washington State Department of Ecology (Ecology), and U.S. Environmental Protection Agency (EPA) have agreed to include in this report. This volume contains the approval page for both volumes and includes the storage report. Information pertaining to waste characterization and treatment are addressed in Volume 2. Appendix A lists the land disposal restrictions (LDR) reporting requirements and explains where the requirements are addressed in this report. The reporting period for this document is from January 1, 2002, to December 31, 2002.

1.1 SOURCES AND ORGANIZATION OF WASTE STORAGE DATA

This report presents information on waste streams that are reported either as a matter of law or as a result of discussions among DOE, Ecology, and EPA. Waste streams reported as a matter of law include mixed waste in storage subject to the storage prohibition of Title 40 *Code of Federal Regulations* (CFR) Part 268.50. *Washington Administrative Code* (WAC) 173-303-140, "Dangerous Waste Regulations", incorporates the federal rule by reference. The EPA guidance (EPA 1990) indicates which mixed waste is subject to the storage prohibition. Other mixed waste streams, are being reported under the Tri-Party Agreement Milestone M-26-01 as a result of discussions held among DOE, Ecology, and EPA.

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 until the waste leaves a *Comprehensive Environmental Response, Compensation, and Liability Act* (CERCLA) of 1980 area of contamination. 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 or a 90-day accumulation area.

This storage report provides aggregate waste stream data based on a set of waste treatability groups and also provides the detailed data on location-specific sources of waste. The waste from these sources is included in the appropriate treatability groups. More information concerning treatability groups can be found in Volume 2. Per agreement with Ecology on February 6, 2003, mixed waste generated and sent directly to disposal does not need to be reported in the LDR report (Ecology et al. 2003). If any storage of the mixed waste occurs, the mixed waste must be reported.

Treatability group data sheets describe the characteristics that the location-specific waste sources share (Appendix B, Figure B-1). The data sheets also provide total waste volume data from the associated

location-specific data sheets for both the currently stored inventory and the waste projected to be generated. The location-specific data sheets describe how, where, and volume of waste stored and present information concerning disposition of the waste.

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

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

One treatability group has been added to this year's report: the 221-T Containment Building. Detail on the new group is found in Table 1-1, Table 2-1, Table 2-2, as well as the treatability group data sheet in Appendix B.

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

Table 1-1. Treatability Groups.

Treatability Group Name	Major Waste Sources
221-T Containment Building	Waste resulting primarily from 221-T Building canyon activities.
221-T Tank System	Waste resulting from decontamination activities at the 221-T and 2706-T Buildings; some additional waste from other Hanford Site locations.
222-S T8 Tunnel	Waste piping removed from aqueous waste service formerly used to transfer waste from the laboratory to the waste tank system.
241-CX Tank System	Residual tank waste resulting from REDOX, PUREX, and Semiworks processes.
324 Building REC Waste	High-activity radioactive waste containing toxic heavy metals generated during research and development activities since the mid-1960's and the processing of high-level vault waste.
325 HWTU	Laboratory waste generated by research and analytical activities conducted by PNNL. This waste stream was managed in satellite and 90-day accumulation areas and subsequently transferred to the 325 HWTU for storage and/or treatment. Waste is or was generated by active, ongoing projects at PNNL.
618-4 DU/Oil Drums	Drums of DU metal chips, turnings, cuttings, and sludges immersed in oil found in the 618-4 Burial Grounds.
B Plant Cell 4	Drums of WESF hot cell maintenance waste placed in storage from 1988 to 1997.
B Plant Containment Building	Process jumpers and equipment from B Plant Complex processes stored on the canyon deck and in process cells.

Table 1-1. Treatability Groups.

Treatability Group Name	Major Waste Sources
Cesium and Strontium Capsules	CsCl salt and SrF ₂ salt reclaimed from DST and SST Systems mixed waste.
DST Waste	Widely varying waste from chemical separations processes (e.g., PUREX, PFP, and cesium and strontium separations) and related support facilities operating from 1970 to date.
ERDF—Treatment	Spent resins and lead-contaminated waste from CERCLA remediation requiring treatment before disposal at ERDF.
HSTF	Residual heel content remaining from REDOX process.
LERF/ETF Liquid Waste	Liquid waste sent from various Hanford Site processes to LERF and ETF for treatment.
MLLW-01 - LDR Compliant Waste	Inorganic salt waste, excavated soil, and contaminated equipment that currently meets disposal criteria and regulatory requirements for disposal.
MLLW-02 - Inorganic Non-Debris	Inorganic particulates, absorbed liquids and sludges, paint waste, salt waste, and aqueous laboratory packs from various locations.
MLLW-03 - Organic Non-Debris	General organic solids and laboratory packs from various locations.
MLLW-04A - O/C Hazardous Debris	Organic plastic, rubber, and heterogeneous debris from various locations.
MLLW-04B- Non-O/C Hazardous Debris	Current and past-practice waste, including metals, concrete, asbestos, and heterogeneous debris from various locations.
MLLW-05 - Elemental Lead	Elemental lead and lead shielding from various locations.
MLLW-06 - Elemental Mercury	Elemental mercury from various locations.
MLLW-07 - RH and Large Container	RH and oversized CH MLLW generated from various locations.
MLLW-08 - Unique Waste	Waste stream consists of unique waste that requires special processing not typically employed for the other MLLW waste streams. Example includes beryllium powder from various locations, requiring RMETL or RTHRM (40 CFR 268.42).
MLLW-09 - Lead-Acid and Cadmium Batteries	Spent radioactive lead-acid and cadmium batteries from various locations.
MLLW-10 - Reactive Metals	Reactive metal waste from from various locations.
PUREX Plant	Chromium-contaminated debris from E-Cell floor currently stored in F-Cell of the PUREX Containment Building.
PUREX Storage Tunnels ¹	Equipment and waste containing mercury, lead, silver, cadmium, chromium, barium, and mineral oil from PUREX and other processes.

Table 1-1. Treatability Groups.

Treatability Group Name	Major Waste Sources
Purgewater	Purgewater generated from pump-and-treat operations, well drilling, groundwater sampling, and well maintenance from across the Hanford Site.
SST Waste	Waste from spent nuclear fuel processing and related support facilities operating between 1944 and 1980.
TRUM-CH	CH TRUM waste includes waste from various locations.
TRUM-Large Box	TRUM waste in large boxes, slated for M-91 processing, from the 324 Building and/or other sources.
TRUM-PCB	TRUM and nonmixed waste contaminated with regulated levels of PCBs from various locations.
TRUM-RH	TRUM waste slated for M-91 processing from various locations.
¹ This treatability group includes both TRUM and nonmixed TRU waste. TRUM and nonmixed TRU exist in the same storage unit and can be difficult to distinguish when the waste has been in storage for quite some time.	

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

Table 1-2. Streams No Longer Applicable to Report.

Treatability Group Name	Waste Source	Reason
183-H Solar Evaporation Basins Waste	Containerized solids retrieved from 183-H Solar Evaporations Basins, generated from 300 Area fuel fabrication waste from 1973 to 1985.	Unit is in post-closure care. Process waste inventory is now stored at CWC and reported as part of that inventory.
PNNL-305B	Waste generated from PNNL laboratory and facility operations.	Storage activities at 305-B no longer meet the definition of a "waste stream" subject to the report. Waste stored is reflected in location-specific data sheets and reflected in the appropriate CWC waste stream description.
4843 Sodium Storage Facility Waste	Waste sodium from FFTF operations.	Significant amounts of alkali metal waste are no longer generated. This inventory is stored at CWC and reported as part of that inventory.
Hexone Waste	Hexone that had been planned for use in the 202-S solvent extraction process.	Hexone has been incinerated offsite at Diversified Scientific Services, Inc., Kingston, Tennessee. (Small amounts of waste continue to be generated from surveillance and maintenance of the emptied tanks that were used to store the hexone. This waste is involved in the MLLW-04A treatability group.)
PUREX Facility Ammonia Scrubber Waste	Waste generated from sorption of gaseous ammonia from fuel processing operations at the PUREX Plant.	Waste no longer generated. Inventory in DST System.
PUREX Facility Process Condensate	Condensed vapors from PUREX Plant operations.	Waste no longer generated. Inventory in DST System.
PUREX Plant Aging Waste	First extraction-column fission products from the PUREX Plant.	Waste no longer generated. Inventory in DST System.
T-Dragoff	T Plant Complex	Waste was dispositioned and disposed.
222-S RH-MLLW	222-S Laboratory Complex	Treatability group was combined with the MLLW-07 treatability group.
241-Z	Plutonium Finishing Plant	Treatability group was combined with the DST Waste treatability group.

Table 1-2. Streams No Longer Applicable to Report.

Treatability Group Name	Waste Source	Reason
HO-64-4275	Various Hanford Site locations.	Treatability group was combined with the DST Waste treatability group.
K Basin Sludge	100 Area K Basins	Treatability group was combined with the TRUM-PCB treatability group.
T Plant EC-1 Condenser	242-A Evaporator	Shipped offsite for recycling in CY2002
ERDF – Direct Disposal	Hanford Site remediation waste	No storage of mixed waste occurred for this treatability group.

1.2 STORAGE REPORT DATA COLLECTION PROCESS

A central database was used for managing data contained in Volume 1, Appendix B. Data were collected for all stored and projected mixed waste and input into the database. Volumes reported as stored inventory at specific locations automatically were summed and presented as the storage information for the associated treatability group inventory. An analogous automatic summation was performed for projected waste generation rates. Appendix B contains the treatability group data sheets, along with the following information:

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

1.3 SCHEDULE AND MECHANICS OF LDR REPORT UPDATE

Each annual update is issued as a complete replacement with a new document number that supersedes the previous year's LDR Report. Proposed TPA milestones or proposed changes to TPA milestones are identified and processed using existing processes contained in the TPA Action Plan, Section 12.0, and not as part of the annual LDR report review and approval process. Commitments other than TPA milestones, however can be proposed in the LDR Report when required. Modification of commitments in the report are made by either using a LDR Report change form for within-year changes, by agreement through TPA lead regulatory agency project manager meetings, by agreement through LDR TPA project manager meetings, or by DOE in the annual update agreed on by Ecology during the primary document review and comment process. Changes to commitments proposed by DOE as part of the primary document process are summarized in Volume 1, Section 1.5.

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

Year 2000 Hanford Site Mixed Waste Land Disposal Restrictions Report, workshops were held during 2002 to improve the LDR Report process. These results have been incorporated into the LDR Report.

The annual report revisions consist of the following:

- Updated mixed waste storage inventories and projected generation rates to reflect current plans and schedules
- Revised waste stream characterization information to reflect current knowledge
- Updated compliance status of the TSD units to reflect completion of pending storage assessments and permitting activities
- Report on completed LDR storage assessments and summarized resulting findings and observations
- Re-evaluation of the adequacy of the capacity of current TSD units for storing LDR mixed waste
- Addition of new milestones and revision of existing milestones as applicable
- Report on changes in the management and TSD of mixed waste required by changes in federal policy or regulations as applied to the DOE complex
- Funding/budget guidance impacts on operating plans and schedules
- Addition of mixed waste streams and projected mixed waste that will be generated in the 5-year span for the LDR report; and adding potential mixed waste as waste is identified
- Removing mixed waste and potential mixed waste from the LDR report that has been disposed or otherwise dispositioned (e.g., recycled); Refer to Volume 1, Table 1-2 and Volume 1, Appendix C Table C-3.

1.4 ASSUMPTIONS

This section lists key assumptions used to prepare this report. The assumptions could apply to either or both volumes of the report.

- For tank waste (DST Waste and SST Waste treatability groups), the pretreatment methods to be developed include acceptable technology to separate the tank waste into low-activity waste (LAW) and high-level waste (HLW) streams so the bulk of chemical waste is in the LAW stream and the bulk of radionuclides are in the HLW stream.
- Pretreated tank waste will be transferred to LAW and HLW vitrification facilities.
- For tank waste, it is assumed that a treatability variance is in place for both the LAW and HLW fractions and a delisting petition is in place for the vitrified HLW fraction.
- The glass waste forms either comply with leachability requirements or appropriate variances are obtained.

- Liquid SST Waste from the SST System continues to be transferred to the DST System and mixed with DST Waste as part of the stabilization program for the SST System.
- Process condensate from the 242-A Evaporator and hazardous wastewater from other sources, including liquid effluents from tank waste pretreatment and vitrification, will continue to be treated at ETF.
- The work scope contained in the LDR report is based on expected funding and is contingent on Congressional budget actions. If funding is reduced or reprioritized, the ability to conduct and complete work scope is affected. To address these changes, changes to Tri-Party Agreement milestones are made using Section 12.0 of the Tri-Party Agreement Action Plan, and not part of the review and approval of the annual LDR report update.

1.5 SUMMARY OF PROPOSED CHANGES TO COMMITMENTS IN THE LDR REPORT

LDR report commitments can be changed through the processes described in Volume 1, Section 1.3. This section contains any commitment changes that are proposed by DOE in the annual update agreed on by Ecology during the primary document review and comment process.

- ORP LDR assessments have been changed as described in Volume 1, Tables 3-3 and 3-4.
- PUREX Storage Tunnels treatability group – Propose to change the planned characterization schedule from year 2027 to “To be determined via Tri-Party Agreement Action Plan, Section 8.0.” This will make the information consistent with the PUREX Plant treatability group. Information is located in Volume 1, Table 2-2 and Volume 2, Table 7-1.

2.0 SUMMARY STORAGE DATA

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

2.1 SUMMARY INVENTORY OF WASTE TREATMENT GROUPS AND FORECAST GENERATION RATES

The volume of mixed waste currently in storage and the volume projected to be generated during the next 5 calendar years are presented in Table 2-1. These data are summarized from the location-specific data sheets and also are reported in the treatability group data sheets in Appendix B. Table 2-2 presents an overall summary of the storage, characterization, treatment, and disposal activities for the treatability groups. Table 2-2 is a collection of information from the following four tables: Volume 1, Table 2-1; Volume 2, Table 7-1; Volume 2, Table 8-1; and Volume 2, Table 8-2. Data on waste volumes in these tables are taken from Appendix B and rounded to two significant figures. Stored waste volumes are reported either by the actual waste or by the waste container volume. In general, stored waste volumes are reported by actual waste unless the data is obtained from the solid waste information tracking system.

Mixed waste is projected to be generated at the Waste Treatment Plant towards the end of the 5-year forecasting window. The Waste Treatment Plant is a new TSD unit being constructed to treat DST Waste and SST Waste. Because of the uncertainties of these projected generation volumes and generation dates, data sheets do not appear in the CY 2002 LDR Report. Per agreement with Ecology at the February 6, 2003, LDR Project Manager Meeting, location-specific data sheets and/or treatability group data sheets for the Waste Treatment Plant will be prepared for the CY 2003 LDR Report.

2.2 INVENTORY STORAGE METHOD AND LOCATION

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

2.3 POTENTIAL MIXED WASTE

The potential mixed waste table (PMWT) (Appendix C) includes materials that have not been generated as mixed waste and waste that has not been actively managed as mixed waste. The materials included are those that reasonably could be expected to be generated as mixed waste at some future time. The materials included in the PMWT (equipment, piping, etc.) are those that currently are not being used and do not have a clear path for reuse or recycling. The waste that has not been actively managed as mixed waste is, in many cases, at past-practice units, either as RCRA or CERCLA, under the Tri-Party Agreement. Past-practice waste is waste that was abandoned before the first effective LDR date in Washington State, August 19, 1987. Classification of waste management units 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 operable unit for these RCRA or CERCLA past-practice units, mixed waste could, or is expected to be, generated during remediation activities. The PMWT also includes a similar category of materials currently in standby for a potential future use. The table was developed for the following reasons:

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

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

- Generated mixed waste. This mixed waste is included in treatability group and location-specific data sheets in Appendix B of this LDR report.
- Contaminated soil sites, cribs, ponds, ditches, trenches, etc., considered engineered disposal units. [However, the materials would be included in a LDR report location-specific data sheet (Appendix B) when management or disposition activities associated with those units are expected to result in the generation of mixed waste in the next 5 years.]
- The building structures themselves, including contaminated walls, floors, floor sweepings, dust, etc. Building equipment, such as ventilation system components and building utilities that would be considered part of the structure, also is not included.
- Equipment and chemicals being used.

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

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

- Proposed dates for assessments
- Operable units that encompass the facility or unit
- Existing documentation and milestones or schedules that indicate plans that will address the PMW
- Date to complete data gap plan
- Start date for major negotiations such as facility transition or deactivation.

Table 2-1. Stored Volumes of Mixed Waste and Generation Projections.

Treatability Group Name	Description ¹	Current Inventory (m ³) ²	Generation Projection 2003 (m ³) ²	Generation Projection 2004 (m ³) ²	Generation Projection 2005 (m ³) ²	Generation Projection 2006 (m ³) ²	Generation Projection 2007 (m ³) ²
221-T Containment Building	Equipment (e.g., jumpers, tanks, centrifuges, etc.), other debris (e.g., pieces of concrete, etc.), and nondebris (e.g., sandblasting grit) generated during canyon deck and/or process cell cleanout, or from treatment and/or decontamination activities.	50	0	0	0	0	0
221-T Tank System	Liquid mixed waste with settled solids/sludge (waste also contains PCBs at TSCA regulated concentrations)	52	0	0	0	0	0
222-S T8 Tunnel	Debris that has contacted waste from the 219-S WHF tank system. The debris is designated as RH MLLW as a result of this contact.	0.20	0	0	0	0	0
241-CX Tank System	Residual tank waste resulting from REDOX, PUREX, and Semiworks processes.	3.0	0	0	0	0	0
324 Bldg. REC Waste	WSRd# 324X-20J-0001. High activity radioactive waste containing regulated quantities of toxic heavy metals. Mixed waste residue will be generated from the future REC D&D activities.	5.0	0	5.0	5.0	0	0
325 HWTU	This waste stream consists of many different inorganic and organic solids and liquids contaminated with inorganic and organic regulated dangerous waste constituents, including PCBs. This waste stream also includes hazardous debris. WSRds in this waste stream: 400, 401, 402, 403, 404, 420, 421, 422, 500, 501, 503, 504, 505, 521, 523, 524, 525, 627, 647, 800, 820, 822, 830, 923, 930.	8.2	14	16	16	16	16
618-4 DU/Oil Drums	Drums contain depleted uranium chips, turnings, cuttings, and sludge immersed in oil discovered in a burial ground being excavated under a CERCLA ROD. The 618-4 Burial Ground was operated from 1955 to 1961. No information is available on the history or source of the waste. The drums were discovered in March 1998 during remediation activities. In April 1998, each of the excavated drums was placed in a vented overpack and those with low oil content were stabilized with mineral oil. The drums are located at an ERDF staging area and are being managed in accordance with CERCLA requirements.	120	0	0	0	0	0
B Plant Cell 4	Waste resulted from WESF hot cell maintenance waste (i.e., manipulator boots, light bulbs, HEPA filters, misc. debris). No additional waste will be stored in this location as the B Plant Complex is under long-term S&M.	1.4	0	0	0	0	0

Table 2-1. Stored Volumes of Mixed Waste and Generation Projections.

