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Revision 0

part 1 of 2

# Calendar Year 2003 Hanford Site Mixed Waste Land Disposal Restrictions Report



April 2004

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

**United States Department of Energy**
**P.O. Box 550**
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Project Hanford Management Contractor for the
U.S. Department of Energy under Contract DE-AC06-96RL13200

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# PRIMARY DOCUMENT STATEMENT

## CALENDAR YEAR 2003 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 _____ 2004.

J. B. Hebdon, Director
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## FIGURES, VOLUME 1



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# ACRONYMS

| | |
|---|---|
| AEA | *Atomic Energy Act* |
| AOC | area of contamination |
| BDAT | best demonstrated available technology |
| BHI | Bechtel Hanford, Inc. |
| CDI | Canyon Disposition Initiative |
| CERCLA | *Comprehensive Environmental Response, Compensation, and Liability Act of 1980* |
| 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 | *Federal Facilities Compliance Act* |
| 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 |
| PEcoS | Pacific EcoSolutions |
| 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 | *Resource Conservation and Recovery Act of 1976* |
| 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 | *Hanford Federal Facility Agreement and Consent Order* (TPA) |
| TRU | transuranic (waste) |
| TRUM | transuranic mixed (waste) |
| TRUSAF | 224-T Transuranic Waste Storage and Assay Facility |
| TSCA | *Toxic Substances Control Act of 1976* |
| TSD | treatment, storage, and/or disposal |
| | |
| WAC | *Washington Administrative Code* |
| 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 2003 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. 2003) Milestone M-26-01N, 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, 2003, to December 31, 2003.

## 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, a 90-day accumulation area, or CERCLA area of contamination.

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. 2004). If any storage of the mixed waste occurs, the mixed waste must be reported.

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

Appendix B provides location-specific data sheets for each waste stream, sorted by treatability group. Each location-specific data sheet was completed by staff knowledgeable of the waste stream. Mixed waste currently in satellite accumulation areas, in 90-day accumulation areas, or in CERCLA areas of contamination 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.

No treatability groups have been added to this year's report. Two treatability groups, the 618-4 DU/Oil Drums and the TRUM-PCB, have been deleted from this year's report. Detail on treatability groups is found in Table 1-1, Table 2-1, Table 2-2, as well as the treatability group data sheets in Appendix B.

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

Table 1-1. Treatability Groups.

| 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. |
| B Plant Cell 4 | Drums of WESF hot cell maintenance waste placed in storage from 1988 to 1997. |

Table 1-1. Treatability Groups.

| Treatability Group Name | Major Waste Sources |
|---|---|
| B Plant Containment Building | Process jumpers and equipment from B Plant Complex processes stored on the canyon deck and in process cells. |
| Cesium and Strontium Capsules | CsCl salt and $SrF_2$ salt reclaimed from 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 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 as well as MLLW highly radioactive waste. |
| 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 various locations. |
| PUREX Plant | Chromium-contaminated debris from E-Cell floor currently stored in F-Cell of the PUREX Containment Building. |

Table 1-1. Treatability Groups.

| Treatability Group Name | Major Waste Sources |
|---|---|
| PUREX Storage Tunnels[1] | Equipment and waste containing mercury, lead, silver, cadmium, chromium, barium, and mineral oil from PUREX and other processes. |
| Purgewater | Purgewater generated from pump-and-treat operations, well drilling, groundwater sampling, and well maintenance from across the Hanford Site. |
| SST Waste | Widely varying waste from chemical separations processes and related support facilities operating between 1944 and 1980. |
| TRUM-CH | 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-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. PNNL mixed waste storage/treatment has been consolidated into the 325 HWTUs |
| 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. |
| 618-4 DU/Oil Drums | 618-4 Burial Ground | Waste has been treated off-site. Anticipate solid phase waste will be returned for direct disposal at ERDF during Calendar Year 2004. Liquid phase waste will be disposed at a commercial facility. |
| TRUM-PCBs | Various Hanford Site locations. | Waste in this treatability group has been rolled into the other three TRUM treatability groups based on the M-91 settlement agreement. |

## 1.2 STORAGE REPORT DATA COLLECTION PROCESS

A central database was used for managing data contained in 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 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.

- All SST tank waste is managed as high level. For treatment and disposal, some SST waste maybe designated as transuranic.

- 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 and retrieval programs 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 and 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.

# 2.0 SUMMARY STORAGE DATA

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

## 2.1 SUMMARY INVENTORY OF WASTE TREATMENT GROUPS AND FORECAST GENERATION RATES

The volume of mixed waste currently in storage and the volume projected to be generated 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.

The Waste Treatment Plant is a new TSD unit being constructed to treat DST Waste and SST Waste. Mixed waste is not projected to be generated at the Waste Treatment Plant within the 5-year forecasting window because WTP commissioning is not scheduled to commence per TPA milestones M-47-04 and M-62-09 until CY 2009. Per agreement with Ecology at the January 20, 2004, LDR Project Manager Meeting, location-specific data sheets and/or treatability group data sheets for the Waste Treatment Plant will not be prepared for the CY 2003 LDR Report. In addition to the Waste Treatment Plant, mixed waste may be generated from treatment of SST and DST tank waste by supplemental technologies currently under evaluation. Supplemental technology data is anticipated in CY 2005 under TPA milestone M-62-08.

## 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. 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 requiring treatment 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 2004 ($m^3$)[2] | Generation Projection 2005 ($m^3$)[2] | Generation Projection 2006 ($m^3$)[2] | Generation Projection 2007 ($m^3$)[2] | Generation Projection 2008 ($m^3$)[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) | 23 | 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 | 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: PNNL-501-0001-02; PNNL-505-0001-03; PNNL-800-0001-02; PNNL-930-05; and PNNL-931-04. | 7.9 | 14 | 16 | 16 | 16 | 16 |
| 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 |
| 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 |

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

| Treatability Group Name | Description[1] | Current Inventory ($m^3$)[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] | Generation Projection 2008 ($m^3$)[2] |
|---|---|---|---|---|---|---|---|
| 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. | 93,000 | 83 | 68 | 38 | 38 | 38 |
| ERDF—Treatment | This waste stream reflects mixed waste that requires treatment before disposal at ERDF. The waste is stored at the operable unit/facility, and is transferred to ERDF where the waste is treated and disposed. | 80 | 22,000 | 22,000 | 22,000 | 22,000 | 22,000 |
| HSTF | Residual heel content remaining from REDOX Process. | 2.1 | 0 | 0 | 0 | 0 | 0 |
| LERF/ETF Liquid Waste | CERCLA and RCRA aqueous wastewater. | 47,000 | 89,000 | 94,000 | 88,000 | 84,000 | 82,000 |
| MLLW-01 – LDR Compliant Waste | WSRds: BLS, 930, 931, EH3, EHM, EHR, EHB, EHS; 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). | 650 | 34 | 51 | 76 | 51 | 34 |

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

| Treatability Group Name | Description[1] | Current Inventory ($m^3$)[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] | Generation Projection 2008 ($m^3$)[2] |
|---|---|---|---|---|---|---|---|
| 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, EH4, EHP, IXI, LPI, PAI, SSA, 420, 421, 422, 425, 426, 428, 521, 523, 524, 525, 900, 901, 902, 903, 904. This waste consists of many different inorganic solids (e.g., particulates, absorbed liquids, sludges, resins, soils) and labpacks that are contaminated with regulated metals and other inorganics. This waste treatability group does not include hazardous debris other than incidental debris material commingled with the non-debris. The inventory is primarily from the closure of the 183-H Solar Evaporation Basins. | 2,100 | 8.6 | 15 | 11 | 14 | 5.9 |
| 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, IDW, IXO, LPA, LPO, PAO, SOC, SOE, SOW, TFS, TSC, 300, 301, 302, 303, 304, 305, 310, 311, 315, 320, 321, 330, 331, 400, 401, 402, 403, 404, 405, 406, 407, 408, 409, 40A, 40B, 427, 429, 430, 431, 432, 43C, 45A, 47A, 500, 501, 502, 503, 504, 505, 506, 507, 50A, 50B, 50C, 520, 522, 52A, 53A, 700, 701, 720, 721, 90A, 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. | 976 | 120 | 190 | 210 | 250 | 390 |

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

| Treatability Group Name | Description[1] | Current Inventory ($m^3$)[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] | Generation Projection 2008 ($m^3$)[2] |
|---|---|---|---|---|---|---|---|
| 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: BLD, DBR, UUU, , 334, 600, 601,603, 605, 606, 607, 60A, 60B, 620, 621, 622, 625, 626, and 627. | 450 | 470 | 680 | 800 | 950 | 1,400 |
| 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. | 85 | 97 | 120 | 140 | 170 | 230 |
| 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, 802, and 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. | 23 | 2.4 | 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. | 14 | 4.6 | 0.64 | 0.32 | 0.42 | 0.02 |

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

| Treatability Group Name | Description[1] | Current Inventory ($m^3$)[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] | Generation Projection 2008 ($m^3$)[2] |
|---|---|---|---|---|---|---|---|
| MLLW-07 - RH and Large Container | WSRds: DBL, HRW, 450, 550, 650. All MLLW WSRds in packages greater or equal to 10 cubic meters. All MLLW WSRds with high rad waste. 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. | 330 | 150 | 340 | 300 | 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. | 34 | 0 | 0 | 0 | 0 | 0 |
| MLLW-09 - Lead-Acid and Cadmium Batteries | BAT, 830. This waste consists of lead-acid and cadmium batteries from various onsite locations and from offsite generators. | 5.5 | 0.34 | 0.85 | 4.0 | 0.43 | 0.03 |
| 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. | 25 | 0.30 | 0.30 | 0.30 | 0.30 | 0.30 |
| 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 |

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

| Treatability Group Name | Description[1] | Current Inventory ($m^3$)[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] | Generation Projection 2008 ($m^3$)[2] |
|---|---|---|---|---|---|---|---|
| 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. | 630 | 890 | 970 | 770 | 310 | 1,200 |
| 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. | 280 | 0 | 0 | 540 | 1,500 | 1,100 |
| 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 reaearch and development laboratories. The relative waste quantity is small, because the waste matrix contains a large percentage of lead and steel shielding materials. | 50 | 3.6 | 1.0 | 1.0 | 0.51 | 0.51 |

[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 |
| BDAT | best demonstrated available technology |
| CERCLA | *Comprehensive Environmental Response, Compensation, and Liability Act of 1980* |
| CFR | Code of Federal Regulations |
| CH | contact handled |
| CSB | Canister Storage Building |
| D&D | decontamination and decommissioning |
| DST | double-shell tank |
| ERDF | Environmental Restoration Disposal Facility |
| ETF | 200 Area EffluentTreatment Facility |
| HEPA | high-efficiency particulate air |
| HLV | high-level vault |
| HWTU | Hazardous Waste Treatment Unit |
| IHLW | immobilized high-level waste |
| ILAW | immobilized low-activity waste |
| LDR | land disposal restrictions |
| LERF | Liquid Effluent Retention Facility |
| LLCE | long-length contaminated equipment |
| MLLW | mixed low-level waste |
| O/C | organic/carbonaceous |
| OU | operable unit |
| PCB | polychlorinated biphenyl |
| PNNL | Pacific Northwest National Laboratory |
| PUREX | Plutonium-Uranium Extraction (Plant) |
| RCRA | *Resource Conservation and Recovery Act of 1976* |
| REC | radiochemical engineering cell |
| REDOX | Reduction-Oxidation (Plant) |
| RH | remote handled |
| ROD | record of decision |
| SST | single-shell tank |
| TRUM | transuranic mixed |
| TSCA | *Toxic Substances Control Act of 1976* |
| WAC | *Washington Administrative Code* |
| WESF | Waste Encapsulation and Storage Facility |
| WHF | Waste Handling Facility |
| 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 2004 through 2008 ($m^3$)[1] | Planned Characterization Schedule | Treatment Process | Projected Volume to be Treated 2004 through 2008 ($m^3$)[1] | Disposal Location |
|---|---|---|---|---|---|---|
| 221-T Containment Building | 50 | 0 | Completed. | M-091 TRUM | 0 | Not yet determined. |
| 221-T Tank System | 23 | 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 | Ongoing | HWTU, Commercieal - Macro, Commercial -Thermal | 80 | Mixed waste trenches. |
| 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. | Under evaluation. | 0 | HLW repository. |
| DST Waste | 93,000 | 270 | Ongoing. | WTP. | 0 | HLW- storage in onsite vaults; disposal in geologic repository. ILAW – onsite disposal. |
| ERDF—Treatment | 80 | 110,000 | Ongoing. | ERDF treatment. | 110,000 | ERDF. |
| HSTF | 2.1 | 0 | To be determined through future negotiations. | 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 2004 through 2008 ($m^3$)[1] | Planned Characterization Schedule | Treatment Process | Projected Volume to be Treated 2004 through 2008 ($m^3$)[1] | Disposal Location |
|---|---|---|---|---|---|---|
| LERF/ETF Liquid Waste | 46,000 | 440,000 | Ongoing. | ETF. | 440,000 | SALDS. |
| MLLW-01 – LDR Compliant Waste | 650 | 250 | Completed | No treatment required. | No treatment required. | Mixed waste trenches and ERDF. |
| MLLW-02 - Inorganic Non-Debris | 2,100 | 55 | Proposed M-091[2] | Commercial-stabilization. | Proposed M-091[2] | Mixed waste trenches. |
| MLLW-03 - Organic Non-Debris | 980 | 1,200 | 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 | 450 | 4,300 | Proposed M-091[2] | Commercial-Thermal | Proposed M-091[2] | Mixed waste trenches. |
| MLLW-04B - Non-O/C Hazardous Debris | 85 | 760 | Proposed M-091[2] | Commercial-Macro. | Proposed M-091[2] | Mixed waste trenches. |
| MLLW-05 - Elemental Lead | 23 | 81 | Proposed M-091[2] | Commercial-Macro. | Proposed M-091[2] | Mixed waste trenches. |
| MLLW-06 - Elemental Mercury | 14 | 6.0 | Proposed M-091[2] | Commercial Amalgamation. | Proposed M-091[2] | Mixed waste trenches. |
| MLLW-07 - RH and Large Container | 327 | 1,300 | Proposed M-091[2] | M-091 MLLW. | Proposed M-091[2] | Mixed waste trenches. |
| MLLW-08 - Unique Waste | 34 | 0 | Proposed M-091[2] | Not yet determined. | Proposed M-091[2] | Mixed waste trenches. |
| MLLW-09 - Lead-Acid and Cadmium Batteries | 5.5 | 5.6 | Proposed M-091[2] | Not yet determined. | Proposed M-091[2] | Mixed waste trenches. |
| MLLW-10 - Reactive Metals | 25 | 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 2004 through 2008 ($m^3$)[1] | Planned Characterization Schedule | Treatment Process | Projected Volume to be Treated 2004 through 2008 ($m^3$)[1] | Disposal Location |
|---|---|---|---|---|---|---|
| Purgewater | 3,700 | 13,000 | Ongoing. | Solar evaporation at PSTF. | 13,000 | ERDF. |
| SST Waste | 120,000 | 0 | Ongoing. | WTP[3]. | 0[3] | HLW- storage in onsite vaults; disposal in geologic repository. ILAW – onsite disposal. |
| TRUM-CH | 630 | 4,200 | Proposed M-091[2] | WRAP Facility. | Proposed M-091[2] | WIPP. |
| TRUM-Large Box | 280 | 3,100 | Proposed M-091[2] | M-091 TRUM. | 0 | WIPP. |
| TRUM-RH | 50 | 6.7 | Proposed M-091[2] | M-091 TRUM | Proposed M-091[2] | WIPP. |

[1] Volume numbers in this table have been rounded to two significant figures.
[2] Treatment will be performed in accordance with M-091 milestones and target dates after they have been finalized.
[3] Some SSTs may classify as TRU, not high-level. If so, these would be expected to follow a different treatment path.

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

# 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 2003, no indicators requiring global actions for LDR reporting were identified.

## 3.2 ASSESSMENT SCHEDULES

In CY 2003, DOE-RL contractors performed three assessments and completed three CY 2002 assessments (3720, 324, and 327). 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 |
|---|---|---|---|
| 3720 | Not assigned | June 28, 2002 | There were no findings or observations identified. |
| 324/327 | Not assigned | August 27, 2002 | There were two findings and three observations identified (footnotes 1-5). |
| 333/314/3708 | Not assigned | March 21, 2003 | There were no findings or observations identified for the 314, 333, or 3708 buildings, however the assessment report concluded the 314 and 3708 buildings could be removed from the potential mixed waste table. |
| 300 Area General | Not assigned | September 30, 2003 | As of December 31, 2003, the assessment report was not finalized. |
| 340/340A/340B/300-RLWS | Not assigned | September 30, 2003 | As of December 31, 2003, the assessment report was not finalized. |

[1] Finding: 324 SMF Reactive Matrices not identified in CY2001 LDR Report
[2] Finding: 327 Basement Lead not identified in CY2001 LDR Report
[3] Observation : Lead in 324 SMF to be added to existing Location-Specific Data Sheet for the 324 Building under MLLW-05
[4] Observation: Shielded Glovebox in Room 3G to be deleted from the Potential Mixed Waste Table
[5] Observation: Material in SERF Cell to be added to existing Location-Specific Data Sheet for the 327 Building under MLLW-02

Table 3-2 lists the locations where DOE-RL plans to conduct assessments in CYs 2004 through 2006

Table 3-2. DOE-RL Assessments for CYs 2004 through 2006.

| Facility/Location | Start Date | Facility/Location | Start Date |
|---|---|---|---|
| K Basin East | 1st quarter CY2004 | T Plant | 3rd quarter CY2005 |
| K Basin West<br>100 Area Reactor Auxiliaries (excluding reactors) | 2nd quarter CY2004 | 200 Area General<br>1. 200 Area North<br>2. Railcar staging areas | 4th quarter CY2005 |
| 100 Area General (everything but reactors and reactor auxiliaries) | 3rd quarter CY2004 | PFP settling tanks<br>231-Z | 1st quarter CY2006 |
| SNF Complex | 4th quarter CY2004 | IMUSTs not associated with a building | 2nd quarter CY2006 |
| 2711E<br>241-CX | 1st quarter CY2005 | Heavy equipment staging area | 3rd quarter CY2006 |
| ERDF | 2nd quarter CY2005 | 3. 224-B | 4th quarter CY2006 |

The tank farm assessment program was transitioned from the U.S. Department of Energy, Office of River Protection (DOE-ORP), to CH2M HILL Hanford Group, Inc. Multiple assessments were scheduled for the tank farms in CY2004. However, to accommodate the program transition, Ecology allowed the assessments to be combined into a single effort (October 21, 2003 LDR Project Manager Meeting minutes). The assessment work was initiated in November 2003, and the final report will be submitted in CY2004.

Assessments conducted in 2002 (DOE-ORP) and 2004 (CH2M Hill) are listed in Table 3-3, along with related deficiencies. Table 3-4 shows assessments tentatively scheduled for CY 2004 through CY2006. Final assessment targets and schedules will be negotiated with Ecology following its review of the final report.

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] |
| - SST Farms: A, AX, T, TX, TY, and U<br>- DST Farms: AZ, AW<br>- Catch Tanks: UX-302A, A-350, AX-152, AZ-151 | RPP-ENV-LDR-2003 -01 | November-December 2004 | Three findings, five observations[5] |

* 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; faded labeling on secondary containers; round sheets don't address environmental postings

[4]Observation: Round sheets do not address environmental postings; 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

[5]Observations: Environmental inspections do not optimally support LDR assessment process; periodicity for certain daily inspections varies between DST and SST farms, suggesting the need for scrutiny; implementing document appears to combine requirements in some instances, which may cause confusion; procedure governing environmental "records" has not yet incorporated recently acquired facilities; issues noted with waste designation and waste segregation that suggest a need for closer scrutiny.
[5]Findings: Not managing contaminated equipment per procedure; equipment deficiencies not documented and tracked per procedure; round sheets do not implement requirements consistently.

Table 3-4. DOE-ORP Assessments for CYs 2004 through 2006.

| Facility/Location | Completion Date |
|---|---|
| 241-A-701 | 4th Quarter 2004 |
| 242-S and 242-T Evaporators[1] | 2nd 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. | |

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# 4.0 POTENTIAL STORAGE ISSUES

This section discusses issues pertaining to storage of mixed waste.

## 4.1 STORAGE CAPACITY

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

### 4.1.1 Bechtel Hanford, Inc.

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 2007, 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. The 242-A Evaporator and the 222-S Laboratory Complex were transferred to CH2M HILL during CY2003. The 222-S Laboratory Complex contains a long-term storage location.

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

CH2M HILL is evaluating the disposal of approximately 12,000 $M^3$ of SST and DST tank waste as TRU waste at WIPP. A Supplemental Analysis (SA4) has been prepared under the National Environmental Policy Act and awaiting a Record of Decision. This document assumes all SST and DST tank waste is managed as HLW until dispositioned as HLW, LLW/MLLW or TRU.

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 | 8,000 | 2007[1] |
| DST Waste | 241-AY | 7,000 | 7,000 | 2007[1] |
| DST Waste | 241-AZ | 7,000 | 4,000 | 2007[1] |
| DST Waste | 241-AW | 26,000 | 22,000 | 2007[1] |
| DST Waste | 241-AP | 35,000 | 25,000 | 2007[1] |
| DST Waste | 241-AN | 30,000 | 27,000 | 2007[1] |
| | Total | 118,000 | 93,000 | |

[1]This 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, SST System, 242-A Evaporator, and the 222-S Laboratory Complex managed by CH2M Hill, and the ERDF managed by BHI. FH transferred the 242-A Evaporator and the 222-S Laboratory Complex to CH2MHill Group during CY2003. FH long-term storage areas include mixed waste at the T Plant Complex, B Plant Complex, the PUREX Plant and the CWC. The waste is stored in the B Plant Complex and the PUREX Plant 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.

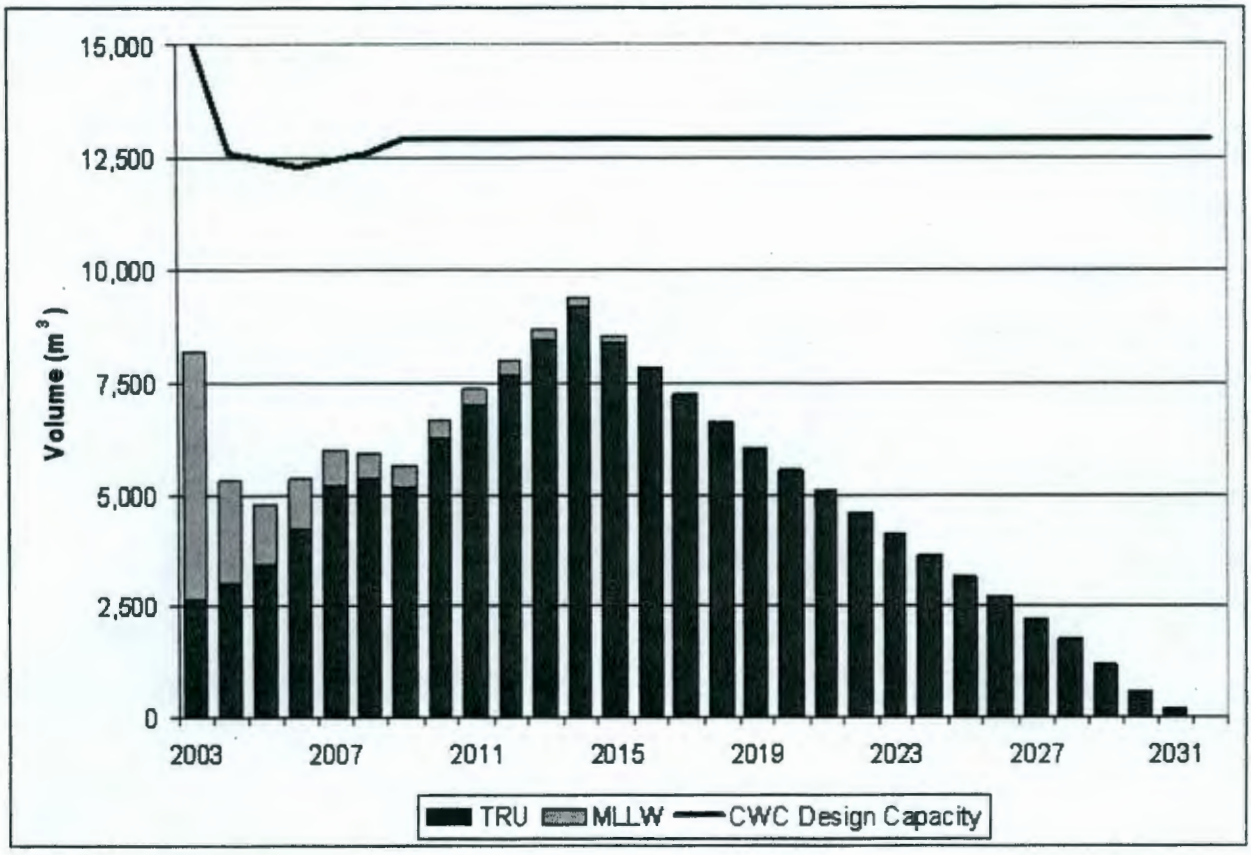
The resulting estimates are used to make decisions concerning future TSD needs. For example, if the amount of waste in storage was projected to exceed the current capacity, planning for additional storage capacity could begin and/or changes could be made to the baseline treatment and disposal schedules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

must leave its 300 Area facilities (including the 325 HWTUs) to support expedited River Corridor cleanup.

## 4.2 ISSUES AND THEIR RESOLUTION

No storage issues were identified for CY 2003 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 2003).

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 $m^3$ to 3,800 $m^3$.

These tanks contain waste that was placed into the system between 1944 and 1980. The waste was generated as a byproduct of processing spent nuclear fuel to recover plutonium, uranium, and neptunium, and consists of radioactive and chemically hazardous waste. Except for cooling water, nothing has been added to the SSTs since 1980. Table 5-2 lists the Hanford Site SST System releases reported in HNF-EP-0182, Rev 189 "Waste Tank Summary Report for Month Ending December 31, 2003." 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 189.

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 1,022 | 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 |
| 241-B-110 | 38 | 1981 | 241-T-101 | 28 | 1992 |

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

| Tank | Volume ($m^3$) | Leak reported | Tank | Volume ($m^3$) | Leak reported |
|---|---|---|---|---|---|
| 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] 2,292 to 3,426 $m^3$ | | | | | |

[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 $m^3$ to 3,000 $m^3$. 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 $m^3$ (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 $m^3$.

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

# 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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# 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.

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

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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)<br>IV.3.A.1, pg 16 (FD)<br>IV.3.A.1.a, pg 16 (FD)<br>IV.3.A.1, pg 17 (FD)<br>IV.3.A.3, pg 18 (FD)<br>IV.3.B.a, pg 19 (FD)<br>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)<br>IV.3.A.1, pg 16 (FD)<br>IV.3.A.1.a, pg 16 (FD)<br>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.<br>**(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)<br>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)<br>IV.3.A.1, pg 16 (FD)<br>IV.3.A.1.a, pg 16 (FD)<br>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)<br>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)<br>IV.3.A.1.c, pg 16 (FD) | Source of the hazardous constituents | **(STR)**: 1.3 and 2.12 (LSDS) |
| 8 | 1.a (1990)<br>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)<br>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)<br>IV.3.A.1.d, pg 16 (FD) | Radioactivity type | **(STR)**: 3.1.1 and 3.1.2 (TGDS). |
| 11 | 1.a (1990)<br>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)<br>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)<br>IV.3.A.1.g, pg 16 (FD)<br>IV.3.A.1, pg 17 (FD) | Physical location | **(STR)**: 2.1 and 2.2 (LSDS) |
| 14 | 1.c (1990)<br>IV.3.A.1.g, pg 16 (FD) | Method of storage | **(STR)**: 2.1 and 2.2 (LSDS). |
| 15 | 1.c (1990)<br>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)<br>IV.3.A.1.h, pg 16 (FD)<br>IV.3.A.2, pg 17 (FD)<br>IV.3.A.2, pg 17 (FD)<br>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.<br>**(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. |

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)<br>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)<br>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)<br>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)<br>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)<br>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)<br>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)<br>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)<br>IV.3.A.3.a, pg 19 (FD)<br>IV.3.A.3.a, pg 19 (FD) | Plan and schedule to characterize all waste | **(STR)**: 2.11 (LSDS).<br>**(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. |

Table A-1. Land Disposal Restrictions Requirements.

| Item [1] | Section ID[2] | Requirement[3] | Location of information[4] |
|---|---|---|---|
| 29 | 3 (1990)<br>IV.3.A.3, pg 19 (FD) | Report characterization results to EPA and Ecology | **(STR)**: 3.0 (TGDS), and 2.11 (LSDS);<br>**(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.<br>**(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).<br>**(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.<br>**(STR)**: 4.2 and 4.3 [also 3.3.2] (TGDS).<br>**(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.<br>**(STR)**: 4.3 (TGDS).<br>**(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.<br>**(STR)**: 4.2 and 4.3 [also 3.3.2] (TGDS).<br>**(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.<br>**(STR)**: 4.3 (TGDS).<br>**(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.<br>**(STR)**: 4.3 (TGDS).<br>**(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).<br>**(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).<br>**(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).<br>**(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)<br>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).<br>**(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)<br>IV.3.A.3, pg 18 (FD)<br>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).<br>**(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).<br>**(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).<br>**(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).<br>**(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. |

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)<br>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.<br>**(C&T):** Section 3.3.1. |
| 68 | IV.3.B.b, pg 19 (FD)<br>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.<br>**(STR):** Section 1.4<br>**(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. |

[1]Item number supplied for the convenience of the reader.

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

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

[4]The information in this column refers to the location of the information within this annual LDR report; 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)

| | |
|---|---|
| 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 | plutonium-uranium extraction |
| RCRA | *Resource Conservation and Recovery Act of 1976* |
| STP | Site Treatment Plan |
| STR | Storage Report |
| Tri-Party Agreement | *Hanford Federal Facility Agreement and Consent Order* |
| TGDS | treatability group data sheet |
| TSD | treatment, storage, and/or disposal |
| WAC | *Washington Administrative Code* |
| WRAP | 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

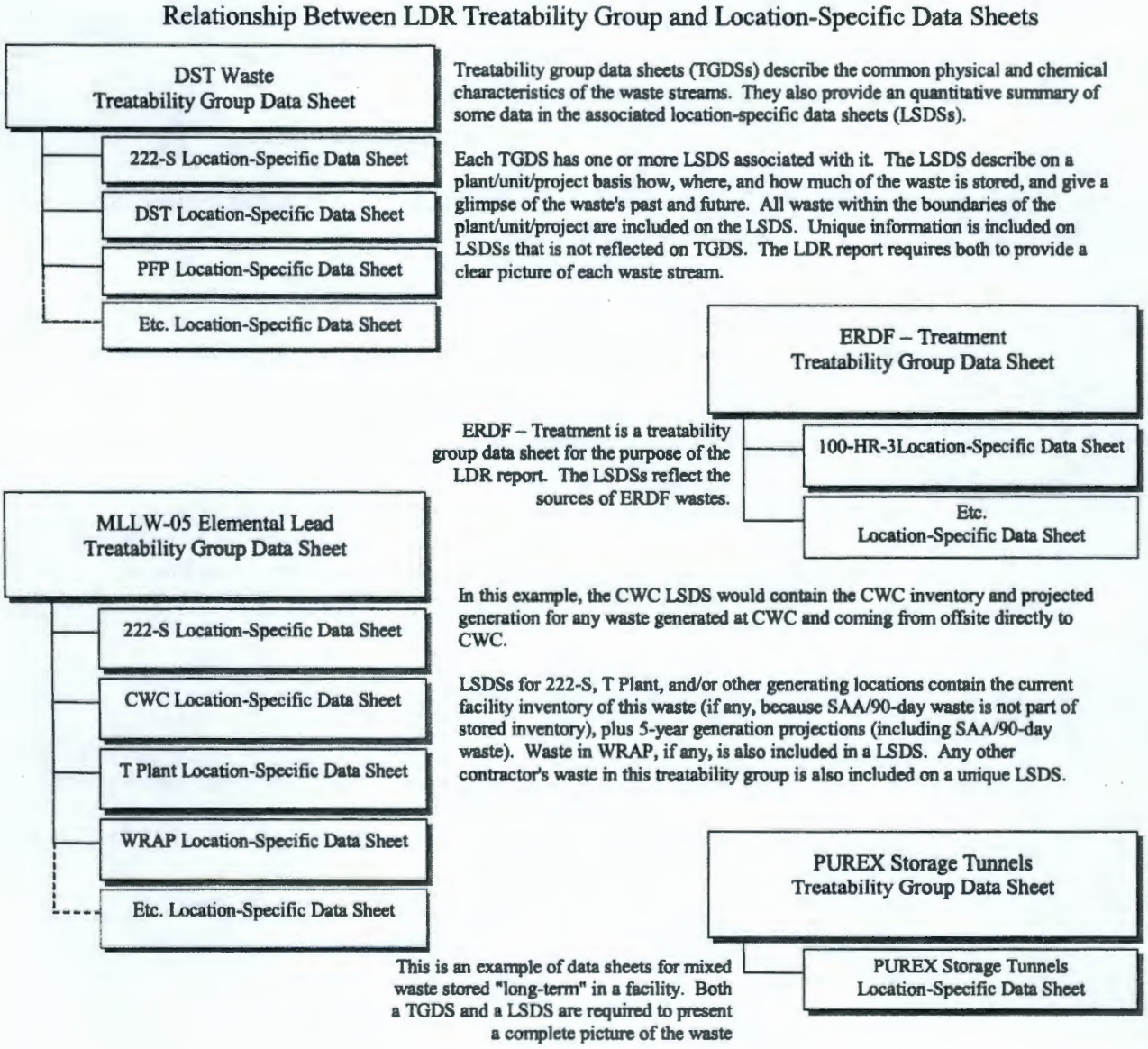


Figure B-1. Example Relationship Between Location-Specific and Treatability Group Data Sheets.