Treatability Group Name	Description ¹	Current Inventory (m ³) ²	Generation Projection 2003 (m ³) ²	Generation Projection 2004 (m ³) ²	Generation Projection 2005 (m ³) ²	Generation Projection 2006 (m ³) ²	Generation Projection 2007 (m ³) ²
B Plant Containment Building	Stream consists of failed equipment (e.g., process jumpers, pumps, etc.) used in the 221-B canyon. Contaminated debris/equipment derived from the processing of "F" listed wastes for the recovery of strontium and cesium. Also contains elemental lead used for counterbalances and shielding. The current waste inventory is 294,000 kg, and no additional waste will be stored at this location. The B Plant Complex is under long-term S&M.	290,000 kg	0	0	0	0	0
Cesium and Strontium Capsules	Cesium and strontium were reclaimed from Tank Farm waste as a product, separated and purified at B Plant, and converted to dry salt for storage at WESF. The cesium and strontium capsules were declared waste in 1997 with the application for a Part A, Form 3, permit application. The subject waste consists of 1,335 cesium capsules and 601 strontium capsules. The capsules are stored in pool cells at WESF.	2.0	0	0	0	0	0
DST Waste	Basic aqueous solution that might contain suspended material and/or settled solids (sludge and saltcake). Waste streams are treated with sodium hydroxide and sodium nitrite to minimize tank corrosion and to address compatibility issues. Waste has been stored in the DST System from 1970 to the present.	88,000	29,000	21,000	4,600	7,800	8,800
ERDF—Treatment	This waste stream reflects mixed waste that requires treatment before disposal at ERDF. The waste is stored at the operable unit, and is transferred to ERDF where the waste is treated and disposed.	140	31,000	31,000	31,000	31,000	31,000
HSTF	Residual heel content remaining from REDOX Process.	2.1	0	0	0	0	0
LERF/ETF Liquid Waste	CERCLA and RCRA aqueous wastewater.	29,000	88,000	90,000	81,000	81,000	81,000

Table 2-1. Stored Volumes of Mixed Waste and Generation Projections.

Treatability Group Name	Description ¹	Current Inventory (m ³) ²	Generation Projection 2003 (m ³) ²	Generation Projection 2004 (m ³) ²	Generation Projection 2005 (m ³) ²	Generation Projection 2006 (m ³) ²	Generation Projection 2007 (m ³) ²
MLLW-01 – LDR Compliant Waste	WSRds: BLS, H3L, 901, 903, 904, 930, 931; Waste with WSRd BLS consists of soils (dirt, sand, gravel, rocks, etc.) that were excavated from the various tank farms. The waste was incidentally contaminated with tank waste; therefore, the waste is designated with F001 through F005 based on the “contained-in” policy. The waste typically is packaged in drums and boxes. Remaining WSRds include waste that consists of soils (dirt, sand, gravel, rocks, etc.), treated debris, other particulates, and solidified liquids. All waste forms are anticipated to contain LDR compliant levels of dangerous waste constituents. Subject waste also includes the currently stored inventory of LDR compliant 183-H Basin waste and the forecasted LDR compliant waste that comes directly from the generator (e.g., debris waste items, deactivated waste, stabilized waste, and waste meeting LDRs as generated).	1,400	13	13	13	13	13
MLLW-02 - Inorganic Non-Debris	This treatability group is for non-debris waste that contains hazardous constituents that either require non-thermal treatment (specified technology) or non-thermal treatment is BDAT for meeting the applicable LDR treatment standards (concentration-based standards). The applicable WSRds for this treatability group are: ALI, IXI, LPI, PAI, SSA, H3C, H3M, H3S, 420, 421, 425, 426, 428, 429, 44A, 500(183-H only), 500-0, 500-1, 504-0, 505(except 505-3), 521, 523, 525, 801, 812, 820, 821, 82A, 830, 900, 902, 904, 90A. This waste consists of many different inorganic solids (e.g., particulates, absorbed liquids, sludges, resins, soils) and labpacks that are contaminated with regulated metals and other inorganics. This waste treatability group does not include hazardous debris other than incidental debris material commingled with the non-debris. The inventory is primarily from the closure of the 183-H Solar Evaporation Basins.	2,700	10	26	18	38	10

Table 2-1. Stored Volumes of Mixed Waste and Generation Projections.

Treatability Group Name	Description ¹	Current Inventory (m ³) ²	Generation Projection 2003 (m ³) ²	Generation Projection 2004 (m ³) ²	Generation Projection 2005 (m ³) ²	Generation Projection 2006 (m ³) ²	Generation Projection 2007 (m ³) ²
MLLW-03 - Organic Non-Debris	This treatability group is for non-debris waste that contains hazardous constituents that either require thermal treatment (specified technology) or thermal treatment is BDAT for meeting the applicable LDR treatment standards (concentration-based standards). Stabilization of the thermal treatment residue also might be required. The applicable WSRds for this treatability group are: ALO, LPA, LPO, PAO, TSC, 300, 301, 302, 303, 304, 305, 310, 311, 320, 321, 330, 331, 31A, 400, 401, 402, 403, 404, 405, 406, 407, 408, 40A, 40B, 427, 430, 431, 432, 45A, 47A, 500 (except 183H), 501-2, 502 (except 200LEF), 503-2, 504-1, 505-3, 506, 507, 50A, 700, 701, 720, 721, 822, 920, 921, 922, 923. This waste stream consists of many different inorganic and organic solids (e.g., particulates, absorbed liquids, sludge, resins, soils) and labpacks that are contaminated with organic regulated dangerous waste constituents, including PCBs. This waste stream does not include hazardous debris other than incidental debris material commingled with the non-debris.	840	30	42	43	40	36
MLLW-04A - O/C Hazardous Debris	This treatability group is for waste that meets the definition of hazardous debris as defined in 40 CFR 268.2, and the waste contains physical and/or chemical constituents that would be considered to meet the definition of O/C waste as defined in WAC 173-303-040. The physical characteristics include paper, plastic, wood, rubber, rags, and lesser quantities of metallic and inorganic waste components. Applicable WSRds could include: ASB, BLD, DBR, DBL, H3D, SOC, SOE, 600, 601, 603, 605, 606, 607, 60A, 60B, 620, 621, 622, 640, 641, 315, 334, 625, 626, and 627.	1,400	150	160	160	170	180
MLLW-04B - Non-O/C Hazardous Debris	This treatability group is for waste that meets the definition of hazardous debris as defined in 40 CFR 268.2, and the waste does not contain physical and/or chemical O/C waste constituents in excess of 10% as defined in WAC 173-303-040. The physical characteristics include metals, inorganic debris items, and lesser quantities of O/C waste components (paper, plastic, wood, etc.). Applicable WSRds could include: ASB, 640, 641, 645, 646, and 647. Debris that is regulated for PCBs by TSCA regulations is not included in this waste stream; such debris is considered organic solid waste and is reported in MLLW-03.	140	60	66	73	80	88

Table 2-1. Stored Volumes of Mixed Waste and Generation Projections.

Treatability Group Name	Description ¹	Current Inventory (m ³) ²	Generation Projection 2003 (m ³) ²	Generation Projection 2004 (m ³) ²	Generation Projection 2005 (m ³) ²	Generation Projection 2006 (m ³) ²	Generation Projection 2007 (m ³) ²
MLLW-05 - Elemental Lead	This treatability group is for waste that is determined to meet the "Radioactive Lead Solids Subcategory" as described in 40 CFR 268.40. Applicable WSRds for this treatability group are: EPB, 800, 801, 803. This treatability group 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 waste was and is generated by many onsite generating organizations and offsite generators.	430	2.5	24	22	17	16
MLLW-06 - Elemental Mercury	This treatability group is for waste that is determined to meet the "Elemental Mercury Contaminated with Radioactive Materials" subcategory as described in 40 CFR 268.40. Applicable WSRds for this treatability group are: EHG, HHG, 810, 811, and 812. This treatability group consists of liquid mercury, partially amalgamated mercury, mercury spill cleanups, and some debris waste items packaged in with the mercury waste.	13	0.56	1.6	0.7	4.3	0.2
MLLW-07 - RH and Large Container	WSRds: DBL, HRW, 450, 550, 650. This waste stream is comprised of RH-MLLW with various chemical (organics, inorganics, metals) and physical (particulates, debris, sludges, etc.) characteristics. Many different regulated constituents could be represented in this waste stream; however, the primary waste type is heterogeneous debris from the SST/DST Systems operations. This waste stream also contains waste in oversized containers not typically suited for commercial treatment; which will be treated using the M-91 MLLW capability.	81	180	340	310	280	280
MLLW-08 - Unique Waste	BER, 821, 823, 84A. This waste stream consists of unique waste that requires special processing not typically employed for the other MLLW waste streams. Example includes beryllium powder, requiring RMETL or RTHRM.	20	0	0	0	0	0
MLLW-09 - Lead-Acid and Cadmium Batteries	BAT, 802, 830. This waste consists of lead-acid and cadmium batteries from various onsite locations and from offsite generators.	8.4	0.37	0.91	4.3	0.57	0.21
MLLW-10 - Reactive Metals	ENA, 44A, 44B, 820, 822, 82A. This waste consists of water-reactive metals and compounds, typically including sodium metal; also could consist of water-reactive cyanides.	18	0.30	0.30	0.30	0.30	0.30

Table 2-1. Stored Volumes of Mixed Waste and Generation Projections.

Treatability Group Name	Description ¹	Current Inventory (m ³) ²	Generation Projection 2003 (m ³) ²	Generation Projection 2004 (m ³) ²	Generation Projection 2005 (m ³) ²	Generation Projection 2006 (m ³) ²	Generation Projection 2007 (m ³) ²
PUREX Plant	Concrete rubble contaminated with trace chromium as a corrosion product. No additional waste will be stored at this location as the PUREX Plant is under long-term S&M.	1.0	0	0	0	0	0
PUREX Storage Tunnels	This treatability group varies from very large equipment vessels with lead counterweights to very fine powder in canisters.	2,800	0	0	0	0	0
Purgewater	Groundwater contaminated with uranium, technetium, carbon tetrachloride, and nitrates.	3,700	2,500	2,500	2,500	2,500	2,500
SST Waste	Basic aqueous slurry with layers of saltcake and/or sludge. The sludge consists of solids (i.e., hydrous metal oxides) precipitated from the neutralization of acid waste. The saltcake consists of the various salts formed from the evaporation of water.	120,000	0	0	0	0	0
TRUM-CH	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, conweb pads, absorbent/kitty litter, filters, lead shielding, universal polypropylenes, anti-corrosive radpad, carbon steel, fiberglass, brick/firebrick, plastic liner, shielding, concrete, animal waste, paints, ceramics, sludges, asbestos, aluminum, sand equipment, diatomaceous earth, resins, copper metal, lead, water, floor sweeps, batteries, leather, liquid, teflon, cork, cotton/kotex, light bulbs, urethane, and wax.	440	270	220	240	150	110
TRUM-Large Box	TRUM waste from various generating activities. The waste contains iron-based metal, plastic/ polyurethane, wood, paper, filters, soil, miscellaneous/ unknown/other, rags, lead, plexiglas, styrofoam, anti-corrosive radpad, asbestos, rubber, glass, absorbent/kitty litter, cement, and concrete.	72	0	0	0	0	0

Table 2-1. Stored Volumes of Mixed Waste and Generation Projections.

Treatability Group Name	Description ¹	Current Inventory (m ³) ²	Generation Projection 2003 (m ³) ²	Generation Projection 2004 (m ³) ²	Generation Projection 2005 (m ³) ²	Generation Projection 2006 (m ³) ²	Generation Projection 2007 (m ³) ²
TRUM-PCB	The waste contains metal, plastic, wood, lead, oils (hydraulic fluid), paper, conweb pads, glass (crushed fluorescent tubes), concrete, rags, absorbent/kitty litter, rubber, universal polypropylenes, soil, and tape/rope contaminated with PCBs. The light ballasts are typically in large boxes and the hydraulic fluid is typically in drums.	110	0	1.9	1.0	1.8	0.32
TRUM-RH	The waste consists of inner-container, iron-based metals, lead, soil, lead shielding, and steel shielding. Waste is from cleanout of hot cells from reearch and development laboratories. The relative waste quantity is small, because the waste matrix contains a large percentage of lead and steel shielding materials.	56	3.2	4.0	3.0	3.0	2.6
Total (without B Plant Containment Building for current inventory only) (Total might not be exact because of rounding)		250,000	110,000	110,000	94,000	94,000	89,000

¹ Waste specification record (WSRd) indicates waste treatment and/or disposal pathway.

² Volume numbers have been rounded to two significant figures.

AOC	area of contamination	MLLW	mixed low-level waste
BDAT	best demonstrated available technology	O/C	organic/carbonaceous
CERCLA	<i>Comprehensive Environmental Response, Compensation, and Liability Act of 1980</i>	OU	operable unit
CFR	Code of Federal Regulations	PCB	polychlorinated biphenyl
CH	contact handled	PNNL	Pacific Northwest National Laboratory
CSB	Canister Storage Building	PUREX	Plutonium-Uranium Extraction (Plant)
D&D	decontamination and decommissioning	RCRA	<i>Resource Conservation and Recovery Act of 1976</i>
DST	double-shell tank	REC	radiochemical engineering cell
ERDF	Environmental Restoration Disposal Facility	REDOX	Reduction-Oxidation (Plant)
ETF	200 Area Effluent Treatment Facility	RH	remote handled
HEPA	high-efficiency particulate air	ROD	record of decision
HLV	high-level vault	SST	single-shell tank
HWTU	Hazardous Waste Treatment Unit	TRUM	transuranic mixed
IHLW	immobilized high-level waste	TSCA	<i>Toxic Substances Control Act of 1976</i>
ILAW	immobilized low-activity waste	WAC	<i>Washington Administrative Code</i>
LDR	land disposal restrictions	WESF	Waste Encapsulation and Storage Facility
LERF	Liquid Effluent Retention Facility	WHF	Waste Handling Facility
LLCE	long-length contaminated equipment	WSRd	Waste Specification Record

Table 2-2. Treatability Group Summary of Storage, Characterization, Treatment, and Disposal Activities.

Treatability Group Name	Current Inventory (m ³) ¹	Projected Generation Volume 2003 through 2007 (m ³) ¹	Planned Characterization Schedule	Treatment Process	Projected Volume to be Treated 2003 through 2007 (m ³) ¹	Disposal Location
221-T Containment Building	50	0	Completed.	M-091 TRUM	0	Not yet determined.
221-T Tank System	52	0	Will be done in conjunction with T Plant Complex Canyon disposition.	Not yet determined.	0	Not yet determined..
222-S T8 Tunnel	0.2	0	2033	Not yet determined.	0	Mixed waste trenches.
241-CX Tank System	3.0	0	To be determined through future negotiations.	Not yet determined.	0	Not yet determined.
324 Building REC Waste	5.0	10	Completed.	Not yet determined.	0	WIPP.
325 HWTU	8.0	79	Proposed M-091 ²	HWTU, Commercial-Thermal	Proposed M-091 ²	Mixed waste trenches.
618-4 DU/Oil Drums	120	0	Completed.	Commercial-Thermal.	120	ERDF.
B Plant Cell 4	1.4	0	To be determined via Tri-Party Agreement Action Plan, Section 8.0.	Not yet determined.	0	Not yet determined.
B Plant Containment Building	290,000 kg	0	To be determined via Tri-Party Agreement Action Plan, Section 8.0.	Not yet determined.	0	Not yet determined
Cesium and Strontium Capsules	2.0	0	Completed.	Vitrification.	0	HLW repository.
DST Waste	88,000	72,000	Ongoing.	WTP.	0	HLW repository and onsite vaults.
ERDF—Treatment	140	160,000	Ongoing.	ERDF treatment.	160,000	ERDF.
HSTF	2.1	0	To be determined through future negotiations.	Not yet determined.	0	Not yet determined.
LERF/ETF Liquid Waste	29,000	420,000	Ongoing.	ETF.	420,000	SALDS.
MLLW-01 – LDR Compliant Waste	1,400	64	Proposed M-091 ²	No treatment required.	No treatment required.	Mixed waste trenches.

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Table 2-2. Treatability Group Summary of Storage, Characterization, Treatment, and Disposal Activities.

Treatability Group Name	Current Inventory (m ³) ¹	Projected Generation Volume 2003 through 2007 (m ³) ¹	Planned Characterization Schedule	Treatment Process	Projected Volume to be Treated 2003 through 2007 (m ³) ¹	Disposal Location
MLLW-02 - Inorganic Non-Debris	2,700	100	Proposed M-091 ²	Commercial-stabilization.	Proposed M-091 ²	Mixed waste trenches.
MLLW-03 - Organic Non-Debris	840	190	M-091-12, M-091-12A, Proposed M-091 ²	Commercial-thermal.	M-091-12, M-091-12A, Proposed M-091 ²	Mixed waste trenches.
MLLW-04A - O/C Hazardous Debris	1,400	820	Proposed M-091 ²	Commercial-Thermal	Proposed M-091 ²	Mixed waste trenches.
MLLW-04B - Non-O/C Hazardous Debris	140	370	Proposed M-091 ²	Commercial-Macro.	Proposed M-091 ²	Mixed waste trenches.
MLLW-05 - Elemental Lead	430	82	Proposed M-091 ²	Commercial-Macro.	Proposed M-091 ²	Mixed waste trenches.
MLLW-06 - Elemental Mercury	13	7.4	Proposed M-091 ²	Commercial Amalgamation.	Proposed M-091 ²	Mixed waste trenches.
MLLW-07 - RH and Large Container	81	1,400	Proposed M-091 ²	M-091 MLLW.	Proposed M-091 ²	Mixed waste trenches.
MLLW-08 - Unique Waste	20	0	Proposed M-091 ²	Not yet determined.	Proposed M-091 ²	Mixed waste trenches.
MLLW-09 - Lead-Acid and Cadmium Batteries	8.4	6.4	Proposed M-091 ²	Not yet determined.	Proposed M-091 ²	Mixed waste trenches.
MLLW-10 - Reactive Metals	18	1.5	Proposed M-091 ²	Not yet determined.	Proposed M-091 ²	Mixed waste trenches.
PUREX Plant	1.0	0	To be determined via Tri-Party Agreement Action Plan, Section 8.0.	Not yet determined.	0	Not yet determined.
PUREX Storage Tunnel	2,800	0	To be determined via Tri-Party Agreement Action Plan, Section 8.0.	Not yet determined.	0	Not yet determined.

Table 2-2. Treatability Group Summary of Storage, Characterization, Treatment, and Disposal Activities.

Treatability Group Name	Current Inventory (m ³) ¹	Projected Generation Volume 2003 through 2007 (m ³) ¹	Planned Characterization Schedule	Treatment Process	Projected Volume to be Treated 2003 through 2007 (m ³) ¹	Disposal Location
Purgewater	3,700	13,000	Ongoing.	Solar evaporation at PSTF.	13,000	The residues and sludges remaining in the modular tanks will be removed, treated as necessary to meet the ERDF waste acceptance criteria, and be disposed in ERDF.
SST Waste	120,000	0	Ongoing.	WTP.	0	HLW repository and onsite vaults.
TRUM-CH	440	1,000	Proposed M-091 ²	WRAP Facility.	1,000	WIPP.
TRUM-Large Box	72	0	Proposed M-091 ²	M-091 TRUM.	0	WIPP.
TRUM-PCB	110	5.0	Before WIPP closure (~2034).	Not yet determined.	0	WIPP.
TRUM-RH	57	16	Proposed M-091 ²	M-091 TRUM	0	WIPP.

¹ Volume numbers in this table have been rounded to two significant figures.

² Treatment and disposal will be performed as necessary to support results of the M-091 TPA dispute.

ATG	Allied Technology Group, Inc.	LDR	land disposal restrictions	RH	remote handled
CH	contact handled	LERF	Liquid Effluent Retention Facility	SALDS	State-approved land disposal structure
DST	double-shell tank	MLLW	mixed low-level waste	SST	single-shell tank
ERDF	Environmental Restoration Disposal Facility	PCB	polychlorinated biphenyls	TBD	to be determined
ETF	200 Area Effluent Treatment Facility	PNNL	Pacific Northwest National Laboratory	TRUM	transuranic mixed
HLW	high-level waste	PSTF	Purgewater Storage and Treatment Facility	WIPP	Waste Isolation Pilot Plant
HWTU	hazardous waste treatment unit	PUREX	Plutonium-Uranium Extraction (Plant)	WTP	Waste Treatment Project
kg	Kilogram	RCRA	<i>Resource Conservation and Recovery Act of 1976</i>		

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

The DOE conducts/oversees assessments of mixed waste storage areas and other areas that could, in the future, be the source of generation of other mixed waste. DOE assessments include reviewing other independent assessments and inspections and contractor self-assessments. In addition, daily, weekly, monthly, quarterly, and annual contractor assessments and inspections are conducted at Hanford Site mixed waste storage areas in accordance with company policy, 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 potential mixed waste.

3.1 INTRODUCTION

Of the findings and observations that were made from DOE assessments in CY 2002, no indicators requiring global actions for LDR reporting were identified.

3.2 ASSESSMENT SCHEDULES

In CY 2002, DOE-RL performed four assessments and completed a CY 2001 assessment (325 HWTU). The 324 and the 327 assessments were combined into one effort. The findings and observations from these assessments are summarized in Table 3-1.

Table 3-1. Summary of DOE-RL Assessment Results.

Assessment Location	Assessment Number	Assessment Start Dates	Findings and Observations
224-T Process Cells	A&E-SEC-02-009	February 19, 2002	There were no findings and four observations. (footnotes 1-4).
325 HWTU	A&E-DWR-02-004	December 20, 2001	There were no findings and one observation ⁵ .
3720	Not available	June 28, 2002	As of December 31, 2002, the assessment report was not finalized.
324/327	Not available	August 27, 2002	As of December 31, 2002, the assessment report was not finalized.

¹ Observation : Vessel inventories have not been determined.

² Observation : Informal monitoring of water level in C-Cell.

³ Observation : Informal technical evaluation of C-Cell water concern.

⁴ Observation : Unknown contents of a light bulb box in the process area not identified as PMW.

⁵ Observation: Drained and flushed stainless steel tanks stored in Room 603 had no apparent future use. The tanks had not contained listed wastes, so they are not considered PMW

Table 3-2 lists the locations where DOE-RL plans to conduct assessments in CYs 2003 through 2005

Table 3-2. DOE-RL Assessments for CYs 2003 through 2005.

Facility/Location	Start Date	Facility/Location	Start Date
333 314	1st quarter CY2003	100 Area General (everything but reactors and reactor auxiliaries)	3rd quarter CY2004
3708	2nd quarter CY2003	SNF Complex	4th quarter CY2004
300 Area General	3rd quarter CY2003	2711E 241-CX	1st quarter CY2005
340/340A/340B/300-RLWS	4th quarter CY2003	618-4 ERDF	2nd quarter CY2005
K Basin East	1st quarter CY2004	T Plant	3rd quarter CY2005
K Basin West 100 Area Reactor Auxiliaries (excluding reactors)	2nd quarter CY2004	200 Area General 1. 200 Area North 2. Railcar staging areas	4th quarter CY2005

The U.S. Department of Energy, Office of River Protection (DOE-ORP), was scheduled to conduct eight assessments in CY 2002. Five assessments were completed. The BX and BY assessments were combined. These assessments are listed in Table 3-3 and are documented in the listed assessment reports. Table 3-4 shows where DOE-ORP plans to conduct assessments for CY 2003 through 2005.

Table 3-3. Summary of DOE-ORP Assessment Results.

Assessment Location*	Assessment Number	Assessment Conduct Dates	Findings and Observations
Cesium Unloading Station (801C Building)	A-02-EMD-TF-01	March-April 2002	No findings and one observation ¹
Contractor Self Assessment	N/A ²	May 2002	Four findings and seven observations ¹
BX/BY Tank Farms	A-02-EMD-TF-02	June-July 2002	No findings and ten observations ³
SY Tank Farm	A-02-EMD-TF-03	August-September 2002	One concern, one finding, and five observations ⁴

* Not all findings and observations from these assessments are directly related to mixed waste storage compliance. Only those directly related are tabled below.

¹ None directly related to mixed waste storage compliance.

² Conducted as oversight of contractor-initiated independent assessment of its assessment program.

³ Observation: Inadequate maintenance of required environmental postings

³ Observation: Faded labeling on secondary containers

³ Observation: Round sheets don't address environmental postings

⁴ Observation: Round sheets do not address environmental postings

⁴ Observation: Round sheets do not address daily inspection of aboveground portion of tank system

⁴ Concern: Reusable contaminated equipment improperly managed and labeled

⁴ Finding: Implementation of "Shift Routines and Practices" was inadequate

Table 3-4. DOE-ORP Assessments for CYs 2003 through 2005.

Facility/Location	Completion Date
242-S and 242-T Evaporators ¹	4 th Quarter 2003
S/SX and U Farms	2 nd Quarter 2004
A/AX, AY and AZ Farms	2 nd Quarter 2005
¹ Contingent upon safety-driven roof inspection entry to the 242-T Evaporator. If no such entry is made, ALARA principles will essentially preclude entry to the high risk areas of the 242-T Evaporator. In that case, the CY 2003 assessment would address the 242-S Evaporator and the S/SX farms.	

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4.0 POTENTIAL STORAGE ISSUES

This section discusses issues pertaining to storage of mixed waste.

4.1 STORAGE CAPACITY

Potential storage capacity issues are addressed in Section 2.4 of the location-specific data sheets (Appendix B) and are summarized in the following sections.

4.1.1 Bechtel Hanford, Inc.

BHI established one storage location during CY 2002. The ERDF ROD was amended to establish a staging area, within the ERDF boundary and to store waste from 100, 200, 300, and 600 Areas until the waste is treated to meet the ERDF waste acceptance criteria. Once the waste is treated to meet the ERDF waste acceptance criteria, the waste will be returned to ERDF for final disposal. Storage areas in the 200 Areas were transferred from BHI to FH during CY 2002. BHI does not have any issues pertaining to storage capacity within the 5-year forecast period and beyond.

4.1.2 CH2M HILL Hanford Group, Inc.

Annually, in accordance with Tri-Party Agreement Milestone M-46-00, an evaluation is performed to determine available tank capacity and capacity needs for future years. This evaluation looks at waste receipts to the DST System for the past 12 months and makes projections based on trends that appear. A computer simulation of site operations (incoming waste projections and outgoing waste) is performed, which results in projections of tank fill schedules, tank transfers, evaporator operations, tank retrieval, and aging waste tank use. During this evaluation, the parties to the Tri-Party Agreement (Ecology, EPA, and DOE) determine whether new tanks need to be built. Current estimates indicate that the storage capacity of the DST System could be reached by 2010, depending on the sequence and rate of retrieval for waste currently stored in SSTs and on evaporator operations. Table 4-1 summarizes DST storage capacities and current volume stored.

Table 4-1. Potential Storage Capacity Issues.

Waste name	Tank farm	Estimated storage capacity per farm (m ³)	Current amount of stored waste (m ³)	Year capacity could be reached/bases and assumptions
DST Waste	241-SY	13,000	11,000	2010 ¹
DST Waste	241-AY	7,000	7,000	2010 ¹
DST Waste	241-AY	7,000	3,000	2010 ¹
DST Waste	241-AW	26,000	13,000	2010 ¹
DST Waste	241-AP	35,000	25,000	2010 ¹
DST Waste	241-AN	30,000	21,000	2010 ¹
	Total	118,000	80,000	

¹This date is for the tank farms as a system and depends on the evaporator runs and the schedule/order of waste retrieval from SSTs.

The reported storage capacities includes all of the tanks. Tanks that were on the Watch List (Public Law 101-510) were not allowed to receive waste. Watch List Tanks will be evaluated to determine whether the capacity of the tank might be used to store additional waste, now that Watch List Tank safety issues have been resolved.

4.1.3 Fluor Hanford, Inc.

FH manages the long-term storage locations of mixed waste in the 200 Areas, except for the DST System and SST System tank waste managed by CH2M Hill, and the ERDF managed by BHI. FH received additional mixed waste storage areas from BHI during the summer of CY2002. These additional long-term storage areas include mixed waste at the B Plant Complex and the PUREX Plant. The waste is stored in these TSD units with lead regulator approval of the specific long-term S&M plans in accordance with Section 8.0 of the Tri-Party Agreement Action Plan. The plans do not allow for storage of any additional waste in these TSD units.

The Solid Waste Projection Model is a discrete event simulation model; the model is used to project the TSD requirements of the onsite radioactive and mixed solid waste management program in CWC. The model combines current waste inventories and forecasts of future waste receipts with baseline planning assumptions to determine TSD unit requirements throughout the anticipated life of the TSD units. The amount of waste is estimated using the following input:

- Amount of waste type in storage
- Amount of waste type sent for processing
- Amount of waste type disposed
- Amount of waste type shipped offsite for disposal.

The resulting estimates are used to make decisions concerning future TSD needs. For example, if the amount of waste in storage was projected to exceed the current capacity, planning for additional storage capacity could begin and/or changes could be made to the baseline treatment and disposal schedules to reduce the projected storage requirement.

The model is reviewed and updated frequently to ensure that the appropriate assumptions for waste treatment and facility capabilities and schedules, and therefore storage capacity, are adequate to

effectively manage mixed waste. When changes occur in programmatic assumptions in response to budgetary or regulatory changes, the model is run again using the new assumptions.

The Hanford Site maintains a system for forecasting the amount of radioactive waste, including mixed waste, to be generated well into the future. This system is known as the SWIFT Report. Input to this system is maintained in a database updated periodically by all waste generating units. Significant changes to the input must be reported. These changes are evaluated for impact on the storage facilities as required.

Based on the projections to date, information on active FH-managed TSD units in this report indicates that no requirements for additional storage capacity exist within the 5-year forecast period and beyond. Figure 4-1 shows projected CWC waste storage versus capacity.

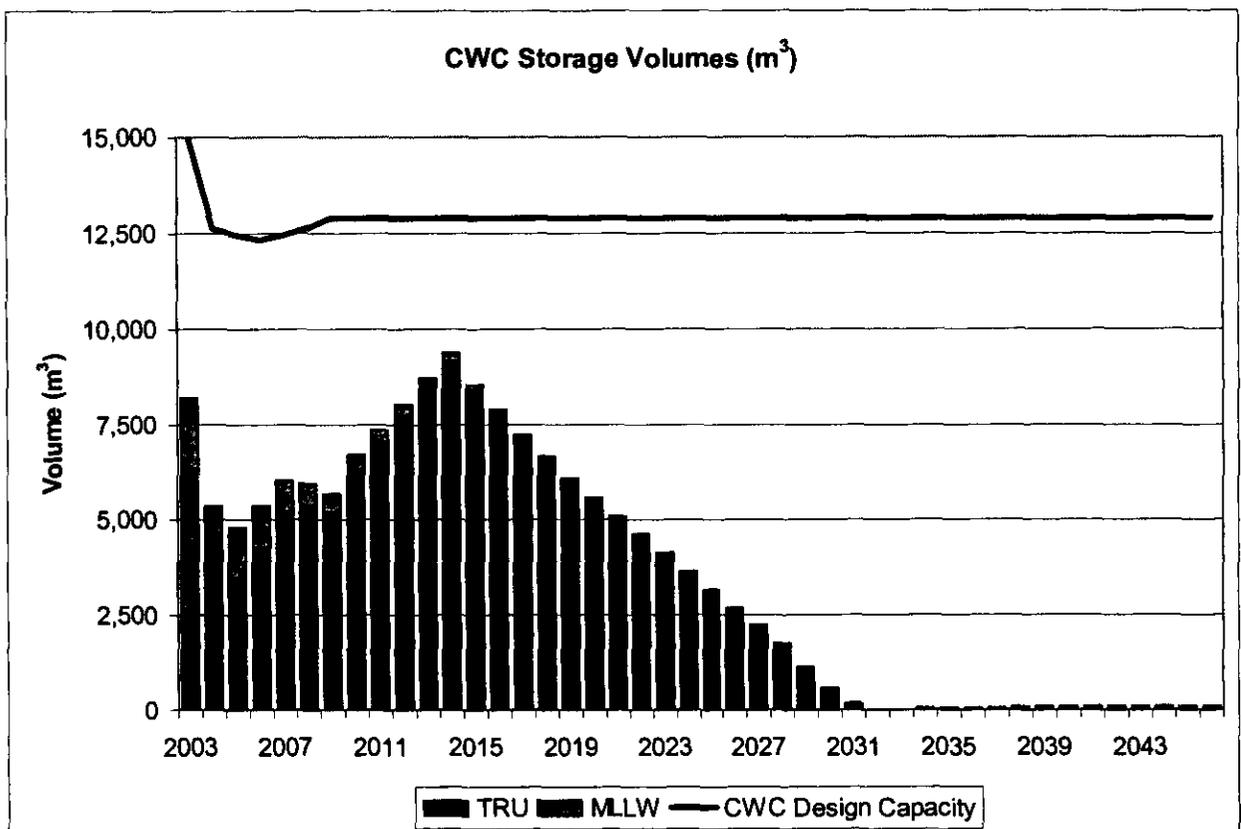


Figure 4-1. Central Waste Complex Waste Storage Versus Capacity.

4.1.4 Pacific Northwest National Laboratory

PNNL uses the SWIFT reporting system to project storage requirements. Based on the projections to date, no requirements for additional storage capacity for PNNL-managed TSD units exist within the 5-year forecast period and beyond.

4.2 ISSUES AND THEIR RESOLUTION

No storage issues were identified for CY 2002 reporting. Storage capacity issues identified and resolved in the future will be reported in the year following their resolution.

4.3 PLANNED VARIANCES OR EXEMPTIONS FOR STORAGE

Requests for variances and other exemptions related to storage are addressed in Section 2.10 of the location-specific data sheets (Appendix B). No requests for variances are identified.

4.4 KEY STORAGE ASSUMPTIONS

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

5.0 WASTE RELEASES FROM STORAGE UNITS

Known releases from mixed waste storage units into the environment are subject to reporting in this report, whether or not the release was cleaned up. The only waste releases from storage to the environment have occurred from the SST System. Table 5-1 lists the names and locations of the SST farms and the number of tanks in each farm. No releases have been documented during this reporting period (CY 2002).

Table 5-1. Single-Shell Tank System.^a

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

^a The capacity of the tanks ranges from 210 m³ to 3,800 m³.

These tanks contain waste that was placed into the system between 1944 and 1980. The waste was generated as a byproduct of processing spent nuclear fuel to recover plutonium, uranium, and neptunium, and consists of radioactive and chemically hazardous waste. Except for cooling water, nothing has been added to the SSTs since 1980. Table 5-2 lists the Hanford Site SST System releases reported in HNF-EP-0182, Rev 177 "Waste Tank Summary Report for Month Ending December 31, 2002." SST System Waste Management Areas (SST WMA) are being reassessed to develop better inventory estimates for chemicals and radionuclides lost to the vadose zone. At this time, the S, SX WMA, B, BY, BX WMA, and the T, TY, TX WMA, have been reassessed. The new assessments have shown that some of the reported volumes may be less than reported in HNF-EP-0182, Rev 177. Table 5-2 will be updated in the CY 2003 LDR report.

Table 5-2. Hanford Site Single-Shell Tank Releases.^a

Tank	Volume (m ³)	Leak reported	Tank	Volume (m ³)	Leak reported
241-A-103	21	1987	241-SX-107	<19	1964
241-A-104	2 to 10	1975	241-SX-108	9 to 133	1962
241-A-105	38 to 1,048	1963	241-SX-109	38	1965, 1996
241-AX-102	11	1988	241-SX-110	21	1976
241-AX-104 ^b	--	1977	241-SX-111	2 to 8	1974
241-B-101 ^b	--	1974	241-SX-112	114	1969
241-B-103 ^b	--	1978	241-SX-113	57	1962
241-B-105 ^b	--	1978	241-SX-114 ^b	--	1972
241-B-107	30	1980	241-SX-115	189	1965

Table 5-2. Hanford Site Single-Shell Tank Releases.^a

Tank	Volume (m ³)	Leak reported	Tank	Volume (m ³)	Leak reported
241-B-110	38	1981	241-T-101	28	1992
241-B-111 ^b	--	1978	241-T-103	<4	1974
241-B-112	8	1978	241-T-106	435	1973
241-B-201	5	1980	241-T-107 ^b	--	1984
241-B-203	1	1983	241-T-108	<4	1974
241-B-204	2	1984	241-T-109	<4	1974
241-BX-101 ^b	-	1972	241-T-111	<4	1979, 1994
241-BX-102	265	1971	241-TX-105 ^b	-	1977
241-BX-108	10	1974	241-TX-107	10	1984
241-BX-110 ^b	-	1976	241-TX-110 ^b	-	1977
241-BX-111 ^b	-	1984	241-TX-113 ^b	-	1974
241-BY-103	<19	1973	241-TX-114 ^b	-	1974
241-BY-105 ^b	-	1984	241-TX-115 ^b	-	1977
241-BY-106 ^b	-	1984	241-TX-116 ^b	-	1977
241-BY-107	57	1984	241-TX-117 ^b	-	1977
241-BY-108	<19	1972	241-TY-101	<4	1973
241-C-101	76	1980	241-TY-103	11	1973
241-C-110	8	1984	241-TY-104	5	1981
241-C-111	21	1968	241-TY-105	133	1960
241-C-201	2	1988	241-TY-106	76	1959
241-C-202	2	1988	241-U-101	114	1959
241-C-203	2	1984	241-U-104	208	1961
241-C-204	1	1988	241-U-110	19 to 31	1975
241-S-104	91	1968	241-U-112	32	1980
241-SX-104	23	1988			
Total range ^c 2,862 to 4,022 m ³					

Table 5-2. Hanford Site Single-Shell Tank Releases.^a

Tank	Volume (m ³)	Leak reported	Tank	Volume (m ³)	Leak reported
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^a After some tanks were declared to be leaking, water could have been added to aid evaporative cooling. It is believed that some of this water did not evaporate, but went into the ground. Estimates range from 190 m³ to 3,000 m³. The volumes provided and date of initial release are the subject of continued evaluation and refinement; the numbers could be revised for improved accuracy as a result of the evaluation process. In addition, documents show that from 1946 to 1966, 456,700 m³ (120,661,000 gal) of liquid waste intentionally were discharged from SSTs directly to the ground on the 200 Area Plateau (WHC-MR-0227 1991). The majority of this waste was discharged from 1946 to 1958 as a result of the early plutonium and uranium recovery processes conducted in the 221-B Facility (B Plant Complex), the 221-T Building (T Plant Complex), and the 221-U Facility (U Plant). In addition, from 1960 to 1966 laboratory waste from the 300 Area and equipment decontamination waste from the 200 West Area was routed through SSTs before being discharged to the ground. No waste has been discharged to the ground from SSTs intentionally since 1966, and no waste ever has been discharged directly to the ground from the DSTs.

^b Individual release volumes for these tanks have not been determined. The total volume release from these tanks is estimated to be 570 m³.

^c The total leak volume is presented as a range because some of the individual leak volumes were reported as ranges.

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6.0 HANFORD SITE MIXED WASTE MINIMIZATION PROGRAM DESCRIPTION

The *Hanford Site Waste Minimization and Pollution Prevention Awareness Program Plan* (Program Plan) (DOE/RL-91-31) specifies requirements for Hanford Site contractors to prevent pollution from entering the environment, to conserve resources and energy, and to reduce the quantity and toxicity of hazardous, radioactive, mixed, and sanitary waste releases to the environment at the Hanford Site. The Program Plan is primary in a hierarchical series that includes the Program Plan, prime contractor implementation plans, and the Hanford Site *Guide for Preparing and Maintaining Pollution Prevention Program Documentation* (Program Guide) (DOE/RL-95-103).

The Program Plan reflects the national and local waste minimization and pollution prevention goals and policies and represents an ongoing effort to ensure Pollution Prevention/Waste Minimization is part of the Hanford Site operating philosophy. In accordance with these policies, a hierarchical approach to environmental management has been adopted and is applied to all polluting and waste generating activities. Waste minimization through source reduction is the first priority in the Program Plan, followed by environmentally safe recycling. Treatment, which includes some segregation, to reduce the quantity, toxicity, and mobility of waste is considered only when source reduction or recycling are not possible or practical. Environmentally safe disposal is the least preferred option.