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 2003, 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 $m^3$ and/or kg: Also automatically summed from individual location-specific data sheets contributing to the treatability group data sheet.

**3.0 Waste Stream Characterization**

**3.1 Radiological characteristics**

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

**3.1.2 Handling (as package contents would need to be handled during treatment).** Lists two options, one of which must be selected. The choice differentiates between contact- and remote-handled waste types. The choice made reflects the waste as if no longer packaged for storage, but

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

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

**3.2 Physical form**

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

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

**3.3 Regulated constituents and wastewater/nonwastewater category**

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

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

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

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

- The "LDR subcategory" indicates any applicable subcategory of the assigned waste number (e.g., "corrosive characteristic waste" or "radioactive high level waste" for D002). The LDR subcategory applies only to D001 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" or management in a CERCLA area of contamination is not considered "storage".

**1.0 Waste Stream Identification and Source**

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

**1.2** **Applicable profile number(s) for this waste stream:** Lists waste profile numbers applicable to the waste if any. Waste profile numbers are used principally for waste that is transferred to the CWC or that is received from 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, 90-day accumulation areas, or CERCLA area of contamination, skip to Section 2.6. The comment field in section 2.3 can be used if necessary.

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

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

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

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

2.3 **Current stored inventory for this stream**. Volume of waste (cubic meters) and reporting date in mm/dd/yyyy format of the volume is supplied. The default reporting date is December 31, 2003. In some cases, the date shown will be different if the volume is known only for another date. The volume information for each location-specific data sheet is summed to the reported volume for its associated treatability group data sheet. Note that for reporting of waste in accumulation areas or CERCLA areas of contamination, the answer provided here is "N/A" or zero. Accumulated waste or CERCLA areas of contamination volume is reported only in Section 2.6 of the location-specific data sheet as an estimated generation projection, as applicable. Note also that the volume will display three decimal points in the database. If necessary, comments on waste inventory can be entered in this section even if the waste is managed in a satellite accumulation area, 90-day accumulation area, or a CERCLA area of contamination. If there are no comments, enter "None."

2.4 **Is storage capacity at this location potentially an issue for this waste stream?** The two multiple choice options are "yes" and "no." **If "yes," what is the total estimated storage capacity?** Self-explanatory. Do not answer this question when no is selected, "N/A" will be displayed. **When is this capacity expected to be reached?** Self-explanatory. Do not answer this question when no is selected, "N/A" will be displayed. **Bases and assumptions used:** Lists any bases and assumptions used in estimating storage capacity limitations. Note: For waste reported in accumulation areas or CERCLA areas of contamination, the answer provided here is "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 12/31/03, or will remain in its current location for a finite period of time, the "current location" box in addition to any other known planned storage location indicates where the waste is intended to be stored. Note: For waste reported in accumulation areas or CERCLA areas of contamination, an answer can be provided here but is not required.**2.6 Estimated generation projection by calendar year (includes waste in satellite accumulation areas, 90-day accumulation areas, or CERCLA areas of contamination):** Lists the estimated volume ($m^3$) or mass (kg) of the mixed waste or matrices projected to be generated as mixed waste in the next 5 years. When a volume is entered, the mass can be left blank. Waste volumes in satellite accumulation areas, 90-day accumulation area, or CERCLA areas of contamination at the end of the calendar year are reported in a location-specific data sheet for the first year's forecast. Note that the volume will display three decimal points.

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

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

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

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

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

Answer the question "yes" if any information is needed for any parameter or aspect to allow treatment of the mixed waste. If the answer is Yes, an explanation is required in the comment field. The explanation will reference to the milestone table, make reference to an agreement to obtain the information, reference active negotiations addressing the commitment, include a commitment to obtain the information, or the text will describe why a commitment is not necessary. Refer to the example circumstances in 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 ($m^3$) or mass (kg). The database will automatically add the individual years' entries to supply the location-specific data sheet total.

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

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| | LLBG | TRUM Retrieval Boxes | B-695 |
| TRUM - RH | | | B-699 |
| | 325 HWTU | TRUM-RH | B-703 |
| | CWC | RH TRUM | B-707 |

# 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)**

647

## 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-specfic data sheets for this treatability group].**

| Year | $m^3$ | and/or | kg |
|---|---|---|---|
| 2004 | 0.000 | | |
| 2005 | 0.000 | | |
| 2006 | 0.000 | | |
| 2007 | 0.000 | | |
| 2008 | 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, canyon deck and process cell cleanout continues, or in support of other missions.

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

| Milestone Number | Due Date |
|---|---|
| M-091-01 | 06/30/2012 |
| M-091-05-T01 | 12/31/2002 |
| M-091-15 | 06/30/2008 |

# 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: 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

**Treatabilitiy Group Name:** 221-T Containment Building

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

N/A

1.3 **Waste stream source information**

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

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

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

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

1.3.3 **Source of the regulated constituents:**

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

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

Process knowledge.

1.3.5 **Additional notes:**

None.

## 2.0 WASTE STREAM STORAGE, INVENTORY, AND GENERATION INFORMATION

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

2.1 **Current storage method**

☐ Container (pad) ☐ Container (covered) ☐ Container (retrievably buried)

☐ Tank ☐ DST ☐ SST

☒ Other (explain): 221-T Containment Building in the T Plant Complex.

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

Stored on the canyon deck, railroad tunnel, or in process cells (process cells 7L, 13R, and 17R).

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 (7L, 13R, 17R), deck, RR |

**2.3 Current stored inventory for this stream.**

Total volume (cubic meters): 50.000

Date of inventory values: 12/31/2003

Comments on waste inventory:

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

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

☐ Yes ☒ No

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

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

Bases and assumptions used:

N/A

**2.5 Planned storage areas for this waste:**

☒ Current Location ☐ CWC ☐ DST

☐ Other Area(s) (list):

☐ None

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

| Year | $m^3$ | and/or | kg |
|---|---|---|---|
| 2004 | 0.000 | | |
| 2005 | 0.000 | | |
| 2006 | 0.000 | | |
| 2007 | 0.000 | | |
| 2008 | 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 dnagerous waste designation is adequate to store waste for long-term.

## 3.0 WASTE MINIMIZATION

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

☐ Yes ☒ No

If yes, provide date assessment conducted: N/A

If yes, provide document number or other identification:

N/A

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

N/A

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

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

**3.3 Waste minimization schedule**

**3.3.1 Reduction achieved during calendar year 2003 (volume or mass)**

0.000 m3

**3.3.2 Projected future waste volume reductions**

| Year | $m^3$ | and/or | kg |
|---|---|---|---|
| 2004 | 0.000 | | |
| 2005 | 0.000 | | |
| 2006 | 0.000 | | |
| 2007 | 0.000 | | |
| 2008 | 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): 23.000

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

| Year | $m^3$ | and/or | kg |
|---|---|---|---|
| 2004 | 0.000 | | |
| 2005 | 0.000 | | |
| 2006 | 0.000 | | |
| 2007 | 0.000 | | |
| 2008 | 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:**

To be determined.

**4.4 Treatment schedule information:**

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

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

| Milestone Number | Due Date |
|---|---|
| N/A | N/A |

# LDR REPORT TREATABILITY GROUP DATA SHEET

**4.6 Proposed new Tri-Party Agreement treatment milestones:**

None.

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

☐ Yes ☐ No ☒ Unknown

If yes, describe: 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 has been accomplished through the T Plant Complex Part B workshop/negotiations with Ecology and documented in "Hanford Facility Dangerous Waste Permit Application, T Plant Complex," DOE/RL-95-36, Revision 1.

## 5.0 WASTE STREAM DISPOSAL

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

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

# LDR REPORT WASTE LOCATION-SPECIFIC DATA SHEET

## 1.0 WASTE STREAM IDENTIFICATION AND SOURCE

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

**Treatabilitiy Group Name:** 221-T Tank System

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

None.

1.3 **Waste stream source information**

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

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

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

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

1.3.3 **Source of the regulated constituents:**

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

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

Process knowledge, analytical data.

1.3.5 **Additional notes:**

None.

## 2.0 WASTE STREAM STORAGE, INVENTORY, AND GENERATION INFORMATION

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

2.1 **Current storage method**

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

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

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

# LDR REPORT WASTE LOCATION-SPECIFIC DATA SHEET

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

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

**2.2 Storage inventory locations:**

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

**2.3 Current stored inventory for this stream.**

Total volume (cubic meters): 23.000

Date of inventory values: 12/31/2003

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 |
|---|---|---|---|
| 2004 | 0.000 | | |
| 2005 | 0.000 | | |
| 2006 | 0.000 | | |
| 2007 | 0.000 | | |
| 2008 | 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.

**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. 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 2003 (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 |
|---|---|---|---|
| 2004 | 0.000 | | |
| 2005 | 0.000 | | |
| 2006 | 0.000 | | |
| 2007 | 0.000 | | |
| 2008 | 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-specfic data sheets for this treatability group].**

| Year | $m^3$ | and/or | kg |
|---|---|---|---|
| 2004 | 0.000 | | 0.000 |
| 2005 | 0.000 | | 0.000 |
| 2006 | 0.000 | | 0.000 |
| 2007 | 0.000 | | 0.000 |
| 2008 | 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

**Treatabilitiy Group Name:** 222-S T8 Tunnel

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

None.

**1.3 Waste stream source information**

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

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

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

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

**1.3.3 Source of the regulated constituents:**

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

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

Approval of waste entering 219-S WHF is in accordance 222-S Waste Analysis Plan (WAP), 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: 12/31/2003

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): 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 |
|---|---|---|---|
| 2004 | 0.000 | | 0.000 |
| 2005 | 0.000 | | 0.000 |
| 2006 | 0.000 | | 0.000 |
| 2007 | 0.000 | | 0.000 |
| 2008 | 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 2003 (volume or mass)**

0.000 m3

**3.3.2 Projected future waste volume reductions**

| Year | $m^3$ | and/or | kg |
|---|---|---|---|
| 2004 | 0.000 | | 0.000 |
| 2005 | 0.000 | | 0.000 |
| 2006 | 0.000 | | 0.000 |
| 2007 | 0.000 | | 0.000 |
| 2008 | 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 |
|---|---|---|---|
| 2004 | 0.000 | | |
| 2005 | 0.000 | | |
| 2006 | 0.000 | | |
| 2007 | 0.000 | | |
| 2008 | 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:**

Unknown at this time.

## 5.0 WASTE STREAM DISPOSAL

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

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

# LDR REPORT WASTE LOCATION-SPECIFIC DATA SHEET

## 1.0 WASTE STREAM IDENTIFICATION AND SOURCE

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

**Treatabilitiy Group Name:** 241-CX Tank System

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

N/A

**1.3 Waste stream source information**

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

241-CX-70, -71, and -72 were used to store process waste from REDOX, PUREX, and Strontium Semiworks Complex.

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

Tanks were in operation beginning in early 1950's. On December 21, 1991, the remaining waste in Tank 241-CX-70 was placed in containers and transferred to 224-T TRUSAF and then Central Waste Complex. The tank was dried and is considered empty. 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**

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

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

Waste was placed directly into storage from operations.

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

Waste was placed in storage between 1950 and 1967. Grout was added to the CX-72 tank in 1986.

# LDR REPORT WASTE LOCATION-SPECIFIC DATA SHEET

**2.2 Storage inventory locations:**

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

**2.3 Current stored inventory for this stream.**

Total volume (cubic meters): 3.000

Date of inventory values: 12/31/2003

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 |
|---|---|---|---|
| 2004 | 0.000 | | |
| 2005 | 0.000 | | |
| 2006 | 0.000 | | |
| 2007 | 0.000 | | |
| 2008 | 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.

# 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 2003 (volume or mass)**

0.000 m3

**3.3.2 Projected future waste volume reductions**

| Year | $m^3$ | and/or | kg |
|---|---|---|---|
| 2004 | 0.000 | | |
| 2005 | 0.000 | | |
| 2006 | 0.000 | | |
| 2007 | 0.000 | | |
| 2008 | 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-specfic data sheets for this treatability group].**

| Year | $m^3$ | and/or | kg |
|---|---|---|---|
| 2004 | 0.000 | | |
| 2005 | 5.000 | | |
| 2006 | 5.000 | | |
| 2007 | 0.000 | | |
| 2008 | 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 settlement agreement.

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

| Milestone Number | Due Date |
|---|---|
| N/A | N/A |

**4.6 Proposed new Tri-Party Agreement treatment milestones:**

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

**Treatabilitiy Group Name:** 324 Building REC Waste

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

None.

1.3 **Waste stream source information**

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

Waste residue from further REC deactivation and decontamination activities.

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

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

1.3.3 **Source of the regulated constituents:**

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

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

Analytical data, process knowledge.

1.3.5 **Additional notes:**

None.

## 2.0 WASTE STREAM STORAGE, INVENTORY, AND GENERATION INFORMATION

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

2.1 **Current storage method**

| | | |
|---|---|---|
| ☐ Container (pad) | ☐ Container (covered) | ☐ Container (retrievably buried) |
| ☐ Tank | ☐ DST | ☐ SST |
| ☒ Other (explain): | The waste is in the form of radioactive contamination within the hot cells, pipe trench and tank vault. | |

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

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

# LDR REPORT WASTE LOCATION-SPECIFIC DATA SHEET

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

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

**2.2 Storage inventory locations:**

| Building/Room Number | Number of Containers/Tanks |
|---|---|
| 324 REC | 6 tanks |
| N/A | N/A |

**2.3 Current stored inventory for this stream.**

Total volume (cubic meters): 5.000

Date of inventory values: 12/31/2003

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 |
|---|---|---|---|
| 2004 | 0.000 | | |
| 2005 | 5.000 | | |
| 2006 | 5.000 | | |
| 2007 | 0.000 | | |
| 2008 | 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 |
|---|---|
| 324-LDR-S/A | 02/26/2003 |

☒ Assessment has been scheduled. Scheduled date: 4th quarter CY 2002.

☒ Other. Explain: Assessment field work completed12/31/02.
324-LDR-S/A storage assessment report completed 2/26/03

## 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 2003 (volume or mass)**

0.000 m3

**3.3.2 Projected future waste volume reductions**

| Year | $m^3$ | and/or | kg |
|---|---|---|---|
| 2004 | 0.000 | | |
| 2005 | 0.000 | | |
| 2006 | 0.000 | | |
| 2007 | 0.000 | | |
| 2008 | 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 include: PNNL-501-0001-02; PNNL-505-0001-03; PNNL-800-0001-02; PNNL-930-05; and PNNL-931-04.