6.1 MIXED WASTE MINIMIZATION PROGRAM

Hanford Site prime contractors are required to have a waste minimization program plan as described in the Program Guide. The Program Guide provides guidance to contractor generator groups for developing and maintaining documentation of pollution prevention/waste minimization program activities intended to demonstrate generator compliance with DOE requirements as well as applicable regulations. The required elements are establishing fiscal year goals, documentation of pollution prevention budget requirements, waste minimization assessments, pollution prevention/waste minimization reporting, and facility management annual certification.

6.1.1 Mixed Waste Minimization Program Objectives

The Program Plan establishes the following objectives:

- Establish senior management commitment
- Set quantitative source reduction and recycling goals
- Institute performance measures
- Implement cost-saving pollution prevention projects
- Design pollution prevention into new products, processes, and facilities
- Ensure that programs comply with federal, state, and departmental directives
- Implement consistent generator-specific pollution prevention programs
- Reduce releases of toxic chemicals
- Establish pollution prevention budgets
- Perform pollution prevention cost-benefit analyses
- Facilitate technology transfer and information exchange
- Implement pollution prevention employee training and awareness programs
- Implement environmentally sound pollution prevention procurement practices
- Integrate pollution prevention into research, development, demonstration, testing, and evaluation programs
- Ensure consistent policies and procedures

- Implement pollution prevention outreach and public involvement
- Develop pollution prevention incentives programs
- Promote regulatory review and reform
- Integrate pollution prevention into management systems.

6.1.2 Waste Minimization Techniques

Waste minimization techniques used on the Hanford Site include the following:

- Inventory management
- Maintenance program
- Recycling and reuse
- Segregation
- Work planning.

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

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- WHC-MR-0227, *Tank Waste Discharged Directly to the Soil at the Hanford Site*, April 1991, Westinghouse Hanford Company, Richland, Washington.

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APPENDIX A

LAND DISPOSAL RESTRICTIONS REPORTING REQUIREMENTS

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APPENDIX A

LAND DISPOSAL RESTRICTIONS REPORTING REQUIREMENTS

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

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Table A-1. Land Disposal Restrictions Requirements.

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

Table A-1. Land Disposal Restrictions Requirements.

Item ¹	Section ID ²	Requirement ³	Location of information ⁴
9	1.a (1990) IV.3.A.1.c, pg 16 (FD)	General timeframe determination that serves to categorize when the waste was placed in storage	(STR): 2.1.2 and portions of 1.3 (LSDS)
10	1.a (1990) IV.3.A.1.d, pg 16 (FD)	Radioactivity type	(STR): 3.1.1 and 3.1.2 (TGDS).
11	1.a (1990) IV.3.A.1.e, pg 16 (FD)	Physical form of the waste	(STR): 3.2.1 and 3.3.2 (TGDS).
12	1.b (1990) IV.3.A.1.f, pg 16 (FD)	Quantity of waste	(STR): 2.1 (TGDS), as well as 2.3 (LSDS).
13	1.c (1990) IV.3.A.1.g, pg 16 (FD) IV.3.A.1, pg 17 (FD)	Physical location	(STR): 2.1 and 2.2 (LSDS)
14	1.c (1990) IV.3.A.1.g, pg 16 (FD)	Method of storage	(STR): 2.1 and 2.2 (LSDS).
15	1.c (1990) IV.3.A.1.g, pg 16 (FD)	List of areas permitted for storage	(STR): 2.5 (LSDS). A current list of the permitted storage units can be found at http://www.hanford.gov/rcra .
16	1.d (1990) IV.3.A.1.h, pg 16 (FD) IV.3.A.2, pg 17 (FD) IV.3.A.2, pg 17 (FD) IV.3.A.2, pg 17 (FD)	DOE assessment of the compliance status	(STR): 2.7 (LSDS), as well as in Chapter 3.0 of the LDR Storage Report.
17	IV.3.A.2, pg 17 (FD)	Notification of which DOE organization is responsible for assessment within 60 days of final determination issuance.	Timely notification was provided by a letter (French 2000) and attachment. (STR): Additional information is provided in Chapter 3.0.
18	IV.3.A.2, pg 17 (FD)	Procedure used for assessments must meet minimum regulatory requirements (WAC 173-303 and 40 CFR 265)	Timely notification was provided by a letter (French 2000) and attachment. Item complete.

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Table A-1. Land Disposal Restrictions Requirements.

Item ¹	Section ID ²	Requirement ³	Location of information ⁴
19	IV.3.A.2, pg 17 (FD)	Opportunity for Ecology review and comment must be provided while developing assessment schedules and procedures	Timely notification was provided by a letter (French 2000) and attachment. Item complete.
20	1.e (1990) IV.3.A.1.i, pg 17 (FD)	Identification of any releases	(STR): 2.9 (LSDS), as well as in Chapter 5.0.
21	1.f (1990) IV.3.A.1.j, pg 17 (FD)	Generation rates	(STR): 2.2 (TGDS), as well as 2.6 (LSDS), contains estimates for the next 5 years.
22	1.f (1990) IV.3.A.1.j, pg 17 (FD)	Estimate of the storage capacity	(STR): 2.4 (LSDS), and in the text of the LDR storage report, Section 4.1.
23	1.f (1990) IV.3.A.1.j, pg 17 (FD)	When storage capacity will be reached	(STR): 2.4 (LSDS), and in the text of the LDR storage report, Section 4.1.
24	1.f (1990) IV.3.A.1.j, pg 17 (FD)	Identification of the bases and assumptions used in making the estimate	(STR): 2.12 (LSDS), as well as Chapter 4.0 text when applicable.
25	1.g (1990) IV.3.A.1.k, pg 17 (FD)	Plans to submit requests for variances, case-by-case extensions of the LDR requirements, or other exemptions	(STR): 4.8 and 5.0 (TGDS), and 2.10 (LSDS), as well as in the text of the LDR Storage Report, Section 4.3.
26	2 (1990) IV.3.A.1.k, pg 17 (FD)	Provide for the submittal of requests for case-by-case extensions, variances, and other exemptions of the LDR requirements in accordance with Section 3004 of RCRA	(STR): 4.8 and 5.0 (TGDS), and 2.10 (LSDS), as well as in the text of the LDR Storage Report, Section 4.3.
27	3 (1990) IV.3.A.3.a, pg 19 (FD) IV.3.A.3.a, pg 19 (FD)	Plan and schedule to characterize all waste	(STR): 2.11 (LSDS). (C&T): In the text of Chapter 3.0 and Chapter 7.0.
28	IV.3.A.3, pg 19 (FD)	Reporting of waste characterization plan must delineate steps necessary to confirm which streams are subject to LDR	(STR): The Potential Mixed Waste Table (Appendix C) identifies waste that potentially is mixed, and negotiate a path forward. Any new waste determined to be LDR mixed waste is added to the report, as stated in the report text, Section 1.3.

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Table A-1. Land Disposal Restrictions Requirements.

Item ¹	Section ID ²	Requirement ³	Location of information ⁴
29	3 (1990) IV.3.A.3, pg 19 (FD)	Report characterization results to EPA and Ecology	(STR): 3.0 (TGDS), and 2.11 (LSDS); (C&T): Reporting of results has been according to protocol established in the Tri-Party Agreement, Section 9.6.
30	3 (1990)	Steps necessary to confirm which waste and which waste streams are subject to the LDR	(STR): The Potential Mixed Waste Table (Appendix C) identifies waste that potentially is mixed waste, and negotiate a path forward. Any new waste determined to be LDR mixed waste is added to the report, as stated in Section 1.3.
31	4.a (1990)	Treatment and disposal technologies	(STR): 4.2 and 4.3 [also 3.3.2] (TGDS) for treatment, and in 5.0 (TGDS) for disposal. (C&T): Existing treatment technologies and processes are discussed in Sections 3.1, 4.1, and 5.1. Processes needing adaptation are discussed in Sections 3.2, 4.2, and 5.2. Disposal processes are discussed in Sections 3.5, 4.4, 5.5, and 5.6.
32	4.a (1990)	Treatment capacity	(STR): 4.3 (TGDS). (C&T): In the text and tables of Chapters 3.0, 4.0, and 5.0.
33	4.b (1990)	Commercial treatment technologies	Same as the portion of Item 33 of this table regarding treatment. (STR): 4.2 and 4.3 [also 3.3.2] (TGDS). (C&T): In the text and tables of Chapter 3.0 where applicable for treatment.
34	4.b (1990)	Capacity currently available	Similar to Item 34 of this table. (STR): 4.3 (TGDS). (C&T): In the text and tables of Chapters 3.0, 4.0, and 5.0.

Table A-1. Land Disposal Restrictions Requirements.

Item ¹	Section ID ²	Requirement ³	Location of information ⁴
35	4.c (1990)	DOE treatment technologies	Same as the portion of Item 33 of this table regarding treatment. (STR): 4.2 and 4.3 [also 3.3.2] (TGDS). (C&T): In the text and tables of Chapters 3.0, 4.0, and 5.0 where applicable for treatment.
36	4.c (1990)	Extent of capacity currently available	Same as Item 36 of this table. (STR): 4.3 (TGDS). (C&T): In the text and tables of Chapters 3.0, 4.0, and 5.0.
37	4.d (1990)	Whether any new commercial or DOE treatment capacity is scheduled to be available	Similar to Items 36 and 38 of this table. (STR): 4.3 (TGDS). (C&T): In the text and tables of Chapters 3.0, 4.0, and 5.0.
38	4.d (1990)	When such new capacity will be available	(STR): 4.4, sometimes 4.5 (TGDS). (C&T): In the text and tables of Chapters 3.0, 4.0, and 5.0.
39	4.e (1990)	Alternate technologies which are in development and which may be used to manage these LDR wastes	(C&T): In the text and tables of Chapters 3.0, 4.0, and 5.0.
40	4.e (1990)	Assessment of when such alternate technologies may become available	(C&T): In the text of Chapters 3.0, 4.0, and 5.0.
41	4.f (1990)	Basis and assumptions used	(STR): 4.9 (TGDS). (C&T): Discussed as applicable in the text and tables of Chapters 3.0, 4.0, and 5.0.
42	4.f (1990)	Foreseeable contingencies	(STR): 4.9 (TGDS). (C&T): In the text and tables of Chapters 3.0, 4.0, and 5.0. as applicable.

Table A-1. Land Disposal Restrictions Requirements.

Item 1	Section ID ²	Requirement ³	Location of information ⁴
43	5 (1990) IV.3.A.3, pg 18 (FD)	Milestones and schedules for the development and implementation of treatment technologies	(STR): 4.4, 4.5, and 4.6 (TGDS). (C&T): Applicable milestones and treatment plans are identified by treatment process in Chapters 3.0, 4.0, and 5.0. Existing Tri-Party Agreement milestones and proposed milestones related to LDR are presented in Chapter 9.0 of the C&T plan.
44	5 (1990) IV.3.A.3, pg 18 (FD) IV.3.A.3.a, pg 18 (FD)	All applicable milestones and associated schedules for developing and implementing treatment or management technologies	(STR): 4.4, 4.5, and 4.6 (TGDS). (C&T): Applicable milestones and treatment plans are identified by treatment process in Chapters 3.0, 4.0, and 5.0. Existing Tri-Party Agreement milestones and proposed milestones related to LDR are presented in Chapter 9.0 of the C&T plan.
45	IV.3.A.3.a, pg 18 (FD)	Schedules for submitting applicable permit applications, initiating construction, conducting systems testing, commencing operations, and processing backlogged and currently generated waste, for those waste types for which treatment technologies exist	(STR): 4.4, 4.5, and 4.6, (TGDS). (C&T): Applicable schedules are identified by treatment process in Chapters 3.0, 4.0, and 5.0. Existing Tri-Party Agreement milestones and proposed milestones related to LDR are presented in Chapter 9.0 of the C&T plan.
46	IV.3.A.3.b, pg 18 (FD)	Schedules for identifying and developing treatment technologies for those waste types for which no treatment technologies currently exist, to include identification of funding requirements for the identification and development of such technologies, submitting treatability study exemptions, and submitting research and development permit applications	(STR): 4.4, 4.5, and 4.6, (TGDS). (C&T): Applicable schedules are in Chapters 3.0, 4.0, and 5.0. Existing Tri-Party Agreement milestones related to LDR are presented in Chapter 9.0 of the C&T plan.
47	IV.3.A.3.c, pg 18 (FD)	Requirements for all cases where DOE proposes radionuclide separation of mixed waste or materials derived from mixed waste	(C&T): The only current or planned radionuclide separations are during treatment of liquid waste in ETF (Section 3.4) and treatment of DST and SST Systems waste (Section 5.3).

Table A-1. Land Disposal Restrictions Requirements.

Item ¹	Section ID ²	Requirement ³	Location of information ⁴
48	6 (1990)	Provide that DOE may treat LDR waste in accordance with applicable law in advance of approved milestone dates	Activities always can be completed in advance of the milestone date, and are whenever possible. However, budget constraints are a reality and sometimes have an impact on the ability to even meet existing milestones.
49	IV.3.A.3, pg 18 (FD)	Propose milestones and associated schedules for known waste not covered by the report to be incorporated and established in accordance with the Tri-Party Agreement Action Plan (Section 12)	(STR): 4.6 (TGDS). All known waste types are covered in the LDR report (TGDS and LSDS). Potential mixed waste is presented in the Potential Mixed Waste Table (Appendix C). (C&T): Chapters 3.0, 4.0, 5.0, and 7.0.
50	7 (1990)	Identified methods for minimizing the generation of LDR waste	(STR): 3.2 (LSDS), as well as the text in Chapter 6.
51	7 (1990)	Process changes that can be made to reduce or eliminate LDR waste	(STR): 3.2 (LSDS), as well as the text in Chapter 6.0.
52	7 (1990)	Methods to minimize the volume of regulated and restricted waste through segregation and avoidance of commingling	(STR): 3.2 (LSDS), as well as the text in Chapter 6.0.
53	7 (1990)	Substitution of less toxic materials for materials currently used at the Hanford Site	(STR): 3.2 (LSDS), as well as the text in Chapter 6.0.
54	7 (1990)	Schedule for implementing waste minimization procedures	(STR): 3.3.2 and 3.3.3 (LSDS).
55	7 (1990)	Projections for reducing newly generated waste	(STR): 3.3.2 (LSDS).
56	7 (1990)	Basis for developing projections	(STR): 3.3.3 (LSDS).
57	7 (1990)	Assumptions used in developing the projections	(STR): 3.3.3 (LSDS) as well as the text in Chapter 6.0. The Hanford Site contractors issue periodic waste minimization plans, separate from the LDR report, and have waste minimization assessments for each applicable facility.

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Table A-1. Land Disposal Restrictions Requirements.

Item ¹	Section ID ²	Requirement ³	Location of information ⁴
58	7 (1990)	Annually revise and submit as part of the annual report that portion of the storage report associated with Item 1 of this table, to conform with the generation projections contained in the Waste Minimization Plan	The LDR report is revised annually, including the waste minimization content.
59	7 (1990)	As part of the annual report, DOE shall submit an amendment to the Waste Minimization Plan	Same as Item 60 of this table. The LDR report is revised annually, including the waste minimization content.
60	7 (1990)	Annually, DOE shall revise and submit that portion of the Storage Report associated with Item 1 (and the "1990" reference) of this table, to conform with generation projections contained in the update to the Waste Minimization Plan	Same as Item 60 of this table. The LDR report is revised annually, including the waste minimization content.
61	IV.3.A.3, pg 18 (FD) IV.3.A.3, pg 18-19 (FD)	The annual LDR report must include a waste characterization plan and associated schedules based on the waste identified in accordance with the final determination.	(C&T): Chapter 7.0
62	8 (1990)	Describe how information, plans, and schedules contained in the LDR Plan will be updated as part of the annual report	(STR): Section 1.3
63	8 (1990)	Describe how and when the LDR Plan will be revised and reissued	(STR): Explained briefly in Section 1.3. The annual LDR report evolved from, and is based on, the original LDR document, which was called the LDR Plan. Therefore, the 'Plan' essentially is revised and submitted each year.
64	IV.3.B.c, pg 19 (FD)	Each waste stream has an associated statement by DOE documenting whether sufficient work has been performed for continued compliance	No longer applicable, as a result of Pollution Control Hearings Board stipulations.

Table A-1. Land Disposal Restrictions Requirements.

Item 1	Section ID ²	Requirement ³	Location of information ⁴
65	IV.3.B.d, pg 19 (FD)	The Annual LDR report will serve as a vehicle to propose schedules for newly discovered or to be generated mixed waste not yet covered by the report or the Tri-Party Agreement	Newly identified waste has been and continues to be added to the report each year, subject to scope of the report and waste stream definition. Proposed schedules are incorporated for all waste streams where applicable. The Potential Mixed Waste Table (Appendix C) covers material that might become mixed waste in the future.
66	IV.3.B.e, pg 19 (FD)	Annual LDR report will serve as vehicle to propose modified Tri-Party Agreement schedules as necessary to achieve compliance with LDR treatment requirements in a manner equivalent to STPs as required by FFCA	(C&T): While the annual report can identify the need for modifications of current Tri-Party Agreement schedules, such changes are established via the Tri-Party Agreement, Chapter 12.0 (Action Plan). This report contains milestones that are proposed in change request(s) as Tri-Party Agreement milestones.
67	IV.3.A.3.a, pg 19 (FD)	Proposed plans and schedules to sufficiently characterize mixed waste, including an inventory of mixed waste not sufficiently characterized by sampling and analysis	(STR): 2.11 (LSDS) as well as the Potential Mixed Waste Table (Appendix C) for potential mixed waste. (C&T): Section 3.3.1.
68	IV.3.B.b, pg 19 (FD) IV.3.B.f, pg 20 (FD)	LDR report will be published as a primary document and will propose new waste streams as necessary	(STR): Signature page states that this report is a primary document, and explained briefly in Section 1.3. New waste streams are included as identified. Section 1.1.
69	IV.3.B.b, pg 19 (FD)	LDR report will support equivalency to FFCA STPs	While not identical to an STP, the LDR report is equivalent to an STP. The basis format for the C&T is the same as for an STP. (STR): Section 1.4 (C&T): Section 1.0
70	IV.3.B.c, pg 19 (FD)	LDR report will serve as unified sitewide document detailing requirements of LDR Requirements Document ²	This table delineates how the LDR report meets these requirements; refer to all items in second column of this table marked with "(1990)"

Table A-1. Land Disposal Restrictions Requirements.

Item ¹	Section ID ²	Requirement ³	Location of information ⁴
71	IV.3.B.c, pg 19 (FD)	LDR report will report DOE actions planned and taken to achieve and maintain full compliance with LDR and associated Tri-Party Agreement requirements in effect as of LDR report submittal date	This table delineates how the LDR report meets these requirements, refers to all items in second column of this table.
72	IV.3.B.f, pg 20 (FD)	Inclusion of specific statement regarding the LDR report being a primary document, and regarding binding and enforceable nature of contents: "This document has been prepared, submitted, revised and approved as a primary document in response to the requirements of Tri-Party Agreement Milestone Series M-26-01 and related RCRA Land Disposal Restriction (LDR) and Tri-Party Agreement requirements. As such, this document serves as a binding and enforceable document under the Tri-Party Agreement."	The signature page states that this report is a primary document and includes the required language. Editorial changes have been made to the text.
73	IV.3.B.f, pg 20 (FD)	Inclusion of specific statement regarding approval by DOE and Ecology: "Approval of DOE's annual LDR Report as a Tri-Party Agreement primary document shall be by written approval of DOE and Ecology IAMIT representatives." Signature blocks are to follow the above statement.	The signature page states that this report is a primary document, and includes signature blocks. Editorial changes have been made to the text.

Table A-1. Land Disposal Restrictions Requirements.

Item 1	Section ID ²	Requirement ³	Location of information ⁴
74	IV.3.C, pg 20 (FD)	The LDR report submitted in 2000 is an interim report documenting known information, and detailing actions planned to fully comply with the final determination.	This item does not contain a requirement for this report, and therefore is not applicable as a calendar year 2000 report content requirement. DOE/RL-2000-39 in Chapter 7.0 of the report references the Interim LDR Report.

¹Item number supplied for the convenience of the reader.

²The notation "(1990)" refers to the four-page "Requirements for the Hanford LDR Plan"(LDR Requirements Document) signed by EPA and Ecology in 1990. The notation "(FD)" refers to the "Director's Final Determination" issued by Ecology on March 29, 2000. The notation "(Ltr)" refers to the January 25, 2000 clarification letter from Ecology delineating the wastes required to be reported.

³The text in this column is a brief summary of the requirement(s).

⁴The information in this column refers to the location of the information within this annual LDR report; the term "(STR)" refers to the LDR Storage Report, and the term "(C&T)" refers to the LDR Characterization and Treatment Plan. For information presented on the data sheets of Appendix B, LDR Storage Report, "(TGDS)" refers to the treatability group data sheet, and "(LSDS)" refers to the location -specific data sheet. A brief description of how the two types of data sheets are related can be found in Section 1.2 of the LDR Storage Report (see also Figure B-1 of Appendix B)

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C&T Characterization and Treatment Plan
 CFR Code of Federal Regulations
 CWC Central Waste Complex
 DOE U.S. Department of Energy
 Ecology Washington State Department of Ecology
 EPA U.S. Environmental Protection Agency
 FD Final Determination
 FFCA Federal Facility Compliance Agreement
 LDR land disposal restrictions
 LSDS location-specific data sheets

PUREX
 RCRA
 STP
 STR
 Tri-Party Agreement
 TGDS
 TSD
 WAC
 WRAP

plutonium-uranium extraction
Resource Conservation and Recovery Act of 1976
 Site Treatment Plan
 Storage Report
Hanford Federal Facility Agreement and Consent Order
 treatability group data sheet
 treatment, storage, and/or disposal
Washington Administrative Code
 Waste Receiving and Processing Facility

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APPENDIX B

WASTE STORAGE REPORT DATA SHEETS

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APPENDIX B

WASTE STORAGE REPORT DATA SHEETS

Relationship Between LDR Treatability Group and Location-Specific Data Sheets

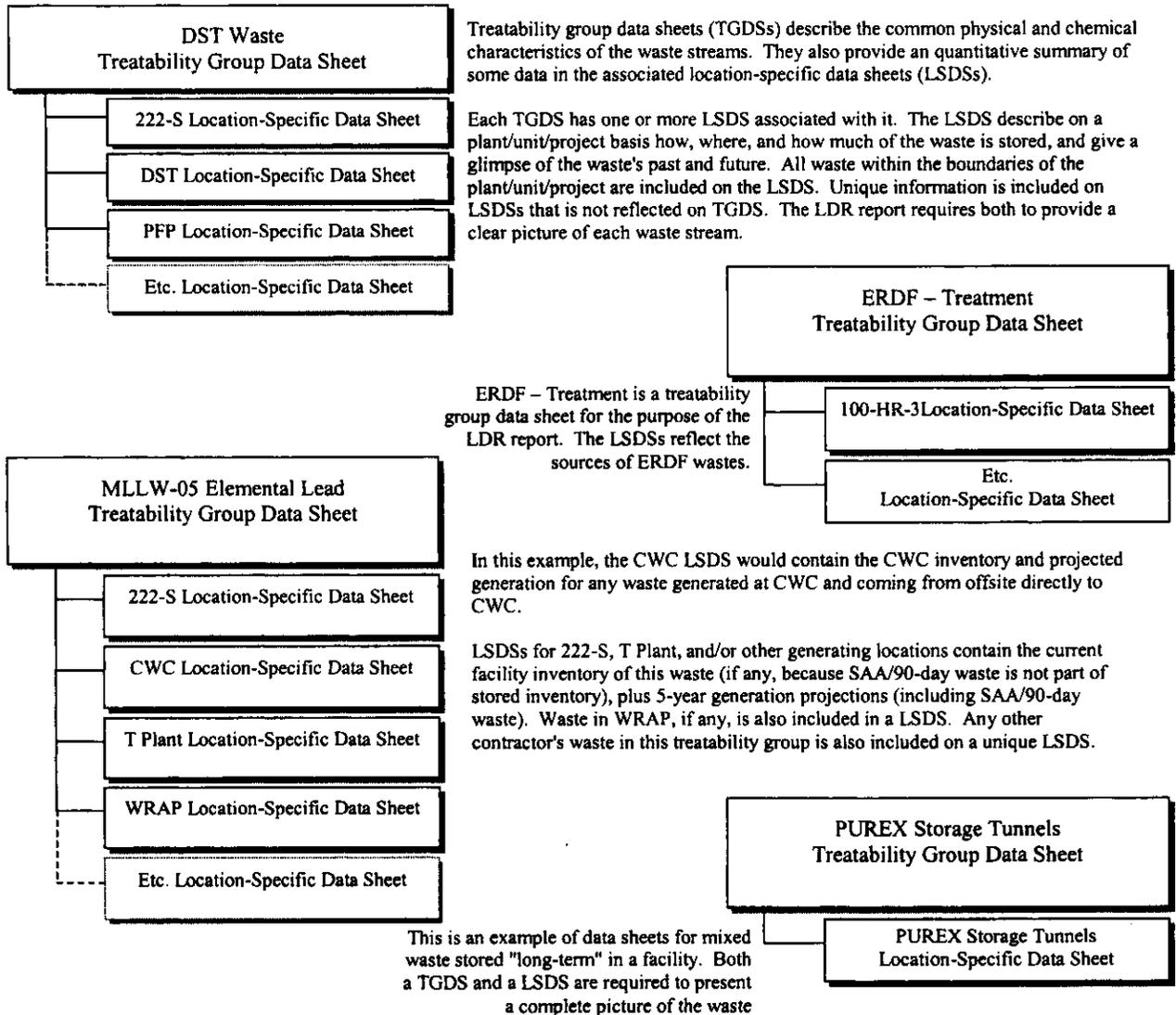


Figure B-1. Example Relationship Between Location-Specific and Treatability Group Data Sheets.

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

GENERAL INSTRUCTIONS FOR ALL DATA SHEETS:

The basis for LDR reporting in this document is CY 2002, unless stated otherwise.

B1.0 TREATABILITY GROUP DATA SHEET DATA FIELD DESCRIPTIONS

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

1.0 Waste Stream Identification

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

2.0 Waste Stream Inventory and Generation

- 2.1 Current total inventory for this waste stream (stored waste only, not accumulation areas). Total volume (cubic meters):** Automatically summed from stored inventory reported in individual location-specific data sheets contributing to the treatability group data sheet.
- 2.2 Estimated generation projection by calendar year:** Listed by year, and m³ and/or kg: Also automatically summed from individual location-specific data sheets contributing to the treatability group data sheet.

3.0 Waste Stream Characterization

3.1 Radiological characteristics

- 3.1.1 Mixed waste type.** Lists three options, one of which must be selected. The choice indicates radiological classification (either high-level, transuranic, or low-level). If more than one selection applies to the treatability group data sheet, select the most appropriate one and enter explanatory comments in section 3.1.3.
- 3.1.2 Handling (as package contents would need to be handled during treatment).** Lists two options, one of which must be selected. The choice differentiates between contact- and remote-handled waste types. The choice made reflects the waste as if no longer packaged for storage, but

instead as if it were unpackaged and handled for treatment. If more than one selection applies to the treatability group data sheet, select the most appropriate one and enter explanatory comments in section 3.1.3.

- 3.1.3 Comments on radiological characteristics (e.g., more specific information on content, treatment concerns caused by radiation, confidence level):** Provides space for explanatory information on radiological characteristics of the waste that cannot be supplied in the multiple-choice format used in previous sections of this data sheet. (Refer to explanations above for previous sections of the treatability group data sheet.)
- 3.2 Physical form**
- 3.2.1 Physical form of the waste.** Lists five options, one or more of which must be selected. The choice indicates the physical form (either solid, liquid, semi-solid, debris, or other). If the "Other" choice is selected or if there are any comments on the physical form, enter explanatory comments in section 3.2.2.
- 3.2.2 Comments on physical form:** Indicate any comments on the physical form of the waste within the treatability group data sheet. If there are no comments, enter "None."
- 3.3 Regulated constituents and wastewater/nonwastewater category**
- 3.3.1 Wastewater/non-wastewater under RCRA.** Lists three options, one of which must be selected. The choice indicates whether, under federal LDR requirements defined in 40 CFR 268.2, the waste stream is considered wastewater, non-wastewater, or is of an unknown type. For state-only dangerous waste select unknown.
- 3.3.2 Regulated constituent table including treatment requirements and UHCs, if applicable.** Provides the following information in a table. Note that underlying hazardous constituent (UHC) information is included in this table. Footnotes provide further explanation for the table, as applicable:
- The EPA or state-only "EPA/State numbers" indicate the listed or characteristic waste numbers such as D001, F005, etc. Note that not all waste numbers listed in the table for waste reported on any particular treatability group data sheet will be applicable to all subcategories of waste in the treatability group (nor, therefore, will all waste numbers apply to each location-specific data sheet contributing to a particular treatability group). Note also that for waste for which more than one subcategory applies, the waste number appears in this table once for each of the applicable LDR subcategories.
 - The "Waste description" indicates the characteristics of the waste or constituents of concern (e.g., "ignitable" or "methyl ethyl ketone").
 - The "LDR subcategory" indicates any applicable subcategory of the assigned waste number (e.g., "corrosive characteristic waste" or "radioactive high level waste" for D002). The LDR subcategory applies only to D001 though D011. Some data sheets could show the constituent of concern in this field for F-coded waste. Note that if more than one subcategory applies, the waste number appears in this table once for each of the applicable LDR subcategories.

- “Concentration (typical or range)” of the constituent, if known, is included in the table as a range or a single value. In some cases, the concentration might not be known; in that case, this field is labeled “TBD” or explained with a footnote to the table or elsewhere in the data sheet.
- “Basis” explains how the concentration information was determined (i.e., “process knowledge” and/or “analytical data”).
- The final column, “LDR Treatment Concentration Standard or Technology Code”, lists either the regulatory-required method for treating the waste, or the required final concentration, as obtained from the applicable regulations. Note that transuranic mixed waste is a special case.

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

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

3.3.4.1 Is waste stream subject to TSCA regulations for PCBs? Implies applicability as determined by *Toxic Substance Control Act* (TSCA) regulations. Only answer this question when 3.3.4 is answered as “yes.”

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

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

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

4.0 Waste Stream Treatment

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

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

- 4.3 Planned treatment method, facility, and extent of treatment capacity available:** Describes details of planned treatment for onsite treatment, storage, and/or disposal (TSD) units and offsite facilities, as well as details of how much of the required treatment capacity is available.
- 4.4 Treatment schedule information:** Provides space to include such information as start date of treatment, end date of treatment, and how much waste will be treated each year. Either treatment schedule information or other schedule-related information is provided, or if none exists as of the status reporting date for the treatability group, the current status of any active negotiations or applicable actions are described instead.
- 4.5 Applicable Tri-Party Agreement treatment milestone numbers (including permitting):** Provides table with Tri-Party Agreement milestone drop down menu to list appropriate existing milestone numbers related to treatment. "N/A" will be indicated when the table is empty. Milestones cited as commitments for treatment must be the specific milestone(s) that on completion will satisfy the LDR requirements for treatment.
- 4.6 Proposed new Tri-Party Agreement treatment milestones:** Provides space to list appropriate proposed new treatment milestones. If applicable, make reference to any active Tri-Party Agreement negotiations.
- 4.7 If treating or planning to treat onsite, was or will waste minimization be addressed in developing and/or selecting the treatment method?** If the corresponding box is selected in Section 4.2, three options for a multiple choice answer are provided to describe any waste minimization plans for the waste during treatment. **If yes, describe:** Self-explanatory. If the corresponding box in Section 4.2 is not checked, insert "N/A based on 4.2" in the comment field.
- 4.8 List or describe treatability equivalency petitions, rulemaking petitions, and case-by-case exemptions needed for treatment already in place:** Space provided for supplying details of any existing or future treatability variances (40 CFR 268.44), equivalency petitions (40 CFR 268.42(b)), rulemaking petitions (WAC 173-303-910, 40 CFR 260.20), and case-by-case exemptions [WAC 173-303-140(6)]. If there are none, insert "None."
- 4.9 Key assumptions:** Provides space to list assumptions concerning treatment that cannot otherwise be supplied in the format provided. If there are no key assumptions, insert "None."
- 5.0 Waste Stream Disposal**
- After treatment, how will the waste stream be disposed of (include locations, milestone numbers, variances required, etc., as applicable)?** Provides space to describe disposal methods, locations, variances required, etc., as applicable.

B2.0 LOCATION-SPECIFIC DATA SHEET DATA FIELD DESCRIPTIONS

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

1.0 Waste Stream Identification and Source

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

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

1.3 Waste stream source information

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

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

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

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

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

2.0 Waste Stream Storage, Inventory, and Generation Information

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

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

- 2.1.1 How was the waste managed prior to storage?** Describes routine and special management of the waste. Note: For waste in accumulation areas, the answer provided is "N/A".
- 2.1.2 Timeframe when waste was placed into storage:** Supplies the date or dates the waste was placed in storage (waste storage history). Examples might be, "This waste has been generated and stored at this location from 1987 to the present" for waste continuously generated and stored, or "The waste currently in storage was generated in 1999" for waste no longer generated and stored. Note: For reporting of waste in accumulation areas, the answer provided is "N/A".
- 2.2 Storage Inventory locations:** Lists the building and/or room number, as appropriate, with the number of storage containers/tanks for each storage location in a table format. Note: This section of this data sheet does not include satellite or 90-day accumulation areas. For reporting of waste in accumulation areas, the answer provided is "N/A" in both table cells.
- 2.3 Current stored inventory for this stream.** Volume of waste (cubic meters) and reporting date in mm/dd/yyyy format of the volume is supplied. The default reporting date is December 31, 2002. In some cases, the date shown will be different if the volume is known only for another date. The volume information for each location-specific data sheet is summed to the reported volume for its associated treatability group data sheet. Note that for reporting of waste in accumulation areas, the answer provided here is "N/A". Accumulated waste volume is reported only in Section 2.6 of the location-specific data sheet as an estimated generation projection, as applicable. Note also that the volume will display three decimal points in the database. If necessary, comments on waste inventory can be entered in this section even if the waste is managed in satellite or 90-day accumulation areas. If there are no comments, enter "None."
- 2.4 Is storage capacity at this location potentially an issue for this waste stream?** The two multiple choice options are "yes" and "no." If "yes," what is the total estimated storage capacity? Self-explanatory. Do not answer this question when no is selected, "N/A" will be displayed. When is this capacity expected to be reached? Self-explanatory. Do not answer this question when no is selected, "N/A" will be displayed. **Bases and assumptions used:** Lists any bases and assumptions used in estimating storage capacity limitations. Note: For waste reported in accumulation areas, the answer provided here is "NA".
- 2.5 Planned storage areas for this waste:** Five types of storage areas are provided in a multiple-choice format. More than one choice could apply. If the waste was in its current location as of 12/31/02, or will remain in its current location for a finite period of time, the "current location" box in addition to any other known planned storage location indicates where the waste is intended to be stored.
- 2.6 Estimated generation projection by calendar year (includes waste in satellite and 90-day accumulation areas):** Lists the estimated volume (m³) or mass (kg) of the mixed waste or matrices projected to be generated as mixed waste in the next 5 years. When a volume is entered, the mass can be left blank. Waste volumes in satellite accumulation areas or 90-day accumulation areas at the end of the calendar year are reported in a location-specific data sheet for the first year's forecast. Note that the volume will display three decimal points.
- 2.7 DOE Storage Compliance Assessment information:** Three options are provided in a multiple choice format. In some cases, more than one option is appropriate. The chosen option shows whether the assessment either has been or will be completed, and references the appropriate assessment end date or planned assessment date; or, it explains why neither of the other two options is an appropriate answer. For accumulation areas, or waste that has not been generated, check the "other" box and insert "N/A" for the explanation. When selecting "assessment has

been completed," the assessment document number and the assessment date (e.g., transmittal letter date) must be entered into the table. The assessment schedule can be found in Volume 1, Section 3.2.

- 2.8 Applicable Tri-Party Agreement milestones related to storage at this location:** Provides table with Tri-Party Agreement milestone drop down menu with associated due dates. Lists any applicable Tri-Party Agreement milestone(s) for storage. "N/A" indicates that this question is not applicable (i.e., waste is only in accumulation areas or there are no milestones) For TSD units, identifying the M-20 milestone or other permitting related milestone is appropriate. Milestones cited as commitments must be the specific milestone(s) that on completion will satisfy the LDR requirements.
- 2.9 Has there ever been any non-permitted, unauthorized release of this waste stream from this storage unit to the environment?** Lists two options, one of which must be selected -- "yes" and "no" -- to report known spills, such as those reported in accordance with WAC 173-303-145, and -360 and the tank waste release status reports. Note: For waste reported in accumulation areas, select "No." **If yes, summarize releases and quantities and provide date:** Provide information or reference the Section of the LDR report that discusses the releases.
- 2.10 Are there any plans to submit requests for variances or other exemptions related to storage?** Lists two options, one of which must be selected, "yes" and "no." **If yes, explain:** If "yes" is chosen, an explanation is provided. (Variances and/or exemptions associated with waste treatment are addressed in treatability group data sheets, Section 4.8.).
- 2.11 Characterization:**
- 2.11.1 Is further characterization needed about the waste prior to acceptance for storage?** Three options, one of which must be selected: "yes," "no," and "unknown at this time." Answer the question as whether further information is needed about the waste before acceptance for storage. Use the explanation area of question 2.12 if additional space is necessary.

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

3.0 Waste Minimization

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

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

3.3 Waste minimization schedule

- 3.3.1 Reduction achieved during calendar year 2002 (volume or mass):** How much waste has the facility avoided generating this past year as part of the waste minimization program?

- 3.3.2 Projected future waste volume reductions:** Lists the next 5 years in volume (m³) or mass (kg). The database will automatically add the individual years’ entries to supply the location-specific data sheet total.