## 2.0 WASTE INVENTORY AND GENERATION

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

Total volume (cubic meters): 7.938

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

| Year | $m^3$ | and/or | kg |
|---|---|---|---|
| 2004 | 13.700 | | |
| 2005 | 16.300 | | |
| 2006 | 16.300 | | |
| 2007 | 16.300 | | |
| 2008 | 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 |
| WT01 | Toxic, EHW | N/A | *** | *** | N/A |
| WT02 | Toxic, DW | N/A | *** | *** | N/A |

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

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

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

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

**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 both "<50" and ">=50" because concentrations occur below and above 50 ppm in individual waste packages. In Section 3.3.1 of this data sheet, waste may be either wastewater or non-wastewater at the point of generation but is most likely to be non-wastewater at the time of shipment.

## 4.0 WASTE STREAM TREATMENT

**4.1 Is this waste stream currently being treated?**

☒ Yes ☐ No

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

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

☐ No treatment required (skip to Section 5.0)

☒ Treating or plan to treat on site

☒ Treating or plan to treat off site

☐ Treatment options still being assessed

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

# LDR REPORT TREATABILITY GROUP DATA SHEET

Elements of this waste stream will be managed in one (or more) of three ways. Some LDR-compliant treatment will be performed at the 325 HWTUs. Some waste that can be treated using off-site commercial treatment will be treated at those facilities; facilities planned to be used are Pacific EcoSolutions in Richland and PermaFix/DSSI in Oak Ridge, Tennessee. For wastes that cannot be treated by either of the above means to meet LDR standards, the waste will be shipped to Central Waste Complex under an exception to current requirements to only receive LDR-compliant waste from PNNL.

**4.4 Treatment schedule information:**

Waste to be treated in the 325 HWTUs or at commercial treatment facilities will generally be treated within one year. Waste that cannot be treated by these options will be shipped to CWC and will be subject to the schedules for treatment set forth in proposed TPA milestone P-091-42 (for contact-handled waste) currently in public review and comment.

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

| Milestone Number | Due Date |
|---|---|
| M-020-20 | 06/30/1992 |
| P-091-42E | 12/31/2008 |

**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:**

None

## 5.0 WASTE STREAM DISPOSAL

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

Subject waste will ultimately be disposed of in low-level waste trenches (treated characteristic waste only) or mixed waste trenches located on the Hanford Site or at commercial facilities.

# LDR REPORT WASTE LOCATION-SPECIFIC DATA SHEET

## 1.0 WASTE STREAM IDENTIFICATION AND SOURCE

1.1 **Unit/Plant name:** 325 HWTU **Waste Stream:** 325 HWTU

**Treatabilitiy Group Name:** 325 HWTU

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

PNNL-501-0001-02; PNNL-505-0001-03; PNNL-800-0001-02; PNNL-930-05; PNNL-931-04

1.3 **Waste stream source information**

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

Subject waste was generated from PNNL laboratory and facility operations.

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

Waste is continually generated from routine operations at PNNL.

1.3.3 **Source of the regulated constituents:**

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

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

Wastes are characterized as specified in PNNL Waste Stream Profiles.

1.3.5 **Additional notes:**

The waste profile numbers listed in 1.2 represent all mixed waste profiles that PNNL is approved to ship waste to CWC. Other wastes to be treated in the unit or at commercial TSD facilities may not have approved CWC profile numbers reflected in Section 1.2.

## 2.0 WASTE STREAM STORAGE, INVENTORY, AND GENERATION INFORMATION

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

2.1 **Current storage method**

☐ Container (pad) ☒ Container (covered) ☐ Container (retrievably buried)

☐ Tank ☐ DST ☐ SST

☐ Other (explain):

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

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

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

The waste inventoried below and currently stored at 325 building were placed in storage between 2/18/99 and 1/22/04.

# LDR REPORT WASTE LOCATION-SPECIFIC DATA SHEET

**2.2 Storage inventory locations:**

| Building/Room Number | Number of Containers/Tanks |
|---|---|
| 325/520 | 104 |
| 325/528 | 98 |
| 325/524 | 115 |
| 325/SAL | 17 |

**2.3 Current stored inventory for this stream.**

Total volume (cubic meters): 7.938

Date of inventory values: 01/22/2004

Comments on waste inventory:

None.

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

☐ Yes ☒ No

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

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

Bases and assumptions used:

N/A

**2.5 Planned storage areas for this waste:**

☒ Current Location ☒ CWC ☐ DST

☒ Other Area(s) (list): Commercial TSD facilities storing before or after treatment

☐ None

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

| Year | $m^3$ | and/or | kg |
|---|---|---|---|
| 2004 | 13.700 | | |
| 2005 | 16.300 | | |
| 2006 | 16.300 | | |
| 2007 | 16.300 | | |
| 2008 | 16.300 | | |
| Total | 78.900 | | |

**2.7 DOE Storage Compliance Assessment information:**

☒ Assessment has been completed.

# LDR REPORT WASTE LOCATION-SPECIFIC DATA SHEET

| 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-020-20 | 06/30/1992 |
| P-091-42E | 12/31/2008 |

**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 |

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.

To meet concentration based LDR treatment standards applicable for the residues, sampling and analysis is required after treatment (see 40 CFR 268.7(b).

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

The inventory information is for what is currently in storage in the specified HWTU Location(s).

## 3.0 WASTE MINIMIZATION

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

☐ Yes ☒ No

If yes, provide date assessment conducted: N/A

If yes, provide document number or other identification:

N/A

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

To be determined.

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

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

**3.3 Waste minimization schedule**

**3.3.1 Reduction achieved during calendar year 2003 (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 |
|---|---|---|---|
| 2004 | 6.000 | | |
| 2005 | 6.000 | | |
| 2006 | 6.000 | | |
| 2007 | 6.000 | | |
| 2008 | 6.000 | | |
| Total | 30.000 | | |

**3.3.3 Bases and assumptions used in above estimates:**

Reductions indicated reflect only those achieved through consolidation in the 325 HWTUs, not minimization efforts done in the laboratory prior to packaging. Thus the reduction is in shipping volume, not generation volume. The reductions projected are based upon historical reductions achieved through unit operations.

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# LDR REPORT TREATABILITY GROUP DATA SHEET

## 1.0 WASTE STREAM IDENTIFICATION

**1.1 Treatability Group Name:** B Plant Cell 4

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

Waste resulted from WESF hot cell maintenance waste (i.e. manipulator boots, light bulbs, HEPA filters, misc. debris). B Plant, including Cell 4, was placed in long term surveillance and maintenance in 1998. No additional waste will be stored in this location as B Plant is under long term S&M.

## 2.0 WASTE INVENTORY AND GENERATION

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

Total volume (cubic meters): 1.400

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

| Year | $m^3$ | and/or | kg |
|---|---|---|---|
| 2004 | 0.000 | | |
| 2005 | 0.000 | | |
| 2006 | 0.000 | | |
| 2007 | 0.000 | | |
| 2008 | 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):**

High personnel dose potential, remote handled. Range from 200 mR to 500 R at 30 cm. Confidence high. No additional waste will be placed in storage.

### 3.2 Physical Form

**3.2.1 Physical form of the waste:**

☒ Solid ☐ Liquid ☐ Semi-solid ☐ Debris

☐ Other (Describe in comments.)

**3.2.2 Comments on physical form:**

# LDR REPORT TREATABILITY GROUP DATA SHEET

Lead component represents <1% of the entire waste matrix as it is mixed with other miscellaneous non-hazardous radioactive materials in the drum due to packaging constraints in WESF. The lead component is lead solder from contaminated light bulbs. However, due to the packaging constraints, if a drum contains lead in any proportions, the entire drum is managed appropriately for the lead component.

**3.3 Regulated constituents and wastewater/non-wastewater category**

**3.3.1 Wastewater/non-wastewater under RCRA**

☐ Wastewater ☒ Non-wastewater ☐ Unknown

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

| EPA/ State Number | Waste Description | LDR Sub-Category* | Concentration (Typical or Range)** | Basis | LDR Treatment Concentration Standard or Technology Code |
|---|---|---|---|---|---|
| D008 | Lead-contaminated | Waste Lead Char | >5 mg/L | Process knowledge | 5.0 MG/L |

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

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

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

☐ List:

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

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

**3.3.4 Does this waste stream contain PCBs?**

☐ Yes ☒ No ☐ Unknown

If no or unknown, skip to Section 3.3.5.

**3.3.4.1 Is waste stream subject to TSCA regulations for PCBs?**

☐ Yes ☐ No ☐ Unknown

**3.3.4.2 Indicate the PCB concentration range.**

☐ < 50 ppm ☐ $ 50 ppm ☐ Unknown

**3.3.5 What is the confidence level for the regulated constituents?**

☐ Low ☐ Medium ☒ High

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

None.

# LDR REPORT TREATABILITY GROUP DATA SHEET

## 4.0 WASTE STREAM TREATMENT

**4.1 Is this waste stream currently being treated?**

☐ Yes ☒ No

If yes, provide details: N/A

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

☐ No treatment required (skip to Section 5.0)

☐ Treating or plan to treat on site

☐ Treating or plan to treat off site

☒ Treatment options still being assessed

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

Disposition of B-Plant waste will be determined after a decision is made on the Canyon Disposition Initiative.

**4.4 Treatment schedule information:**

Schedule will be determined after a final decision has been made on the Canyon Disposition Initiative.

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

| Milestone Number | Due Date |
|---|---|
| N/A | N/A |

**4.6 Proposed new Tri-Party Agreement treatment milestones:**

None.

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

☐ Yes ☐ No ☒ Unknown

If yes, describe: N/A 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.**

N/A

**4.9 Key Assumptions:**

B-Plant is under long term surveillance and maintenance in accordance with Section 8.0 of the Tri-Party Agreement Action Plan, Facility Decommissioning Process.

# LDR REPORT TREATABILITY GROUP DATA SHEET

## 5.0 WASTE STREAM DISPOSAL

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

Disposition of B-Plant Cell 4 waste will be determined after a final decision has been made on the Canyon Disposition Initiative. If waste is not left in place, waste will be dispositioned according to TPA agreements.

# LDR REPORT WASTE LOCATION-SPECIFIC DATA SHEET

## 1.0 WASTE STREAM IDENTIFICATION AND SOURCE

**1.1 Unit/Plant name:** B Plant Complex **Waste Stream:** Cell 4

**Treatabilitiy Group Name:** B Plant Cell 4

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

N/A

**1.3 Waste stream source information**

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

WESF hot cell maintenance waste (i.e., manipulator boots, light bulbs, HEPA filters, misc. debris).

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

Waste in Cell 4 was generated in the WESF hot cells and packaged into 55 gallon drums. When lights in the hot cells were replaced, the old ones were packaged into the drums along with the other waste. There are 7 drums of mixed waste and 36 drums of highly radioactive LLW. The sole hazardous constituent in the mixed waste drums is lead solder on incandesent lamps from the hot cells.

**1.3.3 Source of the regulated constituents:**

The sole hazardous constituent in the mixed waste drums is lead solder on incandesent lamps from the WESF hot cells.

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

Based on multiple sample results for waste matrices with lead solder, including similar incandescent bulbs, these bulbs will likely yield an extract containing greater the 5.0 milligrams/liter of lead when exposed to a leachate. The amount of lead solder on the incandescent lamps from the WESF hot cells was provided by the vender who supplies the light bulbs. An inventory of the waste is prepared as the the drum is packed in the hot cell.

**1.3.5 Additional notes:**

Waste volumes are from past operations. The facility is now under long term surveillance and maintenance in accordance with the Tri-Party Agreement. No additional waste volumes are generated or stored at this location.

## 2.0 WASTE STREAM STORAGE, INVENTORY, AND GENERATION INFORMATION

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

**2.1 Current storage method**

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

# LDR REPORT WASTE LOCATION-SPECIFIC DATA SHEET

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

Waste was located in WESF hot cells.

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

Drums placed in storage between 1988 to 1997

**2.2 Storage inventory locations:**

| Building/Room Number | Number of Containers/Tanks |
|---|---|
| B-Plant Cell 4 | 7 drums |

**2.3 Current stored inventory for this stream.**

Total volume (cubic meters): 1.400

Date of inventory values: 12/31/2003

Comments on waste inventory:

No additional waste will be stored at B-Plant, Cell 4.

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

☐ Yes ☒ No

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

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

Bases and assumptions used:

N/A

**2.5 Planned storage areas for this waste:**

☒ Current Location ☐ CWC ☐ DST

☐ Other Area(s) (list):

☐ None

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

| Year | $m^3$ | and/or | kg |
|---|---|---|---|
| 2004 | 0.000 | | |
| 2005 | 0.000 | | |
| 2006 | 0.000 | | |
| 2007 | 0.000 | | |
| 2008 | 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 |
|---|---|
| 12/2000, A&E-00-ASS-075 | 02/23/2001 |

☐ Assessment has been scheduled. Scheduled date:

☐ Other. Explain:

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

| Milestone Number | Due Date |
|---|---|
| N/A | N/A |

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

☐ Yes ☒ No

If yes, summarize releases and quantities and provide date:

N/A

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

☐ Yes ☒ No

If yes, explain: N/A

**2.11 Characterization**

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

☐ Yes ☒ No ☐ Unknown at this time

| Milestone Number | Due Date |
|---|---|
| N/A | N/A |

If yes or unknown, comment on characterization for storage.

N/A

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

☐ Yes ☒ No ☐ Unknown at this time

| Milestone Number | Due Date |
|---|---|
| N/A | N/A |

If yes or unknown, comment on characterization for treatment.

N/A

# LDR REPORT WASTE LOCATION-SPECIFIC DATA SHEET

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

☐ Yes ☒ No ☐ Unknown at this time

| Milestone Number | Due Date |
|---|---|
| N/A | N/A |

If yes or unknown, comment on characterization for disposal.

N/A

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

No additional waste will be stored at this location. B-Plant is under long term surveillance and maintenance in accordance with Section 8.0 of the Tri-Party Agreement.

## 3.0 WASTE MINIMIZATION

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

☐ Yes ☒ No

If yes, provide date assessment conducted: N/A

If yes, provide document number or other identification:

N/A

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

N/A - The waste stream is no longer generated.

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

No additional waste is being generated at this location.

**3.3 Waste minimization schedule**

**3.3.1 Reduction achieved during calendar year 2003 (volume or mass)**

0.000 m3

**3.3.2 Projected future waste volume reductions**

| Year | $m^3$ | and/or | kg |
|---|---|---|---|
| 2004 | 0.000 | | |
| 2005 | 0.000 | | |
| 2006 | 0.000 | | |
| 2007 | 0.000 | | |
| 2008 | 0.000 | | |
| Total | 0.000 | | |

# LDR REPORT WASTE LOCATION-SPECIFIC DATA SHEET

**3.3.3 Bases and assumptions used in above estimates:**

No additional waste is being placed in Cell 4.

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# LDR REPORT TREATABILITY GROUP DATA SHEET

## 1.0 WASTE STREAM IDENTIFICATION

**1.1 Treatability Group Name:** B Plant Containment Building

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

Stream consists of failed equipment (e.g., process jumpers, pumps, etc.) used in the 221-B canyon. Contaminated debris/equipment derived from the processing of "F" listed wastes for the recovery of strontium and cesium. Also contains elemental lead used for counterbalances and shielding. This waste was placed in long term surveillance and maintenance in accordance with Section 8.0 of the Tri-Party Agreement in 1999. The current waste inventory is 294,000 kg, and no additional waste will be stored at this location. B Plant is under long term S&M.

## 2.0 WASTE INVENTORY AND GENERATION

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

Total volume (cubic meters):

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

| Year | $m^3$ | and/or | kg |
|---|---|---|---|
| 2004 | 0.000 | | |
| 2005 | 0.000 | | |
| 2006 | 0.000 | | |
| 2007 | 0.000 | | |
| 2008 | 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):**

Waste requires remote handling due to radioactivity level. Confidence high.

# LDR REPORT TREATABILITY GROUP DATA SHEET

## 3.2 Physical Form

**3.2.1 Physical form of the waste:**

☒ Solid ☐ Liquid ☐ Semi-solid ☐ Debris

☐ Other (Describe in comments.)

**3.2.2 Comments on physical form:**

Waste inventories are currently maintained by estimates of mass. A more detailed determination of waste volume would require extensive item identification and specific drawing information. At this time, obtaining this information is cost and schedule prohibitive.