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

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Table B-1. Data Sheet Index. (7 sheets)

Treatability Group Data Sheets	Location Specific Data Sheets		
Treatability Group Name	Unit/plant	Waste Stream	Page #
221-T Containment Building			B-21
	T Plant Complex	221-T Containment Building	B-25
221-T Tank System			B-29
	T Plant Complex	RCRA Tank System	B-33
222-S T8 Tunnel			B-39
	222-S Laboratory Complex	T8 Tunnel RH-MLLW	B-43
241-CX Tank System			B-47
	241-CX Tank System	CX Tank System	B-51
324 Building REC Waste			B-55
	324 Building	Radiochemical Engineering Cells	B-59
325 HWTU			B-65
	325 HWTU	325 HWTU	B-71
618-4 DU/Oil Drums			B-77
	618-4 Burial Ground	Depleted Uranium in Oil Drums	B-83
B Plant Cell 4			B-87
	B Plant Complex	Cell 4	B-91
B Plant Containment Building			B-97
	B Plant Complex	Containment Building Storage	B-101
Cesium and Strontium Capsules			B-105
	WESF	Cs and Sr Capsules	B-109
DST Waste			B-113
	222-S Laboratory Complex/219-S Waste Handling Facility	Bulk Aqueous Liquids	B-120
	242-A Evaporator	Slurry Waste	B-125
	DST System	DST System	B-129
	PPF/241-Z Treatment and Storage Tanks	Mixed Waste Tanks	B-134
	Tank Trailer	Tank Trailer HO-64-4275 Waste	B-139

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Table B-1. Data Sheet Index. (7 sheets)

Treatability Group Data Sheets	Location Specific Data Sheets		
Treatability Group Name	Unit/plant	Waste Stream	Page #
ERDF—Treatment			B-143
	100-HR-3	CERCLA Resin	B-147
	CERCLA Lead	CERCLA Lead	B-151
	K Basin	Miscellaneous lead	B-155
HSTF			B-159
	HSTF	HSTF 276-S-141/142	B-166
LERF/ETF Liquid Waste			B-171
	200-UP-1	200-UP-1	B-175
	242-A Evaporator	Evaporator Process Condensate	B-179
	LERF	Wastewater	B-183
	LLBG/MW Trench	TR34 Leachate	B-187
	T Plant Complex/2706-T Tank System	2706-T Tank System	B-191
	WSCF	LERF/ETF	B-196
MLLW-01 – LDR Compliant Waste			B-201
	200 ETF	RCRA Powder, LDR Compliant	B-205
	222-S Laboratory Complex	222-S LDR Compliant	B-209
	CWC	LDR compliant	B-214
	PFP	Lab Chemicals/Reagents, LDR Compliant	B-219
	T Plant Complex	LDR Compliant	B-224
	WRAP	LDR Compliant	B-229
MLLW-02 - Inorganic Non-Debris			B-233
	200 ETF	RCRA Powder, Inorganic Non-Debris Non-LDR Compliant	B-239
	222-S Laboratory Complex	222-S Inorganic Non-Debris	B-243
	2724WB	Absorbed Toxic Chemicals	B-248
	324	Inorganic Non-Debris Discarded Chemical/Waste	B-252

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Table B-1. Data Sheet Index. (7 sheets)

Treatability Group Data Sheets	Location Specific Data Sheets		
Treatability Group Name	Unit/plant	Waste Stream	Page #
	327	Inorganic Non-Debris Discarded Chemical/Waste	B-256
	CWC	Inorganic Non-Debris Solids And Labpacks	B-260
	PFP	Laboratory Chemical Wastes, Inorganic Non-Debris	B-264
	T Plant Complex	Inorganic Non-Debris	B-269
	Tank Farm Facilities	Inorganic Non-Debris	B-274
	WRAP	Inorganic Non-Debris	B-278
	WSCF	Inorganic Non-Debris	B-282
MLLW-03 - Organic Non-Debris			B-287
	100-Area Reactors	Waste Oil from reactors	B-295
	222-S Laboratory Complex	222-S Organic Non-Debris	B-299
	2724WB	Toxic Solids	B-304
	324	Organic Non-Debris Discarded Chemical/Waste	B-308
	327	Organic Non-Debris Discarded Chemical/Waste	B-312
	CWC	Organic Non-Debris Solids and Labpacks	B-316
	PFP	Lab Chemicals/Waste, Organic Non-Debris	B-320
	T Plant Complex	Organic Non-Debris	B-325
	Tank Farm Facilities	Organic Non-Debris	B-329
	WRAP	Organic Non-Debris	B-333
	WSCF	Organic Non-Debris	B-337
MLLW-04A - O/C Hazardous Debris			B-341
	200 ETF	Acid O/C Hazardous Debris	B-350
	200 ETF	Caustic O/C Hazardous Debris	B-354
	200 ETF	RCRA O/C Hazardous Debris	B-358
	202-S	202-S O/C Hazardous Debris	B-362

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Table B-1. Data Sheet Index. (7 sheets)

Treatability Group Data Sheets	Location Specific Data Sheets		
Treatability Group Name	Unit/plant	Waste Stream	Page #
	222-S Laboratory Complex	222-S O/C Hazardous Debris	B-366
	242-A Evaporator	242-A O/C Hazardous Debris	B-370
	324	O/C Hazardous Debris	B-374
	CWC	O/C Hazardous Debris	B-378
	LLBG	MLLW Retrieval Debris	B-382
	PFP	Operations and D&D Wastes O/C Hazardous Debris	B-386
	T Plant Complex	O/C Hazardous Debris	B-390
	Tank Farm Facilities	O/C Hazardous Debris	B-394
	Well Maintenance Debris	O/C Hazardous Debris Well Debris	B-398
	WRAP	O/C Hazardous Debris	B-402
	WSCF	O/C Hazardous Debris	B-406
	MLLW-04B - Non-O/C Hazardous Debris		
2724WB		Lead Solids	B-420
CWC		Non-O/C Inorganic Hazardous Debris	B-424
T Plant Complex		Non-O/C Hazardous Debris	B-428
Tank Farm Facilities		Non-O/C Inorganic Hazardous Debris	B-432
WRAP		Non-O/C Inorganic Hazardous Debris	B-436
MLLW-05 - Elemental Lead			B-441
	222-S Laboratory Complex	222-S Elemental Lead	B-448
	324	Elemental Lead	B-452
	327	Elemental Lead	B-456
	CWC	Elemental Lead	B-460
	PFP	Elemental Lead	B-464
	T Plant Complex	Elemental Lead	B-468
	Tank Farm Facilities	Elemental Lead	B-472

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Table B-1. Data Sheet Index. (7 sheets)

Treatability Group Data Sheets	Location Specific Data Sheets		
Treatability Group Name	Unit/plant	Waste Stream	Page #
MLLW-06 - Elemental Mercury			B-477
	327	Elemental Mercury	B-483
	CWC	Elemental Mercury	B-487
	PFP	Hg, Elemental	B-491
MLLW-07 - RH and Large Container			B-495
	222-S Laboratory Complex	MLLW-07, Shielded Debris	B-500
	325 HWTU	MLLW-07 RH	B-504
	CWC	MLLW-07	B-508
	T Plant Complex	RH and Large Container	B-512
	Tank Farm Facilities	MLLW-07 RH Mixed Waste	B-516
MLLW-08 - Unique Waste			B-521
	CWC	Unique Waste	B-525
	T Plant Complex	MW Requiring Special Processing	B-529
MLLW-09 - Lead-Acid and Cadmium Batteries			B-535
	324	Pb & Cd Batteries	B-539
	327	Pb & Cd Batteries	B-543
	CWC	Pb & Cd Batteries	B-547
	PFP	Batteries, Lead	B-551
	T Plant Complex	Pb & Cd Batteries	B-555
MLLW-10 - Reactive Metals			B-559
	222-S Laboratory Complex	Reactive Metals and Metal Components	B-563
	324	Reactive Metals	B-567
	CWC	Alkali Metals	B-571
	FFTF	Reactive Metals	B-575
	T Plant Complex	Alkali Metals	B-579
PUREX Plant			B-583
	PUREX Plant	PUREX Containment Building	B-587

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Table B-1. Data Sheet Index. (7 sheets)

Treatability Group Data Sheets	Location Specific Data Sheets		
Treatability Group Name	Unit/plant	Waste Stream	Page #
PUREX Storage Tunnels			B-591
	PUREX Storage Tunnels	Tunnels 1 and 2	B-595
Purgewater			B-599
	600 Area PSTF	Purgewater Modu-tanks	B-603
SST Waste			B-607
	SST System	Past Practice Units	B-613
	SST System	SST System	B-618
TRUM - CH			B-623
	200 Area Investigation	200 Area Investigation	B-629
	233-S	233-S CH	B-633
	325 HWTU	TRUM-CH	B-637
	CWC	CH TRUM	B-642
	LLBG	TRUM Retrieval	B-646
	PFP	Hanford Ash Residues	B-651
	PFP	Lead Lined Containers	B-655
	PFP	Legacy Holdup Waste	B-660
	PFP	Plutonium-Bearing Misc. Residues	B-664
	PFP	Pu Miscellaneous Residues, Combustibles	B-668
	PFP	Pu Oxides/Mixed Oxides Residues	B-672
	PFP	Rocky Flats Ash Residues	B-677
	PFP	Sand, Slag, and Crucible Residues	B-681
	PFP	TRUM Debris	B-685
	WRAP	TRUM-CH	B-689
	TRUM - Large Box		
CWC		TRUM Boxes	B-701

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Table B-1. Data Sheet Index. (7 sheets)

Table B-1. Data Sheet Index. (7 sheets)			
Treatability Group Data Sheets	Location Specific Data Sheets		
Treatability Group Name	Unit/plant	Waste Stream	Page #
TRUM - PCB			B-705
	325 HWTU	TRUM PCB	B-710
	CWC	TRUM PCBs	B-714
	PFP	Hydraulic Fluids Contaminated with PCBs/Rad Organic Non-Debris	B-718
TRUM - RH			B-723
	325 HWTU	TRUM-RH	B-727
	CWC	RH TRUM	B-732

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LDR REPORT TREATABILITY GROUP DATA SHEET

1.0 WASTE STREAM IDENTIFICATION

- 1.1 **Treatability Group Name:** 221-T Containment Building
- 1.2 **Description of waste (list WSRd numbers for this waste stream, as applicable)**
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2.0 WASTE INVENTORY AND GENERATION

- 2.1 **Current total inventory for this waste stream (stored waste only, not accumulation areas). [Equals sum of location-specific data sheets for this treatability group.]**
Total volume (cubic meters): 50.000
- 2.2 **Estimated generation projection by calendar year: [equals annual sums of location-specific data sheets for this treatability group].**

Year	m ³	and/or	kg
2003	0.000		
2004	0.000		
2005	0.000		
2006	0.000		
2007	0.000		
Total	0.000		

3.0 WASTE STREAM CHARACTERIZATION

- 3.1 **Radiological Characteristics**
- 3.1.1 **Mixed waste type:** High-level Transuranic Low-level
- 3.1.2 **Handling (as package contents would need to be handled during treatment):**
 Contact-handled Remote-handled
- 3.1.3 **Comments on radiological characteristics (e.g., more specific information on content, treatment concerns caused by radiation, confidence level):**
Typically remote handled waste but can also be contact handled large equipment/debris.
- 3.2 **Physical Form**
- 3.2.1 **Physical form of the waste:**
 Solid Liquid Semi-solid Debris
 Other (Describe in comments.)
- 3.2.2 **Comments on physical form:**
Large equipment and/or debris.

LDR REPORT TREATABILITY GROUP DATA SHEET

3.3 Regulated constituents and wastewater/non-wastewater category

3.3.1 Wastewater/non-wastewater under RCRA

Wastewater Non-wastewater Unknown

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

EPA/ State Number	Waste Description	LDR Sub- Category*	Concentration (Typical or Range)**	Basis	LDR Treatment Concentration Standard or Technology Code
D005	Barium	N/A	unknown	Process knowledge	unknown
D006	Cadmium	N/A	unknown	Process knowledge	unknown
D007	Chromium	N/A	unknown	Process knowledge	unknown
D008	Lead	N/A	unknown	Process knowledge	unknown
D009	Mercury	N/A	unknown	Process knowledge	260 mg/K
F001	1,1,1-trichloroethane	spent solvent	unknown	Process knowledge	6.0 mg/kg
F002	Methylene chloride	spent solvent	unknown	Process knowledge	30.0 mg/kg
F003	Acetone, MIK	spent solvent	unknown	Process knowledge	160 & 33 mg/kg
F004	Cresols	spent solvent	unknown	Process knowledge	5.6 mg/kg
F005	MEK	spent solvent	unknown	Process knowledge	36 mg/kg

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

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

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

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

- List:
- No LDR treatment required (e.g. TRUM waste destined for WIPP, exclusion, etc.)
- None (i.e. all constituents/waste numbers of this waste stream still require treatment).

LDR REPORT TREATABILITY GROUP DATA SHEET

3.3.4 Does this waste stream contain PCBs?

Yes No Unknown

If no or unknown, skip to Section 3.3.5.

3.3.4.1 Is waste stream subject to TSCA regulations for PCBs?

Yes No Unknown

3.3.4.2 Indicate the PCB concentration range.

< 50 ppm ≥ 50 ppm Unknown

3.3.5 What is the confidence level for the regulated constituents?

Low Medium High

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

N/A

4.0 WASTE STREAM TREATMENT

4.1 Is this waste stream currently being treated?

Yes No

If yes, provide details: N/A

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

- No treatment required (skip to Section 5.0)
 Treating or plan to treat on site
 Treating or plan to treat off site
 Treatment options still being assessed

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

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

4.4 Treatment schedule information:

Dependent upon M-091 capability as well as when canyon deck and process cell cleanout continues.

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

Milestone Number	Due Date
N/A	N/A

4.6 Proposed new Tri-Party Agreement treatment milestones:

None.

LDR REPORT TREATABILITY GROUP DATA SHEET

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

Yes No Unknown

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

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

Unknown.

4.9 **Key Assumptions:**

N/A

5.0 WASTE STREAM DISPOSAL

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

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

LDR REPORT WASTE LOCATION-SPECIFIC DATA SHEET

1.0 WASTE STREAM IDENTIFICATION AND SOURCE

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

1.2 **Applicable profile number(s) for this waste stream:**
N/A

1.3 Waste stream source information

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

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

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

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

1.3.3 **Source of the regulated constituents:**

F listed based upon process knowledge from decontaminating of tank farms equipment.

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

Process knowledge.

1.3.5 **Additional notes:**

None.

2.0 WASTE STREAM STORAGE, INVENTORY, AND GENERATION INFORMATION

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

2.1 Current storage method

- | | | |
|--|--|---|
| <input type="checkbox"/> Container (pad) | <input type="checkbox"/> Container (covered) | <input type="checkbox"/> Container (retrievably buried) |
| <input type="checkbox"/> Tank | <input type="checkbox"/> DST | <input type="checkbox"/> SST |
| <input checked="" type="checkbox"/> Other (explain): | 221-T Containment Building in the T Plant Complex. | |

2.1.1 **How was the waste managed prior to storage?**

Stored on the canyon deck, railroad tunnel, or in process cells.

2.1.2 **Timeframe when waste was placed to storage?**

Waste was generated during canyon deck and cell cleanout activities. This process is ongoing as T Plant Complex continues to prepare for current as well as future missions.

LDR REPORT WASTE LOCATION-SPECIFIC DATA SHEET

2.2 Storage inventory locations:

Building/Room Number	Number of Containers/Tanks
221-T Canyon (RR, Deck)	3 cells (7-L, 13--R, 17-R), deck, RR

2.3 Current stored inventory for this stream.

Total volume (cubic meters): 50.000

Date of inventory values: 12/31/2002

Comments on waste inventory:

Waste contents placed into process cells is documented in WMP-340, Section 2.1 as well as video taped.

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

Yes No

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

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

Bases and assumptions used:

N/A

2.5 Planned storage areas for this waste:

- Current Location
 CWC
 DST
 Other Area(s) (list):
 None

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

Year	m ³	and/or	kg
2003	0.000		
2004	0.000		
2005	0.000		
2006	0.000		
2007	0.000		
Total	0.000		

2.7 DOE Storage Compliance Assessment information:

Assessment has been completed.

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

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

Other. Explain:

LDR REPORT WASTE LOCATION-SPECIFIC DATA SHEET

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

Milestone Number	Due Date
N/A	N/A

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

Yes No

If yes, summarize releases and quantities and provide date:

N/A

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

Yes No

If yes, explain: N/A

2.11 Characterization

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

Yes No Unknown at this time

Milestone Number	Due Date
N/A	N/A

If yes or unknown, comment on characterization for storage.

N/A

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

Yes No Unknown at this time

Milestone Number	Due Date
N/A	N/A

If yes or unknown, comment on characterization for treatment.

N/A

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

Yes No Unknown at this time

Milestone Number	Due Date
N/A	N/A

If yes or unknown, comment on characterization for disposal.

N/A

LDR REPORT WASTE LOCATION-SPECIFIC DATA SHEET

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

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

3.0 WASTE MINIMIZATION

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

Yes No

If yes, provide date assessment conducted: N/A

If yes, provide document number or other identification:

N/A

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

N/A

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

Currently there are no processes (e.g., canyon deck and/or cell cleanout) to generate additional waste. Waste reduction and minimization will be addressed when canyon deck and/or cell clean out resumes (e.g., size reduction, etc.) in support of operational needs and/or future needed missions.

3.3 Waste minimization schedule

3.3.1 Reduction achieved during calendar year 2002 (volume or mass)

0.000 m³

3.3.2 Projected future waste volume reductions

Year	m ³	and/or	kg
2003	0.000		
2004	0.000		
2005	0.000		
2006	0.000		
2007	0.000		
Total	0.000		

3.3.3 Bases and assumptions used in above estimates:

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

LDR REPORT TREATABILITY GROUP DATA SHEET

1.0 WASTE STREAM IDENTIFICATION

- 1.1 Treatability Group Name:** 221-T Tank System
- 1.2 Description of waste (list WSRd numbers for this waste stream, as applicable)**
Liquid mixed waste with settled solids/sludge (waste also contains PCBs at TSCA regulated concentrations).

2.0 WASTE INVENTORY AND GENERATION

- 2.1 Current total inventory for this waste stream (stored waste only, not accumulation areas). [Equals sum of location-specific data sheets for this treatability group.]**
Total volume (cubic meters): 51.790
- 2.2 Estimated generation projection by calendar year: [equals annual sums of location-specific data sheets for this treatability group].**

Year	m ³	and/or	kg
2003	0.000		
2004	0.000		
2005	0.000		
2006	0.000		
2007	0.000		
Total	0.000		

3.0 WASTE STREAM CHARACTERIZATION

- 3.1 Radiological Characteristics**
- 3.1.1 Mixed waste type:** High-level Transuranic Low-level
- 3.1.2 Handling (as package contents would need to be handled during treatment):**
 Contact-handled Remote-handled
- 3.1.3 Comments on radiological characteristics (e.g., more specific information on content, treatment concerns caused by radiation, confidence level):**
The contents of the 221-T tank system are evaporating so that the concentration of radionuclides will be increasing over time. According to best information, at least one tank could be considered transuranic waste. Because a majority of the tanks are still considered to contain low-level waste, question 3.1.1 is answered as low-level waste.
- 3.2 Physical Form**
- 3.2.1 Physical form of the waste:**
 Solid Liquid Semi-solid Debris
 Other (Describe in comments.)
- 3.2.2 Comments on physical form:**

LDR REPORT TREATABILITY GROUP DATA SHEET

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

3.3 Regulated constituents and wastewater/non-wastewater category

3.3.1 Wastewater/non-wastewater under RCRA

Wastewater Non-wastewater Unknown

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

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

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

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

UHCs have not been determined for this waste stream.

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

- List: N/A
- No LDR treatment required (e.g. TRUM waste destined for WIPP, exclusion, etc.)
- None (i.e. all constituents/waste numbers of this waste stream still require treatment).

LDR REPORT TREATABILITY GROUP DATA SHEET

3.3.4 Does this waste stream contain PCBs?

Yes No Unknown

If no or unknown, skip to Section 3.3.5.

3.3.4.1 Is waste stream subject to TSCA regulations for PCBs?

Yes No Unknown

3.3.4.2 Indicate the PCB concentration range.

< 50 ppm ≥ 50 ppm Unknown

3.3.5 What is the confidence level for the regulated constituents?

Low Medium High

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

There is a potential for additional sampling to evaluate waste for long term storage (evaluate waste as liquid fraction continues to evaporate, rate estimated at approximately 8 gallons/day) and underlying hazardous constituents.

4.0 WASTE STREAM TREATMENT

4.1 Is this waste stream currently being treated?

Yes No

If yes, provide details: N/A

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

- No treatment required (skip to Section 5.0)
 Treating or plan to treat on site
 Treating or plan to treat off site
 Treatment options still being assessed

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

TBD

4.4 Treatment schedule information:

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

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

Milestone Number	Due Date
N/A	N/A

LDR REPORT TREATABILITY GROUP DATA SHEET

4.6 Proposed new Tri-Party Agreement treatment milestones:

None.

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

Yes No Unknown

If yes, describe: N/A based on 4.2.

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

None.

4.9 Key Assumptions:

An estimated 8 gallons per day is evaporating. Dispositioning of the 221-T RCRA Tank System will be accomplished through the T Plant Complex Part B workshop/negotiations with Ecology.