## 3.3 Regulated constituents and wastewater/non-wastewater category

**3.3.1 Wastewater/non-wastewater under RCRA**

☐ Wastewater ☒ Non-wastewater ☐ Unknown

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

| EPA/ State Number | Waste Description | LDR Sub-Category* | Concentration (Typical or Range)** | Basis | LDR Treatment Concentration Standard or Technology Code |
|---|---|---|---|---|---|
| F001 | 1,1,1-Trichloroethane | Solvent Wastes | unknown | Process knowledge | DEBRIS STDS IN 40 CFR 268.45 |
| F002 | Methylene Chloride | Solvent Wastes | unknown | Process knowledge | DEBRIS STDS IN 40 CFR 268.45 |
| F003 | Acetone & Hexone | Solvent Wastes | unknown | Process knowledge | DEBRIS STDS IN 40 CFR 268.45 |
| F004 | o-Cresol & p-Cresol | Solvent Wastes | unknown | Process knowledge | DEBRIS STDS IN 40 CFR 268.45 |
| F005 | Methyl Ethyl Ketone | Solvent Wastes | unknown | Process knowledge | DEBRIS STDS IN 40 CFR 268.45 |

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

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

UHCs are not applicable to this waste.

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

☐ List:

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

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

# LDR REPORT TREATABILITY GROUP DATA SHEET

**3.3.4 Does this waste stream contain PCBs?**

☐ Yes ☒ No ☐ Unknown

If no or unknown, skip to Section 3.3.5.

**3.3.4.1 Is waste stream subject to TSCA regulations for PCBs?**

☐ Yes ☐ No ☐ Unknown

**3.3.4.2 Indicate the PCB concentration range.**

☐ < 50 ppm ☐ $ 50 ppm ☐ Unknown

**3.3.5 What is the confidence level for the regulated constituents?**

☐ Low ☒ Medium ☐ High

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

An assumption has been made that it is unlikely additional waste codes will be required.

## 4.0 WASTE STREAM TREATMENT

**4.1 Is this waste stream currently being treated?**

☐ Yes ☒ No

If yes, provide details: N/A

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

☐ No treatment required (skip to Section 5.0)

☐ Treating or plan to treat on site

☐ Treating or plan to treat off site

☒ Treatment options still being assessed

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

Until a final decision is made on the Canyon Disposition Initiative, no commitments will be made for waste treatment and disposal.

**4.4 Treatment schedule information:**

Treatment schedule will be determined after a final decision has been made on the Canyon Disposition Initiative.

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

| Milestone Number | Due Date |
|---|---|
| N/A | N/A |

# LDR REPORT TREATABILITY GROUP DATA SHEET

**4.6 Proposed new Tri-Party Agreement treatment milestones:**

None.

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

☐ Yes ☐ No ☒ Unknown

If yes, describe: N/A 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.**

N/A

**4.9 Key Assumptions:**

B-Plant is under long term surveillance and maintenance in accordance with Section 8.0 of the Tri-Party Agreement Action Plan, Facility Decommissioning Process.

## 5.0 WASTE STREAM DISPOSAL

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

Disposition of B-Plant waste will be determined after a final decision has been made on the Canyon Disposition Initiative. If waste is not left in place, waste will be dispositioned according to TPA agreements.

# LDR REPORT WASTE LOCATION-SPECIFIC DATA SHEET

## 1.0 WASTE STREAM IDENTIFICATION AND SOURCE

1.1 **Unit/Plant name:** B Plant Complex **Waste Stream:** Containment Building Storage

**Treatabilitiy Group Name:** B Plant Containment Building

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

None.

1.3 **Waste stream source information**

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

Failed equipment (e.g., process jumpers, pumps, etc.) used in the 221-B canyon.

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

Waste was generated during B Plant operations and facility deactivation.

1.3.3 **Source of the regulated constituents:**

B Plant process operations.

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

Process knowledge.

1.3.5 **Additional notes:**

None.

## 2.0 WASTE STREAM STORAGE, INVENTORY, AND GENERATION INFORMATION

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

2.1 **Current storage method**

☐ Container (pad) ☐ Container (covered) ☐ Container (retrievably buried)

☐ Tank ☐ DST ☐ SST

☒ Other (explain): Containment building.

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

Failed process equipment located in the containment building.

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

Waste was generated until September 1998 and stored in the B Plant Complex.

2.2 **Storage inventory locations:**

| Building/Room Number | Number of Containers/Tanks |
|---|---|
| 221-B | N/A |

# LDR REPORT WASTE LOCATION-SPECIFIC DATA SHEET

**2.3 Current stored inventory for this stream.**

Total volume (cubic meters):

Date of inventory values: 12/31/2003

Comments on waste inventory:

Quantity estimated at 294,000 kg. A more detailed determination of waste volume would require extensive item identification and specific drawing information. At this time, obtaining this information is cost and schedule prohibitive.

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

☐ Yes ☒ No

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

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

Bases and assumptions used:

N/A

**2.5 Planned storage areas for this waste:**

☒ Current Location ☐ CWC ☐ DST

☐ Other Area(s) (list):

☐ None

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

| Year | $m^3$ | and/or | kg |
|---|---|---|---|
| 2004 | 0.000 | | |
| 2005 | 0.000 | | |
| 2006 | 0.000 | | |
| 2007 | 0.000 | | |
| 2008 | 0.000 | | |
| Total | 0.000 | | |

**2.7 DOE Storage Compliance Assessment information:**

☒ Assessment has been completed.

| Document Number | Date |
|---|---|
| 12/2000, A&E-00-ASS-075 | 02/23/2001 |

☐ Assessment has been scheduled. Scheduled date:

☐ Other. Explain:

# LDR REPORT WASTE LOCATION-SPECIFIC DATA SHEET

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

| Milestone Number | Due Date |
|---|---|
| N/A | N/A |

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

☐ Yes ☒ No

If yes, summarize releases and quantities and provide date:

N/A

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

☐ Yes ☒ No

If yes, explain: N/A

**2.11 Characterization**

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

☐ Yes ☐ No ☒ Unknown at this time

| Milestone Number | Due Date |
|---|---|
| N/A | N/A |

If yes or unknown, comment on characterization for storage.

Additional characterization could be required for treatment or disposal of the waste located in the facility. Milestones will be established as necessary in accordance with Section 8.7 of the Tri-Party Agreement Action Plan.

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

☐ Yes ☐ No ☒ Unknown at this time

| Milestone Number | Due Date |
|---|---|
| N/A | N/A |

If yes or unknown, comment on characterization for treatment.

Additional characterization could be required for treatment or disposal of the waste. Milestones will be established as necessary in accordance with Section 8.7 of the Tri-Party Agreement Action Plan.

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

☐ Yes ☐ No ☒ Unknown at this time

| Milestone Number | Due Date |
|---|---|
| N/A | N/A |

# LDR REPORT WASTE LOCATION-SPECIFIC DATA SHEET

If yes or unknown, comment on characterization for disposal.

Additional characterization could be required for treatment or disposal of the waste. Milestones will be established as necessary in accordance with Section 8.7 of the Tri-Party Agreement Action Plan.

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

No additional waste will be stored at this location. B Plant is under long term surveillance and maintenance in accordance with Section 8.0 of the Tri-Party Agreement.

## 3.0 WASTE MINIMIZATION

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

☐ Yes ☒ No

If yes, provide date assessment conducted: N/A

If yes, provide document number or other identification:

N/A

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

N/A

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

N/A

**3.3 Waste minimization schedule**

**3.3.1 Reduction achieved during calendar year 2003 (volume or mass)**

0.000 m3

**3.3.2 Projected future waste volume reductions**

| Year | $m^3$ | and/or | kg |
|---|---|---|---|
| 2004 | 0.000 | | |
| 2005 | 0.000 | | |
| 2006 | 0.000 | | |
| 2007 | 0.000 | | |
| 2008 | 0.000 | | |
| Total | 0.000 | | |

**3.3.3 Bases and assumptions used in above estimates:**

The facility is inactive. No additional waste will be generated.

# LDR REPORT TREATABILITY GROUP DATA SHEET

## 1.0 WASTE STREAM IDENTIFICATION

**1.1 Treatability Group Name:** Cesium and Strontium Capsules

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

Cesium and strontium were reclaimed from Tank Farms waste as a product, separated and purified at B Plant, and converted to dry salt for storage in capsules at WESF. The cesium and strontium capsules were declared waste in 1997 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 WASTE INVENTORY AND GENERATION

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

Total volume (cubic meters): 2.000

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

| Year | $m^3$ | and/or | kg |
|---|---|---|---|
| 2004 | 0.000 | | |
| 2005 | 0.000 | | |
| 2006 | 0.000 | | |
| 2007 | 0.000 | | |
| 2008 | 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 consist of purified cesium and strontium salts in the form of cesium chloride and strontium fluoride. The curie content of each capsule varies depending on when it was reclaimed and the amount of impurities it contains. With the daughter products included, it is estimated that there are 88.6 mega curies of cesium and 38.7 mega curies of strontium as of 12/31/2002.

# LDR REPORT TREATABILITY GROUP DATA SHEET

## 3.2 Physical Form

**3.2.1 Physical form of the waste:**

☒ Solid ☐ Liquid ☐ Semi-solid ☐ Debris

☐ Other (Describe in comments.)

**3.2.2 Comments on physical form:**

None.

## 3.3 Regulated constituents and wastewater/non-wastewater category

**3.3.1 Wastewater/non-wastewater under RCRA**

☐ Wastewater ☒ Non-wastewater ☐ Unknown

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

| EPA/ State Number | Waste Description | LDR Sub-Category* | Concentration (Typical or Range)** | Basis | LDR Treatment Concentration Standard or Technology Code |
|---|---|---|---|---|---|
| D005 | TC-Barium | Radioactive | 0.55-0.94% | (1), (2) | HLVIT |
| D005 | TC-Barium | Radioactive | 0.1-2% | (2), (3) | HLVIT |
| D006 | TC-Cadmium | Radioactive | <0.1% | (2), (3) | HLVIT |
| D006 | TC-Cadmium | Radioactive | 0.02% | (1), (2) | HLVIT |
| D007 | TC-Chromium | Radioactive | 0.02-1.4% | (1), (2) | HLVIT |
| D007 | TC-Chromium | Radioactive | <0.2% | (2), (3) | HLVIT |
| D008 | TC-Lead | Radioactive | <0.2% | (2), (3) | HLVIT |
| D008 | TC-Lead | Radioactive | 0.14-1.4% | (1), (2) | HLVIT |
| D011 | TC-Silver | Radioactive | N/A | (1), (2) | HLVIT |
| D011 | TC-Silver | Radioactive | Unknown | (2), (3) | HLVIT |
| WT02 | Toxic, DW | N/A | | (3) | N/A |
| WT02 | Toxic, DW | N/A | | (1) | N/A |

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

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

(1) Cesium capsules
(2) Process knowledge (flowsheets and history)
(3) Strontium capsules

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

☐ List:

# LDR REPORT TREATABILITY GROUP DATA SHEET

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

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

**3.3.4 Does this waste stream contain PCBs?**

☐ Yes ☒ No ☐ Unknown

If no or unknown, skip to Section 3.3.5.

**3.3.4.1 Is waste stream subject to TSCA regulations for PCBs?**

☐ Yes ☐ No ☐ Unknown

**3.3.4.2 Indicate the PCB concentration range.**

☐ < 50 ppm ☐ $ 50 ppm ☐ Unknown

**3.3.5 What is the confidence level for the regulated constituents?**

☐ Low ☐ Medium ☒ High

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

None.

## 4.0 WASTE STREAM TREATMENT

**4.1 Is this waste stream currently being treated?**

☐ Yes ☒ No

If yes, provide details: N/A

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

☐ No treatment required (skip to Section 5.0)

☐ Treating or plan to treat on site

☐ Treating or plan to treat off site

☒ Treatment options still being assessed

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

The plan at the end of CY 2002 is to establish a dry storage pathway that does not require treatment. Treatment options are still being assessed because of the dry storage plan uncertainty.

**4.4 Treatment schedule information:**

If the dry storage plan without treatment is established, no treatment schedule is required.

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

# LDR REPORT TREATABILITY GROUP DATA SHEET

| Milestone Number | Due Date |
|---|---|
| M-092-01 | 12/31/2009 |
| M-092-05 | 06/30/2003 |

**4.6 Proposed new Tri-Party Agreement treatment milestones:**

None. See response to 4.4.

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

☐ Yes ☐ No ☒ Unknown

If yes, describe: N/A

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

TBD

**4.9 Key Assumptions:**

Discussions with Ecology have been initiated and will address existing milestones.

## 5.0 WASTE STREAM DISPOSAL

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

Disposal in a national geologic repository.

# LDR REPORT WASTE LOCATION-SPECIFIC DATA SHEET

## 1.0 WASTE STREAM IDENTIFICATION AND SOURCE

**1.1 Unit/Plant name:** WESF **Waste Stream:** Cs and Sr Capsules

**Treatability Group Name:** Cesium and Strontium Capsules

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

N/A

**1.3 Waste stream source information**

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

The capsules contain cesium chloride and strontium fluoride salts that are contaminated with barium, cadmium, chromium, lead, and silver from process impurities. The maximum outer container height is approximately 53 centimeters (~21 inches) and a maximum diameter of 8 centimeters (~3 inches).

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

Cesium and strontium were separated from Tank Farms waste, converted to solid cesium chloride and strontium fluoride salts, and encapsulated for storage at WESF. The capsules were declared waste on 7/14/1997.

**1.3.3 Source of the regulated constituents:**

Process impurities and decay products from reclamation of DST and SST wastes.

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

HNF-7342 "Waste Encapsulation and Storage Facility Waste Analysis Plan", Process knowledge

**1.3.5 Additional notes:**

None.

## 2.0 WASTE STREAM STORAGE, INVENTORY, AND GENERATION INFORMATION

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

**2.1 Current storage method**

| | | |
|---|---|---|
| ☐ Container (pad) | ☐ Container (covered) | ☐ Container (retrievably buried) |
| ☐ Tank | ☐ DST | ☐ SST |
| ☒ Other (explain): | Underwater capsule storage in indoor pool cells until 2018 where they will be transferred for treatment or shipped to a national repository | |

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

The salts were considered a product and used as irradiation sources.

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

The capsules were declared waste June 14, 1997.

# LDR REPORT WASTE LOCATION-SPECIFIC DATA SHEET

**2.2 Storage inventory locations:**

| Building/Room Number | Number of Containers/Tanks |
|---|---|
| 225B/Pool cells | 1936 Capsules |

**2.3 Current stored inventory for this stream.**

Total volume (cubic meters): 2.000

Date of inventory values: 12/31/2003

Comments on waste inventory:

There are 1,335 cesium capsules and 601 strontium capsules stored in the pool cells.

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

☐ Yes ☒ No

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

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

Bases and assumptions used:

N/A

**2.5 Planned storage areas for this waste:**

☒ Current Location ☐ CWC ☐ DST

☒ Other Area(s) (list): The waste will be stored at their current location until 2018when they will be shipped for treatment or transferred to a national repository.

☐ None

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

| Year | $m^3$ | and/or | kg |
|---|---|---|---|
| 2004 | 0.000 | | |
| 2005 | 0.000 | | |
| 2006 | 0.000 | | |
| 2007 | 0.000 | | |
| 2008 | 0.000 | | |
| Total | 0.000 | | |

**2.7 DOE Storage Compliance Assessment information:**

☒ Assessment has been completed.

| Document Number | Date |
|---|---|
| A&E-SEC-02-002, ltr# 02-A&E-0043 | 03/14/2002 |

# LDR REPORT WASTE LOCATION-SPECIFIC DATA SHEET

☐ Assessment has been scheduled. Scheduled date:

☐ Other. Explain:

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

| Milestone Number | Due Date |
|---|---|
| M-092-01 | 12/31/2009 |
| M-092-05 | 06/30/2007 |

**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:**

Existing TPA milestones will be reviewed against the dry storage path forward concept. DOE will propose to delete and/or revise related milestones as appropriate to facilitate moving the capsules to dry storage.

## 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 2003 (volume or mass)**

0.000 m3

**3.3.2 Projected future waste volume reductions**

| Year | $m^3$ | and/or | kg |
|---|---|---|---|
| 2004 | 0.000 | | |
| 2005 | 0.000 | | |
| 2006 | 0.000 | | |
| 2007 | 0.000 | | |
| 2008 | 0.000 | | |
| Total | 0.000 | | |

**3.3.3 Bases and assumptions used in above estimates:**

None.

# LDR REPORT TREATABILITY GROUP DATA SHEET

## 1.0 WASTE STREAM IDENTIFICATION

**1.1 Treatability Group Name:** DST Waste

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

Basic aqueous solution that may contain suspended material and/or settled solids (sludge and saltcake). Waste streams are treated with sodium hydroxide and sodium nitrite to minimize tank corrosion and to address compatibility issues. Wastes have been stored in the DST System from 1970 to the present.

## 2.0 WASTE INVENTORY AND GENERATION

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

Total volume (cubic meters): 93,026.300

**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 |
|---|---|---|---|
| 2004 | 83.000 | | |
| 2005 | 68.000 | | |
| 2006 | 38.000 | | |
| 2007 | 38.000 | | |
| 2008 | 38.000 | | |
| Total | 265.000 | | |

## 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):**

DST System waste contains the following major radionuclides: 3H, 14C, 60Co, 63Ni, 90Sr, 90Y, 93Zr, 93mNb, 99Tc, 106Ru, 113mCd, 125Sb, 126Sn, 129I, 134Cs, 137Cs, 137mBa, 151Sm, 152Eu, 154Eu, 155Eu, 234U, 235U, 238U, 238Pu, 239Pu, 240Pu, 241Am, and 241Pu.

# LDR REPORT TREATABILITY GROUP DATA SHEET

## 3.2 Physical Form

**3.2.1 Physical form of the waste:**

☐ Solid ☐ Liquid ☐ Semi-solid ☐ Debris

☒ Other (Describe in comments.)

**3.2.2 Comments on physical form:**

The major constituents of DST System waste are water and sodium salts of aluminates, nitrate, nitrite, phosphate, hydroxide, carbonate, and sulfate. Some calcium and potassium salts are also present. Chemically complexed waste in the DSTs contain sodium salts of chelating agents ethylenediamine-tetraacetic acid and n-hydroxyethylenediamine-tetraacetic acid. There may also be detectable concentrations of halogenated and nonhalogenated organic compounds and heavy metals such as lead, chromium and cadmium.

## 3.3 Regulated constituents and wastewater/non-wastewater category

**3.3.1 Wastewater/non-wastewater under RCRA**

☐ Wastewater ☒ Non-wastewater ☐ Unknown

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

# 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 | Ignitability | Low TOC Ignitable char liquid | (5) | (5) | DEACT(2); RORGS; COMBST |
| D002 | Corrosivity | (1) | (5) | (5) | HLVIT |
| D003 | Reactivity | Reactive Cyanides | (5) | (5) | 590/30 mg/kg |
| D004 | Arsenic | (1) | (5) | (5) | HLVIT |
| D005 | Barium | (1) | (5) | (5) | HLVIT |
| D006 | Cadmium | (1) | (5) | (5) | HLVIT |
| D007 | Chromium | (1) | (5) | (5) | HLVIT |
| D008 | Lead | (1) | (5) | (5) | HLVIT |
| D009 | Mercury | (1) | (5) | (5) | HLVIT |
| D010 | Selenium | (1) | (5) | (5) | HLVIT |
| D011 | Silver | (1) | (5) | (5) | HLVIT |
| D018 | Benzene | N/A | (5) | (5) | 10 mg/kg (2) |
| D019 | Carbon Tetrachloride | N/A | (5) | (5) | 6.0 mg/kg (2) |
| D022 | Chloroform | N/A | (5) | (5) | 6.0 mg/kg (2) |
| D028 | 1,2-Dichloroethane | N/A | (5) | (5) | 6.0 mg/kg (2) |
| D029 | 1,1-Dichloroethylene | N/A | (5) | (5) | 6.0 mg/kg (2) |
| D030 | 2,4-Dinitrotoluene | N/A | (5) | (5) | 140 mg/kg (2) |
| D033 | Hexachlorobutadiene | N/A | (5) | (5) | 5.6 mg/kg (2) |
| D034 | Hexachloroethane | N/A | (5) | (5) | 30 mg/kg (2) |
| D035 | Methyl Ethyl Ketone | N/A | (5) | (5) | 36 mg/kg (2) |
| D036 | Nitrobenzene | N/A | (5) | (5) | 14 mg/kg (2) |
| D038 | Pyridine | N/A | (5) | (5) | 16 mg/kg (2) |
| D039 | Tetrachloroethylene | N/A | (5) | (5) | 6.0 mg/kg (2) |
| D040 | Trichloroethylene | N/A | (5) | (5) | 6.0 mg/kg (2) |
| D041 | 2,4,5-trichlorophenol | N/A | (5) | (5) | 7.4 mg/kg (2) |
| D043 | Vinyl Chloride | N/A | (5) | (5) | 6.0 mg/kg (2) |
| F001 | 1,1,1-Trichloroethane | Spent Solvent | (5) | (5) | 6.0 mg/kg |
| F002 | Methylene Chloride | Spent Solvent | (5) | (5) | 30 mg/kg |
| F003 | Acetone | Spent Solvent | (5) | (5) | 160 mg/kg |
| F003 | Methyl Isobutyl Ketone | Spent Solvent | (5) | (5) | 33 mg/kg |
| F004 | Cresols | Spent Solvent | (5) | (5) | 5.6 mg/kg (o, m & p); 11.2 mg/kg (mixed) |
| F005 | Methyl Ethyl Ketone | Spent Solvent | (5) | (5) | 36 mg/kg |

# LDR REPORT TREATABILITY GROUP DATA SHEET

| EPA/ State Number | Waste Description | LDR Sub-Category* | Concentration (Typical or Range)** | Basis | LDR Treatment Concentration Standard or Technology Code |
|---|---|---|---|---|---|
| UHC(4) | Antimony | N/A | (5) | (5) | 1.15 mg/l (6) |
| UHC(4) | Beryllium | N/A | (5) | (5) | 1.22 mg/l (6) |
| UHC(4) | Cyanide (total) | N/A | (5) | (5) | 590 mg/l (6) |
| UHC(4) | Nickel | N/A | (5) | (5) | 11 mg/l (6) |
| UHC(4) | PCBs (sum of Aroclors) | N/A | (5) | (5) | 10 mg/l (6) |
| UHC(4) | Selenium | N/A | (5) | (5) | 5.7 mg/l (6) |
| UHC(4) | Thallium | N/A | (5) | (5) | 0.2 mg/l (6) |
| WP01 | Persistent, EHW & DW | N/A | (5) | (5) | NONE (3) |
| WP02 | Persistent, DW | N/A | (5) | (5) | N/A |
| WT01 | Toxic, EHW & DW | N/A | (5) | (5) | NONE (3) |
| WT02 | Toxic, DW | N/A | (5) | (5) | N/A |

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

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

1) Radioactive high-level wastes generated during the reprocessing of fuel rods.
2) and meet 40 CFR 268.48.
3) Mixed extremely hazardous wastes can be land-disposed in Washington State in DOE facilities in accordance with RCW 70.105.050(2).
4) UHCs which have been identified in waste entering the DSTSystem since 1995. For more information see comments in 3.3.6.
(5) See Section 3.3.6.
(6) TCLP

Tank Farm waste is subject to non-wastewater treatment standards.

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

☐ List:

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

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

# 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 waste codes assigned to DST system waste are based on process knowledge, and analysis. Dangerous waste constituents in individual tanks will vary based upon process knowledge. Since 1995, LDR requirements have been documented on waste profile sheets for waste sent to the DST System. On September 25, 1995, waste acceptance criteria for waste entering the DST System specifically required the identification of UHCs. There is no documentation of LDR requirements for waste placed in the SST System and for waste sent to the DST System prior to 1995. A list is kept of the UHCs that have been documented since 1995. At this time, UHCs relevant to DOE activities at Hanford are considered or can reasonably be expected to be present in the waste per references PNNL-11927, PNNL-11943, and PNNL-12039. It has been determined per the framework Agreement for Management of PCBs in Hanford Tank Waste, dated August 31, 2001 that some DSTs contain PCB remediation waste. The risk-based disposal approval process will address the disposal of PCB remediation waste through the waste treatment plant where it is being addressed as a constituent of concern.

## 4.0 WASTE STREAM TREATMENT

**4.1 Is this waste stream currently being treated?**

☐ Yes ☒ No

If yes, provide details: N/A

# LDR REPORT TREATABILITY GROUP DATA SHEET

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

☐ No treatment required (skip to Section 5.0)

☒ Treating or plan to treat on site

☐ Treating or plan to treat off site

☐ Treatment options still being assessed

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

DST System wastes will be retrieved, pretreated, and solidified for disposal. The waste may be vitrified in a process that will destroy or extract organic and cyanide constituents to below treatment standards, neutralize or deactivate dangerous waste and extremely hazardous waste, and immobilize toxic metals.

**4.4 Treatment schedule information:**

Per TPA milestone M-62-00:
M-62-09, Hot Start - 02/28/2009
M-62-00A, Complete Phase I Pretreatment - 2/2018

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

| Milestone Number | Due Date |
|---|---|
| M-020-00 | 12/31/2008 |
| M-043-00 | 06/30/2005 |
| M-046-00J | 09/30/2003 |
| M-047-00 | 02/28/2018 |
| M-048-00 | 09/30/2007 |
| M-051-00 | 12/31/2028 |
| M-061-00 | 12/31/2028 |
| M-062-00 | 12/31/2028 |
| M-090-00 | |
| M-092-00 | |

**4.6 Proposed new Tri-Party Agreement treatment milestones:**

Negotiations as outlined in the TPA, to include those in the M-62, series and other modifications necessary to maintain compliance with agreement requirements.

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

☒ Yes ☐ No ☐ Unknown

If yes, describe: The treatment method, high-level vitrification was chosen on the basis of the "Final Environmental Impact Statement for the Tank Waste Remediation System," (DOE/EIS-0189) and the subsequent ROD, as a matter of necessity for compliance with the regulations for this waste. Waste minimization will be considered during the design and development of the vitrification plant in accordance with federal and state laws and regulations, and DOE orders.

# LDR REPORT TREATABILITY GROUP DATA SHEET

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

None at this time.

**4.9 Key Assumptions:**

Tank waste is not currently being treated for LDR concerns.

## 5.0 WASTE STREAM DISPOSAL

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

In accordance with current plans, the vitrified low-activity waste fraction will be disposed of onsite in a retrievable form. The vitrified HLW fraction will be stored on site until the Geologic Repository Program is available to receive wastes for disposal.

# LDR REPORT WASTE LOCATION-SPECIFIC DATA SHEET

## 1.0 WASTE STREAM IDENTIFICATION AND SOURCE

1.1 **Unit/Plant name:** 222-S Laboratory Complex/219-S Waste Handling Facility **Waste Stream:** Bulk Aqueous Liquids

**Treatabilitiy Group Name:** DST Waste

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

None.

1.3 **Waste stream source information**

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

Aqueous liquid waste is generated from analytical procedures, unused or expired standards and reagents, and unused Tank Farm samples.

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

This waste stream is generated from analytical procedure operations, unused samples, unused or expired standards and reagents. The facility will generate this waste throughout the 222-S Laboratory Complex (analytical procedures, hot cell, 219-S WHF operations).

1.3.3 **Source of the regulated constituents:**

Hanford Site generating locations (e.g. LLBG, PFP, Tank Farms, K-Basins, ETF, ERDF, etc.). Analytical procedures standards and reagents.

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

Waste Stream Fact Sheets (WSFS), Container Disposal Request (CDR), Inventory sheets, MSDSs, and Request for Sample Analysis.

1.3.5 **Additional notes:**

None.

## 2.0 WASTE STREAM STORAGE, INVENTORY, AND GENERATION INFORMATION

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

2.1 **Current storage method**

☐ Container (pad) ☐ Container (covered) ☐ Container (retrievably buried)

☒ Tank ☐ DST ☐ SST

☐ Other (explain):

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

Per the Hanford Facility Dangerous Waste Permit Application, 222-S Laboratory Complex (DOE/RL-91-27 Revision 1).

# LDR REPORT WASTE LOCATION-SPECIFIC DATA SHEET

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

The last transfer of 219-S waste to the DST System occurred on September 19, 2003. Thus the timeframe would be from that date until December 31, 2003 for the purposes of this report.

**2.2 Storage inventory locations:**

| Building/Room Number | Number of Containers/Tanks |
|---|---|
| 219S WHF | 3 |

**2.3 Current stored inventory for this stream.**

Total volume (cubic meters): 6.300

Date of inventory values: 12/31/2003

Comments on waste inventory:

The waste volume was based on actual tank readings. (CY 2003 =1667.4 gallons.). A fourth tank, Tank 103 is inactive and only contains a heel. Tank 103 does not contribute to this volume.

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

☐ Yes ☒ No

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

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

Bases and assumptions used:

N/A

**2.5 Planned storage areas for this waste:**

☒ Current Location ☐ CWC ☒ DST

☐ Other Area(s) (list):

☐ None

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

| Year | $m^3$ | and/or | kg |
|---|---|---|---|
| 2004 | 38.000 | | |
| 2005 | 38.000 | | |
| 2006 | 38.000 | | |
| 2007 | 38.000 | | |
| 2008 | 38.000 | | |
| Total | 190.000 | | |

**2.7 DOE Storage Compliance Assessment information:**

☒ Assessment has been completed.

# LDR REPORT WASTE LOCATION-SPECIFIC DATA SHEET

| Document Number | Date |
|---|---|
| A&E-SEC-01-018 | 12/03/2002 |

☐ 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-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.

Characterization is performed as necessary to facilitate batch transfer of the waste to the DST System. A commitment is not necessary for this characterization.

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

☒ Yes ☐ No ☐ Unknown at this time

| Milestone Number | Due Date |
|---|---|
| N/A | N/A |

If yes or unknown, comment on characterization for treatment.

See DST Waste LSDS.

# LDR REPORT WASTE LOCATION-SPECIFIC DATA SHEET

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

☐ Yes ☐ No ☒ Unknown at this time

| Milestone Number | Due Date |
|---|---|
| N/A | N/A |

If yes or unknown, comment on characterization for disposal.

See DST Waste LSDS.

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

Tank 103 was flushed and has a remaining heel. The heel will be left in place until the 219-S WHF undergoes RCRA closure as documented in the 222-S Laboratory Complex Part B Permit Application. Tank 103 will be left in place and addressed during the closure of the 219-S tank system. The 222-S Laboratory Complex Part B Permit Application and resolution of NOD comments reflects Ecology agreement with this strategy. Tank 103 contents were sampled before tank was emptied per Ecology agreement.

## 3.0 WASTE MINIMIZATION

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

☒ Yes ☐ No

If yes, provide date assessment conducted: 9/2000

If yes, provide document number or other identification:

Operating and analytical procedures at the 222-S Laboratory Complex.

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

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

Currently, the Laboratory optimizes the use of labware for the work performed. Proper planning is used prior to waste generation through AJHA pre-job, and consistent review of routine operations minimizes waste generation where possible. Also, the Laboratory constantly seeks innovative opportunities to reduce waste by being aware of current waste minimizing technology.

**3.3 Waste minimization schedule**

**3.3.1 Reduction achieved during calendar year 2003 (volume or mass)**

7.300 m3

# LDR REPORT WASTE LOCATION-SPECIFIC DATA SHEET

**3.3.2 Projected future waste volume reductions**

| Year | $m^3$ | and/or | kg |
|---|---|---|---|
| 2004 | 0.000 | | |
| 2005 | 0.000 | | |
| 2006 | 0.000 | | |
| 2007 | 0.000 | | |
| 2008 | 0.000 | | |
| Total | 0.000 | | |

**3.3.3 Bases and assumptions used in above estimates:**

DOE/RL-2000-79- "Pollution Prevention Accomplishments" reported waste reductions for CY 2000. The waste reduction volume reported above in Section 3.3.1 is a total waste minimization volume for similar waste streams across the 222-S Laboratory Complex; this waste stream may be a portion of what was reported. 222-S has no waste minimization goals for this waste stream; therefore, no projected future waste volume reductions are reported above in Section 3.3.2. However, the analytical process generating this stream is continuously evaluated for waste minimization opportunities.

# LDR REPORT WASTE LOCATION-SPECIFIC DATA SHEET

## 1.0 WASTE STREAM IDENTIFICATION AND SOURCE

1.1 **Unit/Plant name:** DST System **Waste Stream:** DST System

**Treatabilitiy Group Name:** DST Waste

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

N/A

1.3 **Waste stream source information**

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

The DST System contains wastes such as: concentrated phosphate waste, double-shell slurry feed, concentrated complexant waste, dilute complexed and non-complexed wastes, double-shell slurry, and PUREX decladding wastes. The tanks contain mixed wastes which are liquid, layered over solids, such as saltcake and sludge. The 241-AY and 241-AZ tank farms contain Aging Waste.