5.0 WASTE STREAM DISPOSAL

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

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

LDR REPORT WASTE LOCATION-SPECIFIC DATA SHEET

2.1.2 Timeframe when waste was placed to storage?

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

2.2 Storage inventory locations:

Building/Room Number	Number of Containers/Tanks
221-T Building	7 tanks

2.3 Current stored inventory for this stream.

Total volume (cubic meters): 51.790

Date of inventory values: 12/31/2002

Comments on waste inventory:

The liquid fraction of this waste is evaporating at approximately 8 gallons per day, but evaporation rate fluctuates with weather conditions.

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

Yes No

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

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

Bases and assumptions used:

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

2.5 Planned storage areas for this waste:

Current Location CWC DST

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

None

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

Year	m ³	and/or	kg
2003	0.000		
2004	0.000		
2005	0.000		
2006	0.000		
2007	0.000		
Total	0.000		

LDR REPORT WASTE LOCATION-SPECIFIC DATA SHEET

2.7 DOE Storage Compliance Assessment information:

Assessment has been completed.

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

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

Other. Explain: N/A

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

Milestone Number	Due Date
N/A	N/A

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

Yes No

If yes, summarize releases and quantities and provide date:

N/A

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

Yes No

If yes, explain: N/A

2.11 Characterization

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

Yes No Unknown at this time

Milestone Number	Due Date
N/A	N/A

If yes or unknown, comment on characterization for storage.

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

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

Yes No Unknown at this time

Milestone Number	Due Date
N/A	N/A

LDR REPORT WASTE LOCATION-SPECIFIC DATA SHEET

If yes or unknown, comment on characterization for treatment.

The treatment capability must be established to make this determination.

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

Yes No Unknown at this time

Milestone Number	Due Date
N/A	N/A

If yes or unknown, comment on characterization for disposal.

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

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

Negotiations on closure approach of the 221-T RCRA Tanks System have been accomplished with Ecology during the Part B workshop process. The disposition of the 221-T RCRA Tank System is documented in "Hanford Facility Dangerous Waste Permit Application, T Plant Complex," DOE/RL-95-36, Revision 1. An estimated 8 gallons per day are evaporating from the waste currently in the tanks due to ventilation of the cells in 221-T Building containing the tank system. The evaporation rate is approximately 3000 gallons (approximately 11 cubic meters) per year. Assuming this rate continues, the liquid fraction will have evaporated in 5.8 years. Information on the evaporation rate has been discussed with Ecology, and will be included in the Part B permit application. Administrative and engineering controls have been put in place to prevent additional liquids from entering this tank system.

3.0 WASTE MINIMIZATION

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

Yes No

If yes, provide date assessment conducted: N/A

If yes, provide document number or other identification:

N/A

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

N/A

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

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

3.3 Waste minimization schedule

3.3.1 Reduction achieved during calendar year 2002 (volume or mass)

0.000 m³

LDR REPORT WASTE LOCATION-SPECIFIC DATA SHEET

3.3.2 Projected future waste volume reductions

Year	m ³	and/or	kg
2003	0.000		
2004	0.000		
2005	0.000		
2006	0.000		
2007	0.000		
Total	0.000		

3.3.3 Bases and assumptions used in above estimates:

N/A

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LDR REPORT TREATABILITY GROUP DATA SHEET

1.0 WASTE STREAM IDENTIFICATION

- 1.1 **Treatability Group Name:** 222-S T8 Tunnel
- 1.2 **Description of waste (list WSRd numbers for this waste stream, as applicable)**

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

2.0 WASTE INVENTORY AND GENERATION

- 2.1 **Current total inventory for this waste stream (stored waste only, not accumulation areas). [Equals sum of location-specific data sheets for this treatability group.]**
Total volume (cubic meters): 0.200
- 2.2 **Estimated generation projection by calendar year: [equals annual sums of location-specific data sheets for this treatability group].**

Year	m ³	and/or	kg
2003	0.000		0.000
2004	0.000		0.000
2005	0.000		0.000
2006	0.000		0.000
2007	0.000		0.000
Total	0.000		0.000

3.0 WASTE STREAM CHARACTERIZATION

- 3.1 **Radiological Characteristics**
- 3.1.1 **Mixed waste type:** High-level Transuranic Low-level

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

- Contact-handled Remote-handled

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

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

LDR REPORT TREATABILITY GROUP DATA SHEET

3.2 Physical Form

3.2.1 Physical form of the waste:

- Solid Liquid Semi-solid Debris
 Other (Describe in comments.)

3.2.2 Comments on physical form:

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

3.3 Regulated constituents and wastewater/non-wastewater category

3.3.1 Wastewater/non-wastewater under RCRA

- Wastewater Non-wastewater Unknown

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

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

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

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

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

UHCs do not apply to debris.

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

- List:
 No LDR treatment required (e.g. TRUM waste destined for WIPP, exclusion, etc.)
 None (i.e. all constituents/waste numbers of this waste stream still require treatment).

LDR REPORT TREATABILITY GROUP DATA SHEET

3.3.4 Does this waste stream contain PCBs?

Yes No Unknown

If no or unknown, skip to Section 3.3.5.

3.3.4.1 Is waste stream subject to TSCA regulations for PCBs?

Yes No Unknown

3.3.4.2 Indicate the PCB concentration range.

< 50 ppm ≥ 50 ppm Unknown

3.3.5 What is the confidence level for the regulated constituents?

Low Medium High

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

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

4.0 WASTE STREAM TREATMENT

4.1 Is this waste stream currently being treated?

Yes No

If yes, provide details: N/A

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

- No treatment required (skip to Section 5.0)
 Treating or plan to treat on site
 Treating or plan to treat off site
 Treatment options still being assessed

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

TBD.

4.4 Treatment schedule information:

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

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

Milestone Number	Due Date
N/A	N/A

LDR REPORT TREATABILITY GROUP DATA SHEET

4.6 Proposed new Tri-Party Agreement treatment milestones:

None.

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

Yes

No

Unknown

If yes, describe: N/A based on 4.2.

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

TBD

4.9 Key Assumptions:

N/A

5.0 WASTE STREAM DISPOSAL

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

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

LDR REPORT WASTE LOCATION-SPECIFIC DATA SHEET

1.0 WASTE STREAM IDENTIFICATION AND SOURCE

1.1 **Unit/Plant name:** 222-S Laboratory Complex **Waste Stream:** T-8 Tunnel RH-MLLW
Treatability Group Name: 222-S T8 Tunnel

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

None.

1.3 **Waste stream source information**

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

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

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

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

1.3.3 **Source of the regulated constituents:**

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

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

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

1.3.5 **Additional notes:**

None.

2.0 WASTE STREAM STORAGE, INVENTORY, AND GENERATION INFORMATION

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

2.1 **Current storage method**

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

2.1.1 **How was the waste managed prior to storage?**

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

2.1.2 **Timeframe when waste was placed to storage?**

10/1997.

LDR REPORT WASTE LOCATION-SPECIFIC DATA SHEET

2.2 Storage inventory locations:

Building/Room Number	Number of Containers/Tanks
219-S T8 Tunnel	0

2.3 Current stored inventory for this stream.

Total volume (cubic meters): 0.200

Date of inventory values: 12/31/2002

Comments on waste inventory:

None.

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

Yes No

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

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

Bases and assumptions used:

N/A

2.5 Planned storage areas for this waste:

Current Location CWC DST

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

None

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

Year	m ³	and/or	kg
2003	0.000		0.000
2004	0.000		0.000
2005	0.000		0.000
2006	0.000		0.000
2007	0.000		0.000
Total	0.000		0.000

2.7 DOE Storage Compliance Assessment information:

Assessment has been completed.

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

LDR REPORT WASTE LOCATION-SPECIFIC DATA SHEET

- Assessment has been scheduled. Scheduled date:
 Other. Explain:

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

Milestone Number	Due Date
M-020-22	12/31/1991

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

- Yes No

If yes, summarize releases and quantities and provide date:

N/A

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

- Yes No

If yes, explain: N/A

2.11 Characterization

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

- Yes No Unknown at this time

Milestone Number	Due Date
N/A	N/A

If yes or unknown, comment on characterization for storage.

N/A

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

- Yes No Unknown at this time

Milestone Number	Due Date
N/A	N/A

If yes or unknown, comment on characterization for treatment.

N/A

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

- Yes No Unknown at this time

Milestone Number	Due Date
N/A	N/A

LDR REPORT WASTE LOCATION-SPECIFIC DATA SHEET

If yes or unknown, comment on characterization for disposal.

N/A

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

None.

3.0 WASTE MINIMIZATION

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

Yes No

If yes, provide date assessment conducted: N/A

If yes, provide document number or other identification:

N/A

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

N/A

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

N/A

3.3 Waste minimization schedule

3.3.1 Reduction achieved during calendar year 2002 (volume or mass)

0.000 m³

3.3.2 Projected future waste volume reductions

Year	m ³	and/or	kg
2003	0.000		0.000
2004	0.000		0.000
2005	0.000		0.000
2006	0.000		0.000
2007	0.000		0.000
Total	0.000		0.000

3.3.3 Bases and assumptions used in above estimates:

N/A

LDR REPORT TREATABILITY GROUP DATA SHEET

1.0 WASTE STREAM IDENTIFICATION

- 1.1 **Treatability Group Name:** 241-CX Tank System
- 1.2 **Description of waste (list WSRd numbers for this waste stream, as applicable)**
Residual tank waste resulting from REDOX, PUREX, and Semiworks processes.

2.0 WASTE INVENTORY AND GENERATION

- 2.1 **Current total inventory for this waste stream (stored waste only, not accumulation areas). [Equals sum of location-specific data sheets for this treatability group.]**
Total volume (cubic meters): 3.000
- 2.2 **Estimated generation projection by calendar year: [equals annual sums of location-specific data sheets for this treatability group].**

Year	m ³	and/or	kg
2003	0.000		
2004	0.000		
2005	0.000		
2006	0.000		
2007	0.000		
Total	0.000		

3.0 WASTE STREAM CHARACTERIZATION

- 3.1 **Radiological Characteristics**
- 3.1.1 **Mixed waste type:** High-level Transuranic Low-level
- 3.1.2 **Handling (as package contents would need to be handled during treatment):**
 Contact-handled Remote-handled
- 3.1.3 **Comments on radiological characteristics (e.g., more specific information on content, treatment concerns caused by radiation, confidence level):**
None.

3.2 **Physical Form**

- 3.2.1 **Physical form of the waste:**
 Solid Liquid Semi-solid Debris
 Other (Describe in comments.)
- 3.2.2 **Comments on physical form:**

Little information is available on the contents of the waste in the 241-CX-72. Waste in the CX-72 tank was heated until nearly dry, and later, 24 feet of grout was placed over the 11-foot deep heel of non-liquid mixed waste.

LDR REPORT TREATABILITY GROUP DATA SHEET

3.3 Regulated constituents and wastewater/non-wastewater category

3.3.1 Wastewater/non-wastewater under RCRA

Wastewater Non-wastewater Unknown

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

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

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

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

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

- List:
- No LDR treatment required (e.g. TRUM waste destined for WIPP, exclusion, etc.)
- None (i.e. all constituents/waste numbers of this waste stream still require treatment).

LDR REPORT TREATABILITY GROUP DATA SHEET

3.3.4 Does this waste stream contain PCBs?

Yes No Unknown

If no or unknown, skip to Section 3.3.5.

3.3.4.1 Is waste stream subject to TSCA regulations for PCBs?

Yes No Unknown

3.3.4.2 Indicate the PCB concentration range.

< 50 ppm ≥ 50 ppm Unknown

3.3.5 What is the confidence level for the regulated constituents?

Low Medium High

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

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

4.0 WASTE STREAM TREATMENT

4.1 Is this waste stream currently being treated?

Yes No

If yes, provide details: N/A

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

- No treatment required (skip to Section 5.0)
 Treating or plan to treat on site
 Treating or plan to treat off site
 Treatment options still being assessed

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

To be determined.

4.4 Treatment schedule information:

Waste will be dispositioned with the TSD unit closure.

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

Milestone Number	Due Date
M-020-54	12/31/2008

4.6 Proposed new Tri-Party Agreement treatment milestones:

None.

LDR REPORT TREATABILITY GROUP DATA SHEET

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

Yes No Unknown

If yes, describe: N/A based on 4.2.

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

Unknown at this time.

4.9 Key Assumptions:

Milestone negotiations for the Central Plateau are ongoing and could affect this milestone.

5.0 WASTE STREAM DISPOSAL

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

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

LDR REPORT WASTE LOCATION-SPECIFIC DATA SHEET

1.0 WASTE STREAM IDENTIFICATION AND SOURCE

- 1.1 **Unit/Plant name:** 241-CX Tank System **Waste Stream:** CX Tank System
Treatability Group Name: 241-CX Tank System
- 1.2 **Applicable profile number(s) for this waste stream:**
N/A
- 1.3 **Waste stream source information**
- 1.3.1 **General description of the waste (e.g., spill clean-up waste, discarded lab materials, maintenance waste):**
241-CX-70, -71, and -72 were used to store process waste from REDOX, PUREX, and Strontium Semiworks Complex.
- 1.3.2 **History of how and where the waste was/is generated:**
Tanks were in operation beginning in early 1950's. On December 21, 1991, the remaining waste in Tank 241-CX-70 was placed in containers and transferred to 224-T TRUSAF and then Central Waste Complex. The tank was dried and is considered empty. Only tank 241-CX-72 contains mixed waste.
- 1.3.3 **Source of the regulated constituents:**
Hazardous constituents resulted from past operations in REDOX, PUREX, and Strontium Semiworks Complex.
- 1.3.4 **Source of the information (e.g., analytical data, process knowledge, document number, etc.)**
Process knowledge.
- 1.3.5 **Additional notes:**
All of the tanks have been out of service for at least 30 years. Further details can be found in the Part A, Form 3, permit application.

2.0 WASTE STREAM STORAGE, INVENTORY, AND GENERATION INFORMATION

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

- 2.1 **Current storage method**
- | | | |
|---|--|---|
| <input type="checkbox"/> Container (pad) | <input type="checkbox"/> Container (covered) | <input type="checkbox"/> Container (retrievably buried) |
| <input checked="" type="checkbox"/> Tank | <input type="checkbox"/> DST | <input type="checkbox"/> SST |
| <input type="checkbox"/> Other (explain): | N/A | |
- 2.1.1 **How was the waste managed prior to storage?**
Waste was placed directly into storage from operations.
- 2.1.2 **Timeframe when waste was placed to storage?**
Waste was placed in storage between 1950 and 1967. Grout was added to the CX-72 tank in 1986.

LDR REPORT WASTE LOCATION-SPECIFIC DATA SHEET

2.2 Storage inventory locations:

Building/Room Number	Number of Containers/Tanks
241-CX-72	1 tank

2.3 Current stored inventory for this stream.

Total volume (cubic meters): 3.000

Date of inventory values: 12/31/2002

Comments on waste inventory:

11 feet of non-liquid mixed waste is located in tank CX-72. The volume assumes a 3.3 foot tank diameter.

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

Yes No

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

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

Bases and assumptions used:

N/A

2.5 Planned storage areas for this waste:

Current Location CWC DST

Other Area(s) (list):

None

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

Year	m ³	and/or	kg
2003	0.000		
2004	0.000		
2005	0.000		
2006	0.000		
2007	0.000		
Total	0.000		

2.7 DOE Storage Compliance Assessment information:

Assessment has been completed.

Document Number	Date

Assessment has been scheduled. Scheduled date: 1st quarter CY 2005

Other. Explain:

LDR REPORT WASTE LOCATION-SPECIFIC DATA SHEET

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

Milestone Number	Due Date
N/A	N/A

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

Yes No

If yes, summarize releases and quantities and provide date:

N/A

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

Yes No

If yes, explain: N/A

2.11 Characterization

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

Yes No Unknown at this time

Milestone Number	Due Date
M-013-00M	12/31/2002

If yes or unknown, comment on characterization for storage.

N/A

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

Yes No Unknown at this time

Milestone Number	Due Date
N/A	N/A

If yes or unknown, comment on characterization for treatment.

Characterization needs will be determined and coordinated with remediation of the 200-IS-1 Operable Unit.

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

Yes No Unknown at this time

Milestone Number	Due Date
N/A	N/A

If yes or unknown, comment on characterization for disposal.

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

LDR REPORT WASTE LOCATION-SPECIFIC DATA SHEET

2.12 Other key assumptions related to storage, inventory, and generation information:
None.

3.0 WASTE MINIMIZATION

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

Yes No

If yes, provide date assessment conducted: N/A

If yes, provide document number or other identification:

N/A

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

N/A. Waste stream is no longer generated.

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

N/A

3.3 Waste minimization schedule

3.3.1 Reduction achieved during calendar year 2002 (volume or mass)

0.000 m³

3.3.2 Projected future waste volume reductions

Year	m ³	and/or	kg
2003	0.000		
2004	0.000		
2005	0.000		
2006	0.000		
2007	0.000		
Total	0.000		

3.3.3 Bases and assumptions used in above estimates:

The facility is inactive. No waste is being generated.

LDR REPORT TREATABILITY GROUP DATA SHEET

1.0 WASTE STREAM IDENTIFICATION

- 1.1 **Treatability Group Name:** 324 Building REC Waste
- 1.2 **Description of waste (list WSRd numbers for this waste stream, as applicable)**
 WSRd# 324X-20J-0001. High activity radioactive waste containing regulated quantities of toxic heavy metals.
 Mixed waste residue will be generated from the future REC decontamination and deactivation activities.

2.0 WASTE INVENTORY AND GENERATION

- 2.1 **Current total inventory for this waste stream (stored waste only, not accumulation areas). [Equals sum of location-specific data sheets for this treatability group.]**
 Total volume (cubic meters): 5.000
- 2.2 **Estimated generation projection by calendar year: [equals annual sums of location-specific data sheets for this treatability group].**

Year	m ³	and/or	kg
2003	0.000		
2004	5.000		
2005	5.000		
2006	0.000		
2007	0.000		
Total	10.000		

3.0 WASTE STREAM CHARACTERIZATION

- 3.1 **Radiological Characteristics**
- 3.1.1 **Mixed waste type:** High-level Transuranic Low-level
- 3.1.2 **Handling (as package contents would need to be handled during treatment):**
 Contact-handled Remote-handled
- 3.1.3 **Comments on radiological characteristics (e.g., more specific information on content, treatment concerns caused by radiation, confidence level):**
 Waste is highly contaminated.
- 3.2 **Physical Form**
- 3.2.1 **Physical form of the waste:**
 Solid Liquid Semi-solid Debris
 Other (Describe in comments.)
- 3.2.2 **Comments on physical form:**
 None.

LDR REPORT TREATABILITY GROUP DATA SHEET

3.3 Regulated constituents and wastewater/non-wastewater category

3.3.1 Wastewater/non-wastewater under RCRA

Wastewater Non-wastewater Unknown

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

EPA/ State Number	Waste Description	LDR Sub- Category*	Concentration (Typical or Range)**	Basis	LDR Treatment Concentration Standard or Technology Code
D005	Barium	N/A	420 ppm	Sample analysis	Exempt (61 FR 60704)
D006	Cadmium	TC-Cadmium	1.0 ppm	Sample analysis	Exempt (61 FR 60704)
D007	Chromium	N/A	6.3 ppm	Sample analysis	Exempt (61 FR 61704)
D008	Lead	Rad. Lead Solids	>5.0	Process knowledge	Exempt (61 FR 60704)
D008	Lead	TC-Lead	34.6 ppm	Sample analysis	Exempt (61 FR 61704)

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

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

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

- List:
- No LDR treatment required (e.g. TRUM waste destined for WIPP, exclusion, etc.)
- None (i.e. all constituents/waste numbers of this waste stream still require treatment).

3.3.4 Does this waste stream contain PCBs?

Yes No Unknown

If no or unknown, skip to Section 3.3.5.