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

The majority of these wastes are from past chemical separation processes (legacy wastes). The major contributors to the wastes stored here are PUREX, B Plant, the PFP and saltwell liquids from the SST System. Smaller amounts of other miscellaneous wastes such as laboratory wastes and wastes from the clean out of facilities in the 100, 200, 300, 400 and 600 areas are stored in the DST System. Waste streams are treated with sodium hydroxide and sodium nitrite to minimize tank corrosion and to address compatibility issues.

1.3.3 **Source of the regulated constituents:**

Hazardous constituents in the waste are from chemicals used during operations and maintenance, and laboratories, including analytical laboratories, as well as R&D work. The waste could also contain some remediation and D&D wastes.

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

Process knowledge, Tank Characterization Reports, and analytical data from Waste Stream Profile Sheets.

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):

# LDR REPORT WASTE LOCATION-SPECIFIC DATA SHEET

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

Waste was managed at the specific contributing operating facility or in the SST System.

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

From 1971 to the present.

**2.2 Storage inventory locations:**

| Building/Room Number | Number of Containers/Tanks |
|---|---|
| 241-AN | 7 Tanks |
| 241-AP | 8 Tanks |
| 204-AR | 1 Tank |
| 241-AW | 6 Tanks |
| 241-AY | 2 Tanks |
| 241-AZ | 2 Tanks |
| 241-SY | 3 Tanks |
| DCRT | 5 Tanks |
| DST System | Diversion Boxes |
| N/A | Valve Pits |
| N/A | Catch Tanks |
| N/A | Vent Station |

**2.3 Current stored inventory for this stream.**

Total volume (cubic meters): 93,000.000

Date of inventory values: 12/31/2003

Comments on waste inventory:

The volume is rounded to the nearest 1,000 cubic meter. Tank volumes are determined by waste level measurements, which are then converted to volumes. Actual tank volumes at any given time may differ from the reported values due to factors such as instrumentation errors, uneven surfaces, and calculation rounding errors. DST waste level data for 12/31/2003 were obtained from the Surveillance Analysis Computer System (SACS) through the Tank Waste Information Network System (TWINS) interface.

**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? 127000

When is this capacity expected to be reached? 2007

Bases and assumptions used:

The volume is rounded to the nearest 1,000 cubic meter. Current storage capacity is 119,000 cubic meters based on the DST capacity reported in HNF-EP-0182, Rev. 188. Storage capacity of DST system projected to be raised to 127,000 cubic meters by July 2007 (HNF-SD-WM-SP-012, Rev. 5). The DST system is projected to be filled to the available capacity by December 2007 (HNF-SD-WM-SP-012, Rev. 5). The date at which the capacity is reached is dependent on yearly operation of the 242-A Evaporator, and the order and schedule for retrieval of SST wastes.

# LDR REPORT WASTE LOCATION-SPECIFIC DATA SHEET

**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 |
|---|---|---|---|
| 2004 | 0.000 | | |
| 2005 | 0.000 | | |
| 2006 | 0.000 | | |
| 2007 | 0.000 | | |
| 2008 | 0.000 | | |
| Total | 0.000 | | |

**2.7 DOE Storage Compliance Assessment information:**

☒ Assessment has been completed.

| Document Number | Date |
|---|---|
| A-01-EMD-TF-09 | 12/31/2001 |

☒ Assessment has been scheduled. Scheduled date: See Table 3-4 for list of scheduled assessments.

☐ Other. Explain:

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

| Milestone Number | Due Date |
|---|---|
| M-043-00 | 06/30/2005 |
| M-047-00 | 02/28/2018 |
| M-048-00 | 09/30/2007 |
| M-090-06 | 12/31/2002 |

**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

# LDR REPORT WASTE LOCATION-SPECIFIC DATA SHEET

**2.11 Characterization**

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

☐ Yes ☒ No ☐ Unknown at this time

| Milestone Number | Due Date |
|---|---|
| N/A | N/A |

If yes or unknown, comment on characterization for storage.

N/A

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

☒ Yes ☐ No ☐ Unknown at this time

| Milestone Number | Due Date |
|---|---|
| N/A | N/A |

If yes or unknown, comment on characterization for treatment.

The DST waste will be characterized as required to meet the waste acceptance criteria of the treating facility. This will be completed by 2028.

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

☐ Yes ☐ No ☒ Unknown at this time

| Milestone Number | Due Date |
|---|---|
| N/A | N/A |

If yes or unknown, comment on characterization for disposal.

It is unknown if further information will be needed for disposal. Awaiting information such as, variance and delisting petitions.

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

Waste will be sampled and characterized per applicable Data Quality Objectives, and/or the Regulatory Data Quality Objectives Supporting Tank Waste Remediation System Privatization Project, PNNL-12040 Rev 0, 12/1998.

## 3.0 WASTE MINIMIZATION

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

☒ Yes ☐ No

If yes, provide date assessment conducted: 9/1995

If yes, provide document number or other identification:

P20A ID Code 95-0007

# LDR REPORT WASTE LOCATION-SPECIFIC DATA SHEET

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

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

Some of the waste sent to the DST System is reduced at the generating location through pretreatment and recycling of streams. Waste is also minimized by treatment at the 242-A Evaporator. The frequency and volumes of flush solutions has also been minimized. The calendar year 2003 reduction shown below is based on 242-A Evaporator runs.

**3.3 Waste minimization schedule**

**3.3.1 Reduction achieved during calendar year 2003 (volume or mass)**

45.000 m3

**3.3.2 Projected future waste volume reductions**

| Year | $m^3$ | and/or | kg |
|---|---|---|---|
| 2004 | 11,000.000 | | |
| 2005 | 16,000.000 | | |
| 2006 | 10,000.000 | | |
| 2007 | 6,000.000 | | |
| 2008 | 4,000.000 | | |
| Total | 47,000.000 | | |

**3.3.3 Bases and assumptions used in above estimates:**

The waste volume reduction is based on plans to concentrate the waste to a 1.47 specific gravity and on planned schedules for evaporator campaigns.

# LDR REPORT WASTE LOCATION-SPECIFIC DATA SHEET

## 1.0 WASTE STREAM IDENTIFICATION AND SOURCE

1.1 **Unit/Plant name:** PFP/241-Z Treatment and Storage Tanks **Waste Stream:** Mixed Waste Tanks

**Treatabilitiy Group Name:** DST Waste

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

None.

1.3 **Waste stream source information**

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

The liquid waste in the 241-Z dangerous waste tank system was and continues to be generated from PFP development and analytical laboratory testing and procedures, operation of the precipitation processes, stabilization operations, and from miscellaneous facility support and cleanout flush activities. The waste received by the 241-Z dangerous waste tank system may contain arsenic, barium, cadmium, chromium, lead, mercury, selenium, silver, or carbon tetrachloride (designated as waste number D019), based on process knowledge, modeling, and some sampling. The wastes are chemically adjusted to a pH of greater than 12.5 to ensure compatibility of the waste and tank construction materials.

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

These tanks are used to store and treat the radioactive liquid wastes (RLW) generated in PFP before transfer to the tank farms. Also see item 1.3.1 above.

1.3.3 **Source of the regulated constituents:**

1) Chemicals are added to meet DST acceptance criteria 2) Hazardous constituents in the process and laboratory waste are discharged from the plant to the tanks.

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

Process knowledge, modeling, and some sampling.

1.3.5 **Additional notes:**

These liquid wastes are not treated to LDR standards prior to transfer to the DST System.

## 2.0 WASTE STREAM STORAGE, INVENTORY, AND GENERATION INFORMATION

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

2.1 **Current storage method**

☐ Container (pad) ☐ Container (covered) ☐ Container (retrievably buried)

☒ Tank ☐ DST ☐ SST

☐ Other (explain):

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

# LDR REPORT WASTE LOCATION-SPECIFIC DATA SHEET

Laboratory waste and facility support activities waste are either accumulated in satellite accumulation or 90 day areas after generation and prior to discharge to the 241-Z mixed waste tanks or introduced directly into the tank waste system upon generation of the waste. Waste generated from the processing operations (for example, Precipitation Processes), are introduced to the 241-Z mixed waste tanks at the point of generation.

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

Waste is accumulated into a 12,000 kg batch and then transferred to the DST System.

**2.2 Storage inventory locations:**

| Building/Room Number | Number of Containers/Tanks |
|---|---|
| 241-Z | 4 Tanks |

**2.3 Current stored inventory for this stream.**

Total volume (cubic meters): 20.000

Date of inventory values: 12/31/2003

Comments on waste inventory:

Rounded to the nearest cubic meter.

**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 |
|---|---|---|---|
| 2004 | 45.000 | | |
| 2005 | 30.000 | | |
| 2006 | 0.000 | | |
| 2007 | 0.000 | | |
| 2008 | 0.000 | | |
| Total | 75.000 | | |

# LDR REPORT WASTE LOCATION-SPECIFIC DATA SHEET

**2.7 DOE Storage Compliance Assessment information:**

☒ Assessment has been completed.

| Document Number | Date |
|---|---|
| RCRA Assessment A&E- 00-ASSMT-074; ltr #01-A&E-052 | 02/21/2001 |

☐ Assessment has been scheduled. Scheduled date:

☐ Other. Explain:

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

| Milestone Number | Due Date |
|---|---|
| M-083-30 | 07/31/2003 |
| M-083-31 | 06/30/2005 |
| M-083-32 | 09/30/2011 |
| M-083-42 | 09/30/2011 |

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

☐ Yes ☒ No

If yes, summarize releases and quantities and provide date:

N/A

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

☐ Yes ☒ No

If yes, explain: N/A

**2.11 Characterization**

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

☒ Yes ☐ No ☐ Unknown at this time

| Milestone Number | Due Date |
|---|---|
| N/A | N/A |

If yes or unknown, comment on characterization for storage.

The waste is characterized prior to each batch transfer in accordance with applicable acceptance criteria for transfer to the DST System. No characterization commitment needed because it is performed as part of normal requirements to transfer waste.

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

☒ Yes ☐ No ☐ Unknown at this time

# LDR REPORT WASTE LOCATION-SPECIFIC DATA SHEET

| Milestone Number | Due Date |
|---|---|
| N/A | N/A |

If yes or unknown, comment on characterization for treatment.

See DST Waste LSDS.

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

☐ Yes ☐ No ☒ Unknown at this time

| Milestone Number | Due Date |
|---|---|
| N/A | N/A |

If yes or unknown, comment on characterization for disposal.

See DST Waste LSDS.

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

None.

## 3.0 WASTE MINIMIZATION

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

☒ Yes ☐ No

If yes, provide date assessment conducted: CY 2001

If yes, provide document number or other identification:

PFP 2001 Waste Minimization Evaluation for LDR Report Waste Streams, Letter# M2100-02-016

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

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

PFP has a waste minimization program, is operating under TPA milestones to cease discharges to tank farms, and is working towards eliminating liquid waste streams early in D&D work.

**3.3 Waste minimization schedule**

**3.3.1 Reduction achieved during calendar year 2003 (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 |
|---|---|---|---|
| 2004 | 0.000 | | |
| 2005 | 0.000 | | |
| 2006 | 0.000 | | |
| 2007 | 0.000 | | |
| 2008 | 0.000 | | |
| Total | 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:** ERDF -- Treatment

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

This waste stream reflects mixed waste that requires treatment prior to disposal at ERDF. The waste is stored at the operable unit, and is shipped to ERDF where waste treatment and/or disposal occurs.

## 2.0 WASTE INVENTORY AND GENERATION

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

Total volume (cubic meters): 80.000

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

| Year | $m^3$ | and/or | kg |
|---|---|---|---|
| 2004 | 21,582.000 | | |
| 2005 | 21,581.000 | | |
| 2006 | 21,581.000 | | |
| 2007 | 21,580.000 | | |
| 2008 | 21,580.000 | | |
| Total | 107,904.000 | | |

## 3.0 WASTE STREAM CHARACTERIZATION

**3.1 Radiological Characteristics**

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

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

☒ Contact-handled ☐ Remote-handled

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

ERDF accepts waste from CERCLA clean up actions performed across the Hanford Site. The waste disposed at ERDF meets the ERDF Waste Acceptance Criteria, BHI-00139, Rev. 4 (or current revision).

### 3.2 Physical Form

**3.2.1 Physical form of the waste:**

☒ Solid ☐ Liquid ☐ Semi-solid ☒ Debris

☐ Other (Describe in comments.)

**3.2.2 Comments on physical form:**

Waste is stabilized in place at time of disposal.

# LDR REPORT TREATABILITY GROUP DATA SHEET

**3.3 Regulated constituents and wastewater/non-wastewater category**

**3.3.1 Wastewater/non-wastewater under RCRA**

☐ Wastewater ☒ Non-wastewater ☐ Unknown

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

| EPA/ State Number | Waste Description | LDR Sub-Category* | Concentration (Typical or Range)** | Basis | LDR Treatment Concentration Standard or Technology Code |
|---|---|---|---|---|---|
| D007 | Chromium | N/A | ** | process knowledge and analytical data | macroencapsulation |
| D008 | Lead | lead char. | ** | process knowledge and analytical data | macroencapsulation |

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

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

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

☐ List:

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

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

**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:**

Spent resins have been sampled and are of high confidence. Contaminated remediation waste may or may not contain PCBs. Section 4.3.4 of the ERDF acceptance criteria addresses disposal of PCB contaminated waste.

## 4.0 WASTE STREAM TREATMENT

**4.1 Is this waste stream currently being treated?**

☒ Yes ☐ No

If yes, provide details: Waste is stabilized when disposed of at ERDF.

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

☐ No treatment required (skip to Section 5.0)

☒ Treating or plan to treat on site

☐ Treating or plan to treat off site

☐ Treatment options still being assessed

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

Stabilization capacity is available for treatment within the ERDF on an as needed basis.

**4.4 Treatment schedule information:**

ERDF acceptance of waste requiring treatment is coordinated so treatment and disposal can occur within a short time of receipt of the waste.

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

| Milestone Number | Due Date |
|---|---|
| N/A | N/A |

**4.6 Proposed new Tri-Party Agreement treatment milestones:**

None.

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

☐ Yes ☒ No ☐ Unknown

If yes, describe: N/A

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

None planned at this time.

# LDR REPORT TREATABILITY GROUP DATA SHEET

**4.9 Key Assumptions:**

Volume projections are based on the volume of contaminated soil and debris encountered during calendar year 2002 and 2003.

## 5.0 WASTE STREAM DISPOSAL

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

Waste stream is disposed of at ERDF.

# LDR REPORT WASTE LOCATION-SPECIFIC DATA SHEET

## 1.0 WASTE STREAM IDENTIFICATION AND SOURCE

1.1 **Unit/Plant name:** 100-HR-3 **Waste Stream:** CERCLA Resin

**Treatabilitiy Group Name:** ERDF -- Treatment

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

N/A

1.3 **Waste stream source information**

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

Spent ion exchange resins.

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

Contaminated ion exchange resins generated during operations of the 100-HR-3 and 100-KR-4 groundwater pump and treat.

1.3.3 **Source of the regulated constituents:**

Discharge of process liquids to the soil (via cribs, ponds, ditches, and trenches).

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

Analytical data.

1.3.5 **Additional notes:**

The resin will be treated at, and disposed of at ERDF, or sent to an off-site facility for regeneration and reuse.

## 2.0 WASTE STREAM STORAGE, INVENTORY, AND GENERATION INFORMATION

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

2.1 **Current storage method**

☐ Container (pad) ☐ Container (covered) ☐ Container (retrievably buried)

☐ Tank ☐ DST ☐ SST

☒ Other (explain): Waste is placed in drums or burial boxes awaiting treatment prior to disposal. A contained-in determination for listed waste codes has been approved by Ecology, and stabilization for chromium will be conducted if necessary to satisfy the ERDF waste acceptance criteria. Alternatively, non-mixed (non-rad/non-dangerous) resin can be regenerated instead of treated/disposed.

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

Waste is managed in the Area of Contamination.

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

Spent resin started being generated when the remedial action began. Waste is generated and located in the CERCLA Area of Contamination.