3.3.4.1 Is waste stream subject to TSCA regulations for PCBs?

Yes No Unknown

3.3.4.2 Indicate the PCB concentration range.

< 50 ppm ≥ 50 ppm Unknown

LDR REPORT TREATABILITY GROUP DATA SHEET

3.3.5 What is the confidence level for the regulated constituents?

Low Medium High

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

None.

4.0 WASTE STREAM TREATMENT

4.1 Is this waste stream currently being treated?

Yes No

If yes, provide details: N/A

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

- No treatment required (skip to Section 5.0)
 Treating or plan to treat on site
 Treating or plan to treat off site
 Treatment options still being assessed

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

TBD

4.4 Treatment schedule information:

Any treatment on this waste matrix will be performed by the Hanford Site TRU Program. Treatment is anticipated to be performed as necessary by the TRU program to support the results of the M-091 TPA dispute resolution.

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

Milestone Number	Due Date
N/A	N/A

4.6 Proposed new Tri-Party Agreement treatment milestones:

None.

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

Yes No Unknown

If yes, describe: N/A based on 4.2.

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

TBD.

LDR REPORT TREATABILITY GROUP DATA SHEET

4.9 Key Assumptions:

None.

5.0 WASTE STREAM DISPOSAL

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

Waste will be disposed of at WIPP.

LDR REPORT WASTE LOCATION-SPECIFIC DATA SHEET

1.0 WASTE STREAM IDENTIFICATION AND SOURCE

1.1 **Unit/Plant name:** 324 Building **Waste Stream:** Radiochemical Engineering Cells

Treatability Group Name: 324 Building REC Waste

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

None.

1.3 **Waste stream source information**

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

Waste residue from further REC deactivation and decontamination activities.

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

Waste was generated during hot cell operations in the past, as described in the "324 Building Radiochemical Engineering Cells, High Level Vault, Low Level Vault, and Associated Areas Closure Plan", DOE/RL-96-73. Waste is being collected and containerized from the clean-up of the hot cells, pipe trench, and tank vault.

1.3.3 **Source of the regulated constituents:**

The hazardous constituents came from feed materials to support various research and development projects that were performed in the REC. This information is discussed in detail in DOE/RL-96-73, Rev.1, "324 Building Radiochemical Engineering Cells, High-Level Vault, Low-Level Vault, and Associated Areas Closure Plan".

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

Analytical data, process knowledge.

1.3.5 **Additional notes:**

None.

2.0 WASTE STREAM STORAGE, INVENTORY, AND GENERATION INFORMATION

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

2.1 **Current storage method**

- | | | |
|--|---|---|
| <input type="checkbox"/> Container (pad) | <input type="checkbox"/> Container (covered) | <input type="checkbox"/> Container (retrievably buried) |
| <input type="checkbox"/> Tank | <input type="checkbox"/> DST | <input type="checkbox"/> SST |
| <input checked="" type="checkbox"/> Other (explain): | The waste is in the form of radioactive contamination within the hot cells, pipe trench and tank vault. | |

2.1.1 **How was the waste managed prior to storage?**

In accordance with the "324 Building Radiochemical Engineering Cells, High Level Vault, Low Level Vault, and Associated Areas Closure Plan", DOE/RL-96-73.

LDR REPORT WASTE LOCATION-SPECIFIC DATA SHEET

2.1.2 Timeframe when waste was placed to storage?

As addressed in the 324 REC Closure Plan (DOE/RL-96-73), the waste is in the form of hot cell contamination from pre-1996 research and development operations.

2.2 Storage inventory locations:

Building/Room Number	Number of Containers/Tanks
324 REC	6 tanks

2.3 Current stored inventory for this stream.

Total volume (cubic meters): 5.000

Date of inventory values: 12/31/2002

Comments on waste inventory:

Waste volume is estimated based on the container volume.

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

Yes No

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

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

Bases and assumptions used:

N/A

2.5 Planned storage areas for this waste:

Current Location CWC DST

Other Area(s) (list): N/A

None

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

Year	m ³	and/or	kg
2003	0.000		
2004	5.000		
2005	5.000		
2006	0.000		
2007	0.000		
Total	10.000		

2.7 DOE Storage Compliance Assessment Information:

Assessment has been completed.

LDR REPORT WASTE LOCATION-SPECIFIC DATA SHEET

Document Number	Date

- Assessment has been scheduled. Scheduled date: 4th quarter CY 2002.
- Other. Explain: As of December 31, 2002, the assessment field work has been completed, but the assessment report is still being prepared.

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

Milestone Number	Due Date
M-089-00	10/31/2005
M-092-16	09/30/2006

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

- Yes No

If yes, summarize releases and quantities and provide date:

N/A

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

- Yes No

If yes, explain: N/A

2.11 Characterization

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

- Yes No Unknown at this time

Milestone Number	Due Date
N/A	N/A

If yes or unknown, comment on characterization for storage.

N/A

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

- Yes No Unknown at this time

Milestone Number	Due Date
N/A	N/A

If yes or unknown, comment on characterization for treatment.

N/A

LDR REPORT WASTE LOCATION-SPECIFIC DATA SHEET

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

Yes No Unknown at this time

Milestone Number	Due Date
N/A	N/A

If yes or unknown, comment on characterization for disposal.

N/A

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

None.

3.0 WASTE MINIMIZATION

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

Yes No

If yes, provide date assessment conducted: N/A

If yes, provide document number or other identification:

N/A

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

Not scheduled at this time.

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

Waste minimization is accomplished through waste segregation. Waste minimization will be considered during the development and/or selection of the treatment method.

3.3 Waste minimization schedule

3.3.1 Reduction achieved during calendar year 2002 (volume or mass)

0.000 m³

3.3.2 Projected future waste volume reductions

Year	m ³	and/or	kg
2003	0.000		
2004	0.000		
2005	0.000		
2006	0.000		
2007	0.000		
Total	0.000		

LDR REPORT WASTE LOCATION-SPECIFIC DATA SHEET

3.3.3 Bases and assumptions used in above estimates:

None.

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LDR REPORT TREATABILITY GROUP DATA SHEET

1.0 WASTE STREAM IDENTIFICATION

1.1 **Treatability Group Name:**

325 HWTU

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

This waste stream consists of many different inorganic and organic solids and liquids that are contaminated with inorganic and organic regulated dangerous waste constituents, including PCBs. This waste stream also includes hazardous debris. WSRds in this waste stream: 400, 401, 402, 403, 404, 420, 421, 422, 500, 501, 503, 504, 505, 521, 523, 524, 525, 627, 647, 800, 820, 822, 830, 923, 930.

2.0 WASTE INVENTORY AND GENERATION

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

Total volume (cubic meters): 8.147

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

Year	m ³	and/or	kg
2003	13.700		
2004	16.300		
2005	16.300		
2006	16.300		
2007	16.300		
Total	78.900		

3.0 WASTE STREAM CHARACTERIZATION

3.1 **Radiological Characteristics**

3.1.1 **Mixed waste type:** High-level Transuranic Low-level

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

Contact-handled Remote-handled

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

The majority of these wastes are contact handled, thus CH is chosen above. Some items may be RH within containers that are packaged to meet CH limits, thus only CH is indicated. The radiological constituents are characterized using methods approved in PNNL's waste stream profiles for the waste currently being stored.

LDR REPORT TREATABILITY GROUP DATA SHEET

3.2 Physical Form

3.2.1 Physical form of the waste:

Solid Liquid Semi-solid Debris

Other (Describe in comments.)

3.2.2 Comments on physical form:

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

3.3 Regulated constituents and wastewater/non-wastewater category

3.3.1 Wastewater/non-wastewater under RCRA

Wastewater Non-wastewater Unknown

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

LDR REPORT TREATABILITY GROUP DATA SHEET

EPA/ State Number	Waste Description	LDR Sub- Category*	Concentration (Typical or Range)**	Basis	LDR Treatment Concentration Standard or Technology Code
D001	Ignitable	High TOC	***	***	RORGS; CMBST; POLYM
D001	Ignitable	Low TOC	***	***	DEACT & meet 268.48
D002	Corrosive	Corrosive Charac.	***	***	DEACT & meet 268.48
D003	Reactive	multiple	***	***	DEACT & meet 268.48
D004	TC-Arsenic	N/A	***	***	5.0 mg/L TCLP & meet 268.48
D005	TC-Barium	N/A	***	***	100 mg/L TCLP & meet 268.48
D006	TC-Cadmium	Cadmium Charac.	***	***	1.0 mg/L TCLP & meet 268.48
D007	TC-Chromium	N/A	***	***	5.0 mg/L TCLP & meet 268.48
D008	TC-Lead	Lead Charac.	***	***	5.0 mg/L TCLP & meet 268.48
D009	TC-Mercury	Low Mercury	<260 mg/kg	***	0.2 mg/L TCLP & meet 268.48
D010	TC-Selenium	N/A	***	***	5.7 mg/L TCLP & meet 268.48
D011	TC-Silver	N/A	***	***	5.0 mg/L TCLP & meet 268.48
D018	Benzene	N/A	***	***	10 mg/kg & meet 268.48
D019	Carbon Tetrachloride	N/A	***	***	6.0 mg/kg & meet 268.48
D021	Chlorobenzene	N/A	***	***	6.0 mg/kg & meet 268.48
D022	Chloroform	N/A	***	***	6.0 mg/kg & meet 268.48
D027	p-Dichlorobenzene	N/A	***	***	6.0 mg/kg & meet 268.48
D028	1,2-Dichlorethane	N/A	***	***	6.0 mg/kg & meet 268.48
D029	1,1-Dichloroethylene	N/A	***	***	6.0 mg/kg & meet 268.48
D030	2,4-Dinitrotoluene	N/A	***	***	140.0 mg/kg & meet 268.48
D033	Hexachlorobutadiene	N/A	***	***	5.6 mg/kg & meet 268.48
D035	Methyl Ethyl Ketone	N/A	***	***	36 mg/kg & meet 268.48
D038	Pyridine	N/A	***	***	16 mg/kg & meet 268.48

LDR REPORT TREATABILITY GROUP DATA SHEET

EPA/ State Number	Waste Description	LDR Sub- Category*	Concentration (Typical or Range)**	Basis	LDR Treatment Concentration Standard or Technology Code
D039	Tetrachloroethane	N/A	***	***	6.0 mg/kg & meet 268.48
D040	Trichloroethylene	N/A	***	***	6.0 mg/kg & meet 268.48
D043	Vinyl Chloride	N/A	***	***	6.0 mg/kg & meet 268.48
F001	1,1,1-Trichloroethane	Spent Solvent	***	***	6.0 mg/kg
F002	Methylene Chloride	Spent Solvent	***	***	30 mg/kg
F003	Acetone & Hexone	Spent Solvent	***	***	160 mg/kg
F004	o-Cresol & p-Cresol	Spent Solvent	***	***	5.6 mg/kg
F005	Methyl Ethyl Ketone	Spent Solvent	***	***	36 mg/kg
WP01	Persistent, EHW	N/A	***	***	None (1)
WP02	Persistent, DW	N/A	***	***	N/A
WP03	Persistent, EHW	N/A	***	***	None (1)
WSC2	Solid Corrosive	N/A	***	***	Remove solid-acid characteristic
WT02	Toxic, DW	N/A	***	***	N/A

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

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

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

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

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

- List:
- No LDR treatment required (e.g. TRUM waste destined for WIPP, exclusion, etc.)
- None (i.e. all constituents/waste numbers of this waste stream still require treatment).

LDR REPORT TREATABILITY GROUP DATA SHEET

3.3.4 Does this waste stream contain PCBs?

Yes No Unknown

If no or unknown, skip to Section 3.3.5.

3.3.4.1 Is waste stream subject to TSCA regulations for PCBs?

Yes No Unknown

3.3.4.2 Indicate the PCB concentration range.

< 50 ppm ≥ 50 ppm Unknown

3.3.5 What is the confidence level for the regulated constituents?

Low Medium High

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

The subject waste has been characterized as prescribed in the waste profiles for the various WSRds listed in Section 1.2 of this data sheet. Some of the waste does contain PCBs subject to TSCA regulation. If a waste package is regulated by TSCA, it is identified as such on the storage records. In Section 3.3.4.2 of this data sheet, the PCB concentration range is marked as "Unknown" because concentrations occur below and above 50 ppm. In Section 3.3.1 of this data sheet, waste may be either wastewater or non-wastewater at the point of generation but is most likely to be non-wastewater at the time of shipment.

4.0 WASTE STREAM TREATMENT

4.1 Is this waste stream currently being treated?

Yes No

If yes, provide details:

Some of the contents of individual waste containers will be treated to meet acceptance criteria for other Hanford Site waste management units and/or to allow for bulking and absorbing larger volumes of waste into each container. Occasionally the results of this treatment produce waste that meets all LDR treatment standards.

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

- No treatment required (skip to Section 5.0)
 Treating or plan to treat on site
 Treating or plan to treat off site
 Treatment options still being assessed

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

Some of the individual wastes will be treated to meet acceptance criteria for other Hanford Site waste management units. Occasionally the results of this treatment will be a waste that meets all LDR treatment standards.

LDR REPORT TREATABILITY GROUP DATA SHEET

4.4 Treatment schedule information:

Treatment will be performed in the 325 Hazardous Waste Treatment Units before shipment to CWC for further treatment and/or disposal. Waste treatment done at the HWTU is typically done on an as needed basis to facilitate transfer to CWC. In addition, treatment is anticipated to be performed as necessary to support the results of the M-091 TPA dispute resolution.

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

Milestone Number	Due Date
M-020-20	06/30/1992

4.6 Proposed new Tri-Party Agreement treatment milestones:

See Section 4.4.

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

Yes No Unknown

If yes, describe: Waste treatment techniques are sometimes chosen due to external requirements. Where alternate treatment methods are considered, these are evaluated in accordance with PNNL's Waste Minimization and Pollution Prevention management standards to incorporate pollution prevention into daily activities. The standards are based on PNNL's environmental policy and Pollution Prevention Plan, regulatory and contract requirements, and objectives set in PNNL's Environmental Management System.

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

N/A

4.9 Key Assumptions:

N/A

5.0 WASTE STREAM DISPOSAL

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

Mixed waste from PNNL (treated or untreated) is transferred to CWC for storage prior to M-91 treatment.

LDR REPORT WASTE LOCATION-SPECIFIC DATA SHEET

1.0 WASTE STREAM IDENTIFICATION AND SOURCE

1.1 **Unit/Plant name:** 325 HWTU **Waste Stream:** 325 HWTU
Treatability Group Name: 325 HWTU

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

Other waste streams that may be shipped under the following current profiles and may be stored at 305B include:
PNNL-400-0001-00, PNNL-401-0001-00, PNNL-402-0001-00, PNNL-403-0001-00, PNNL-405-0001-00,
PNNL-404-0001-00, PNNL-420-0001-00, PNNL-421-0001-00, PNNL-422-0001-00, PNNL-521-0001-00,
PNNL-523-0001-00, PNNL-524-0001-00, PNNL-525-0002-00, PNNL-525-0003-00, PNNL-627-0001-01,
PNNL-627-0004-00, PNNL-627-0007-00, PNNL-647-0001-00, PNNL-647-0004-00, PNNL-647-0005-00,
PNNL-800-0005-00, PNNL-820-0001-00, PNNL-822-0001-01, PNNL-830-0001-00, PNNL-923-0001-00,
PNNL-930-0002-00, PNNL-505-0001-00, PNNL-505-0002-00, PNNL-500-0002-00, PNNL-501-0001-00,
PNNL-503-0001-00, PNNL-504-0001-00.

1.3 **Waste stream source information**

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

Subject waste was generated from PNNL laboratory and facility operations.

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

Waste is continually generated from routine operations at PNNL.

1.3.3 **Source of the regulated constituents:**

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

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

Wastes are characterized as specified in PNNL Waste Stream Profiles.

1.3.5 **Additional notes:**

The waste profile numbers listed in 1.2 represent all mixed waste profiles that PNNL is approved to ship under.

2.0 WASTE STREAM STORAGE, INVENTORY, AND GENERATION INFORMATION

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

2.1 **Current storage method**

- | | | |
|---|---|---|
| <input type="checkbox"/> Container (pad) | <input checked="" type="checkbox"/> Container (covered) | <input type="checkbox"/> Container (retrievably buried) |
| <input type="checkbox"/> Tank | <input type="checkbox"/> DST | <input type="checkbox"/> SST |
| <input type="checkbox"/> Other (explain): | | |

LDR REPORT WASTE LOCATION-SPECIFIC DATA SHEET

2.1.1 How was the waste managed prior to storage?

The waste was managed in 90 day or satellite accumulation areas prior to being transferred to this storage facility.

2.1.2 Timeframe when waste was placed to storage?

The waste inventoried below and currently stored at 325 building were placed in storage between 9/14/99 and 1/7/03.

2.2 Storage inventory locations:

Building/Room Number	Number of Containers/Tanks
325/520	41
325/528	254
325/524	221

2.3 Current stored inventory for this stream.

Total volume (cubic meters): 8.147

Date of inventory values: 01/10/2003

Comments on waste inventory:

None.

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

Yes No

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

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

Bases and assumptions used:

N/A

2.5 Planned storage areas for this waste:

Current Location CWC DST

Other Area(s) (list):

None

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

Year	m ³	and/or	kg
2003	13.700		
2004	16.300		
2005	16.300		
2006	16.300		
2007	16.300		
Total	78.900		

LDR REPORT WASTE LOCATION-SPECIFIC DATA SHEET

2.7 DOE Storage Compliance Assessment information:

Assessment has been completed.

Document Number	Date
A&E-DWR-02-004	05/31/2002

Assessment has been scheduled. Scheduled date:

Other. Explain:

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

Milestone Number	Due Date
M-047-00	02/28/2018
M-091-11-T01	12/31/2000
M-091-15	06/30/2008

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

Yes No

If yes, summarize releases and quantities and provide date:

N/A

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

Yes No

If yes, explain: N/A

2.11 Characterization

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

Yes No Unknown at this time

Milestone Number	Due Date
N/A	N/A

If yes or unknown, comment on characterization for storage.

PNNL Waste Management requests full chemical and radiological characterization from the laboratory generators prior to receiving the waste into the HWTU.

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

Yes No Unknown at this time

Milestone Number	Due Date
N/A	N/A

LDR REPORT WASTE LOCATION-SPECIFIC DATA SHEET

If yes or unknown, comment on characterization for treatment.

N/A

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

Yes No Unknown at this time

Milestone Number	Due Date
N/A	N/A

If yes or unknown, comment on characterization for disposal.

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

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

The inventory information is for what is currently in storage in the specified HWTU Location(s). This includes current generation and/or M-91 wastes. The projections in Section 2.6 of this data sheet include current generation and M-091 volumes.

3.0 WASTE MINIMIZATION

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

Yes No

If yes, provide date assessment conducted: N/A

If yes, provide document number or other identification:

N/A

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

To be determined.

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

Laboratory staff routinely evaluate their processes to determine if less reagent volume or a less hazardous reagent can be used in the process. The Radioactive Waste Operations Group routinely assesses the possibility of bulking and absorbing wastes to minimize the number of containers shipped to CWC. Additionally, some tank waste contaminated debris streams have been compacted to minimize the number of containers shipped to CWC.

3.3 Waste minimization schedule

3.3.1 Reduction achieved during calendar year 2002 (volume or mass)

2,000 m³

LDR REPORT WASTE LOCATION-SPECIFIC DATA SHEET

3.3.2 Projected future waste volume reductions

Year	m ³	and/or	kg
2003	6.000		
2004	6.000		
2005	6.000		
2006	6.000		
2007	6.000		
Total	30.000		

3.3.3 Bases and assumptions used in above estimates:

Reductions indicated reflect only those achieved prior to shipment to CWC, not minimization efforts done in the laboratory prior to packaging. Thus the reduction is in shipping volume, not generation volume. The reductions projected are based upon historical reductions achieved through unit operations.

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