# LDR REPORT WASTE LOCATION-SPECIFIC DATA SHEET

**2.2 Storage inventory locations:**

| Building/Room Number | Number of Containers/Tanks |
|---|---|
| Operable Unit | 14 boxes |

**2.3 Current stored inventory for this stream.**

Total volume (cubic meters): 80.000

Date of inventory values: 12/31/2003

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): Waste is stored at the 100-HR-3 Area of Contamination prior to being shipped to ERDF for treatment and disposal, or off-site for regeneration.

☐ None

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

| Year | $m^3$ | and/or | kg |
|---|---|---|---|
| 2004 | 80.000 | | |
| 2005 | 80.000 | | |
| 2006 | 80.000 | | |
| 2007 | 80.000 | | |
| 2008 | 80.000 | | |
| Total | 400.000 | | |

**2.7 DOE Storage Compliance Assessment information:**

☐ Assessment has been completed.

| Document Number | Date |
|---|---|
| | |

# LDR REPORT WASTE LOCATION-SPECIFIC DATA SHEET

☒ Assessment has been scheduled. Scheduled date: 2nd quarter CY 2005

☐ Other. Explain:

**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 |

# 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: September 2000

If yes, provide document number or other identification:

System Optimization.

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

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

The duration that the ion exchange resin will remain in the pump and treat system has been reduced (starting 9/00). As a result, the resins in general will not be mixed waste and can be regenerated instead of treated/disposed.

**3.3 Waste minimization schedule**

**3.3.1 Reduction achieved during calendar year 2003 (volume or mass)**

0.000 m3

**3.3.2 Projected future waste volume reductions**

| Year | $m^3$ | and/or | kg |
|---|---|---|---|
| 2004 | 0.000 | | |
| 2005 | 0.000 | | |
| 2006 | 0.000 | | |
| 2007 | 0.000 | | |
| 2008 | 0.000 | | |
| Total | 0.000 | | |

**3.3.3 Bases and assumptions used in above estimates:**

The forecast volume of waste generated by this activity reflects the waste minimization effort undertaken by the project. The waste generation volume assumes that one resin change out per year will be disposed as mixed waste.

# LDR REPORT WASTE LOCATION-SPECIFIC DATA SHEET

## 1.0 WASTE STREAM IDENTIFICATION AND SOURCE

1.1 **Unit/Plant name:** 233-S **Waste Stream:** 233-S CERCLA Lead

**Treatabilitiy Group Name:** ERDF -- Treatment

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

233S-007

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):**

Decontamination and decommissioning (D&D) waste.

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

Waste was generated as a result of facility D&D.

1.3.3 **Source of the regulated constituents:**

Hazardous constituents were introduced as part of plant operations.

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

Process knowledge and analytical data.

1.3.5 **Additional notes:**

This waste stream only accounts for the LLMW CERCLA lead that will be shipped to the ERDF for treatment.

## 2.0 WASTE STREAM STORAGE, INVENTORY, AND GENERATION INFORMATION

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

2.1 **Current storage method**

☐ Container (pad) ☐ Container (covered) ☐ Container (retrievably buried)

☐ Tank ☐ DST ☐ SST

☐ Other (explain): N/A

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

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

2.2 **Storage inventory locations:**

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

# LDR REPORT WASTE LOCATION-SPECIFIC DATA SHEET

**2.3 Current stored inventory for this stream.**

Total volume (cubic meters): 0.000

Date of inventory values: 12/31/2003

Comments on waste inventory:

Waste is managed within CERCLA area of contamination.

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

Yes No

If yes, what is the total estimated storage capacity?

When is this capacity expected to be reached?

Bases and assumptions used:

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 |
|---|---|---|---|
| 2004 | 1.000 | | |
| 2005 | 0.000 | | |
| 2006 | 0.000 | | |
| 2007 | 0.000 | | |
| 2008 | 0.000 | | |
| Total | 1.000 | | |

**2.7 DOE Storage Compliance Assessment information:**

☐ Assessment has been completed.

| Document Number | Date |
|---|---|
| | |

☐ Assessment has been scheduled. Scheduled date:

☒ Other. Explain: Not scheduled at this time.

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

| Milestone Number | Due Date |
|---|---|
| N/A | N/A |

# LDR REPORT WASTE LOCATION-SPECIFIC DATA SHEET

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

☐ Yes ☒ No

If yes, summarize releases and quantities and provide date:

N/A

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

☐ Yes ☒ No

If yes, explain: N/A

**2.11 Characterization**

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

☐ Yes ☒ No ☐ Unknown at this time

| Milestone Number | Due Date |
|---|---|
| N/A | N/A |

If yes or unknown, comment on characterization for storage.

N/A

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

☒ Yes ☐ No ☐ Unknown at this time

| Milestone Number | Due Date |
|---|---|
| N/A | N/A |

If yes or unknown, comment on characterization for treatment.

Characterization is ongoing and will be completed to transfer the LLMW lead to ERDF for treatment. Performed under an Action Memorandum.

**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:**

This phase of the D&D project is scheduled to be completed by June 2004. DOE is completing D&D of this facility under an Action Memorandum from EPA

# LDR REPORT WASTE LOCATION-SPECIFIC DATA SHEET

## 3.0 WASTE MINIMIZATION

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

☐ Yes ☒ No

If yes, provide date assessment conducted:

If yes, provide document number or other identification:

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

N/A

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

Waste is segregated to minimize the volume of LLMW lead waste generated.

**3.3 Waste minimization schedule**

**3.3.1 Reduction achieved during calendar year 2003 (volume or mass)**

0.000 m3

**3.3.2 Projected future waste volume reductions**

| Year | $m^3$ | and/or | kg |
|---|---|---|---|
| 2004 | 0.000 | | |
| 2005 | 0.000 | | |
| 2006 | 0.000 | | |
| 2007 | 0.000 | | |
| 2008 | 0.000 | | |
| Total | 0.000 | | |

**3.3.3 Bases and assumptions used in above estimates:**

Projected volumes relate to 233-S decomissioning schedule.

# LDR REPORT WASTE LOCATION-SPECIFIC DATA SHEET

## 1.0 WASTE STREAM IDENTIFICATION AND SOURCE

**1.1 Unit/Plant name:** CERCLA Waste **Waste Stream:** CERCLA Waste

**Treatabilitiy Group Name:** ERDF -- Treatment

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

N/A

**1.3 Waste stream source information**

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

Contaminated remediation waste generated in the 100, 200, 300, and 600 Areas of the Hanford Site from excavation of waste sites and decommissioning of the Hanford Site Reactors. Waste stream is generated pursuant to a ROD, or other CERCLA authorization documents, and disposed pursuant to the ERDF ROD.

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

The majority of waste is contaminated soil and debris resulting from past Hanford Site operations in which reactor coolant liquids were discharged to cribs, ponds, ditches, and trenches. Lead was used in the reactors for shielding.

**1.3.3 Source of the regulated constituents:**

Generated as a result of past Hanford Site operations, see Section 1.3.2 of this data sheet.

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

Process knowledge and analytical data.

**1.3.5 Additional notes:**

The amount of waste generated and treated from remediation decommissioning, and other projects may vary from year-to-year. The burial ground remediation in calendar year 2002 resulted in large amounts of lead contaminated soil and debris requiring treatment and disposal. In calendar year 2003, the overall amount of waste treated was less. The volume projections in this data sheet are based on an average of the volume of waste treated in calendar year 2002 and calendar year 2003.

## 2.0 WASTE STREAM STORAGE, INVENTORY, AND GENERATION INFORMATION

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

**2.1 Current storage method**

| | | |
|---|---|---|
| ☐ Container (pad) | ☐ Container (covered) | ☐ Container (retrievably buried) |
| ☐ Tank | ☐ DST | ☐ SST |
| ☒ Other (explain): | Waste may be staged within the Area of Contamination prior to treatment | |

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

Soil and debris is excavated or demolished, placed in containers, and transported to ERDF for treatment and disposal.

# LDR REPORT WASTE LOCATION-SPECIFIC DATA SHEET

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

N/A

**2.2 Storage inventory locations:**

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

**2.3 Current stored inventory for this stream.**

Total volume (cubic meters): 0.000

Date of inventory values: 12/31/2003

Comments on waste inventory:

N/A

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

☐ Yes ☒ No

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

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

Bases and assumptions used:

N/A

**2.5 Planned storage areas for this waste:**

☐ Current Location ☐ CWC ☐ DST

☒ Other Area(s) (list): Waste may be staged within the Area of Contamination prior to treatment and disposal.

☐ None

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

| Year | $m^3$ | and/or | kg |
|---|---|---|---|
| 2004 | 21,500.000 | | |
| 2005 | 21,500.000 | | |
| 2006 | 21,500.000 | | |
| 2007 | 21,500.000 | | |
| 2008 | 21,500.000 | | |
| Total | 107,500.000 | | |

**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: 2nd quarter CY 2005

☐ Other. Explain:

## 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

# LDR REPORT WASTE LOCATION-SPECIFIC DATA SHEET

| Milestone Number | Due Date |
|---|---|
| N/A | N/A |

If yes or unknown, comment on characterization for disposal.

N/A

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

Future burial ground remediation has the potential to generate large volumes of contaminated soil and debris, but the actual volumes cannot be predicted until site remediation is performed.

## 3.0 WASTE MINIMIZATION

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

☐ Yes ☒ No

If yes, provide date assessment conducted: N/A

If yes, provide document number or other identification:

N/A

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

Waste minimization assessments are identified by the generating facility

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

**3.3 Waste minimization schedule**

**3.3.1 Reduction achieved during calendar year 2003 (volume or mass)**

0.000 m3

**3.3.2 Projected future waste volume reductions**

| Year | $m^3$ | and/or | kg |
|---|---|---|---|
| 2004 | 0.000 | | |
| 2005 | 0.000 | | |
| 2006 | 0.000 | | |
| 2007 | 0.000 | | |
| 2008 | 0.000 | | |
| Total | 0.000 | | |

**3.3.3 Bases and assumptions used in above estimates:**

None.

# LDR REPORT WASTE LOCATION-SPECIFIC DATA SHEET

## 1.0 WASTE STREAM IDENTIFICATION AND SOURCE

**1.1 Unit/Plant name:** K Basin **Waste Stream:** Miscellaneous Lead

**Treatability Group Name:** ERDF -- Treatment

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

N/A

**1.3 Waste stream source information**

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

Miscellanours radioactive contaminated lead bricks, sheets and misc lead are located at the 100-K Area. The lead was used for shielding during reactor operations. When generated, it is classified as CERCLA waste and will be disposed of at ERDF.

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

The lead is generated as part of 100-K Area cleanup.

**1.3.3 Source of the regulated constituents:**

Lead.

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

Process knowledge.

**1.3.5 Additional notes:**

None.

## 2.0 WASTE STREAM STORAGE, INVENTORY, AND GENERATION INFORMATION

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

**2.1 Current storage method**

☐ Container (pad) ☐ Container (covered) ☐ Container (retrievably buried)

☐ Tank ☐ DST ☐ SST

☐ Other (explain):

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

N/A

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

N/A

**2.2 Storage inventory locations:**

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

# LDR REPORT WASTE LOCATION-SPECIFIC DATA SHEET

**2.3 Current stored inventory for this stream.**

Total volume (cubic meters):

Date of inventory values:

Comments on waste inventory:

N/A

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

Yes No

If yes, what is the total estimated storage capacity?

When is this capacity expected to be reached?

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 |
|---|---|---|---|
| 2004 | 1.000 | | |
| 2005 | 1.000 | | |
| 2006 | 1.000 | | |
| 2007 | 0.000 | | |
| 2008 | 0.000 | | |
| Total | 3.000 | | |

**2.7 DOE Storage Compliance Assessment information:**

☐ Assessment has been completed.

| Document Number | Date |
|---|---|
| | |

☒ Assessment has been scheduled. Scheduled date: 1st and 2nd Quarter CY 2004

☐ Other. Explain:

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

| Milestone Number | Due Date |
|---|---|
| N/A | N/A |

# LDR REPORT WASTE LOCATION-SPECIFIC DATA SHEET

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

☐ Yes ☒ No

If yes, summarize releases and quantities and provide date:

N/A

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

☐ Yes ☒ No

If yes, explain: N/A

**2.11 Characterization**

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

☐ Yes ☒ No ☐ Unknown at this time

| Milestone Number | Due Date |
|---|---|
| N/A | N/A |

If yes or unknown, comment on characterization for storage.

N/A

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

☐ Yes ☒ No ☐ Unknown at this time

| Milestone Number | Due Date |
|---|---|
| N/A | N/A |

If yes or unknown, comment on characterization for treatment.

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

☐ Yes ☒ No ☐ Unknown at this time

| Milestone Number | Due Date |
|---|---|
| N/A | N/A |

If yes or unknown, comment on characterization for disposal.

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

Lead is generated after it no longer serves its intended purpose of shielding at the K Basins.

# LDR REPORT WASTE LOCATION-SPECIFIC DATA SHEET

## 3.0 WASTE MINIMIZATION

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

☐ Yes ☒ No

If yes, provide date assessment conducted: N/A

If yes, provide document number or other identification:

N/A

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

N/A - no assessment is planned.

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

None.

**3.3 Waste minimization schedule**

**3.3.1 Reduction achieved during calendar year 2003 (volume or mass)**

0.000 m3

**3.3.2 Projected future waste volume reductions**

| Year | $m^3$ | and/or | kg |
|---|---|---|---|
| 2004 | 0.000 | | |
| 2005 | 0.000 | | |
| 2006 | 0.000 | | |
| 2007 | 0.000 | | |
| 2008 | 0.000 | | |
| Total | 0.000 | | |

**3.3.3 Bases and assumptions used in above estimates:**

None.

# LDR REPORT TREATABILITY GROUP DATA SHEET

## 1.0 WASTE STREAM IDENTIFICATION

**1.1 Treatability Group Name:** HSTF

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

Residual heel content remaining from Reduction/Oxidation (REDOX) Process.

## 2.0 WASTE INVENTORY AND GENERATION

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

Total volume (cubic meters): 2.100

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

| Year | $m^3$ | and/or | kg |
|---|---|---|---|
| 2004 | 0.000 | | |
| 2005 | 0.000 | | |
| 2006 | 0.000 | | |
| 2007 | 0.000 | | |
| 2008 | 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:**

Samples were taken from the tanks containing the process waste. The waste consists of about 12.7 centimeters (5 inches) of a tar-like substance. A sand/cement mixture was placed on top of the waste to stabilize and fill the tanks.

# LDR REPORT TREATABILITY GROUP DATA SHEET

**3.3 Regulated constituents and wastewater/non-wastewater category**

**3.3.1 Wastewater/non-wastewater under RCRA**

☐ Wastewater ☒ Non-wastewater ☐ Unknown

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

# 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 Ignitable char liquids | | process knowledge | RORGS; CMBS; or POLYM |
| D018 | benzene | N/A | 3.55 | TCLP | 10 mg/kg, meet 268.48 |
| D019 | carbon tetrachloride | N/A | 2.08 | TCLP | 6.0 mg/kg, meet 268.48 |
| D023 | o-Cresol | N/A | 89000 | TCLP | 5.6 mg/kg, meet 268.48 |
| D024 | m-Cresol | N/A | 180000 | TCLP | 5.6 mg/kg, meet 268.48 |
| D025 | p-Cresol | N/A | 180000 | TCLP | 5.6 mg/kg, meet 268.48 |
| D027 | p-Dichlorobenzene | N/A | 89000 | TCLP | 6.0 mg/kg, meet 268.48 |
| D028 | 1,2-Dichloroethane | N/A | 2.85 | TCLP | 6.0 mg/kg, meet 268.48 |
| D029 | 1,1-Dichlorotheylene | N/A | 3.38 | TCLP | 6.0 mg/kg, meet 268.48 |
| D030 | 2,4-Dinitrotoluene | N/A | 89000 | TCLP | 140 mg/kg, meet 268.48 |
| D032 | Hexachlorobenzene | N/A | 89000 | TCLP | 10 mg/kg, meet 268.48 |
| D033 | Hexachlorobutadine | N/A | 89000 | TCLP | 5.6 mg/kg, meet 268.48 |
| D034 | Hexachloroethane | N/A | 89000 | TCLP | 30 mg/kg, meet 268.48 |
| D036 | Nitrobenzene | N/A | 89000 | TCLP | 14 mg/kg, meet 268.48 |
| D037 | Pentachlorophenol | N/A | 180000 | TCLP | 7.4 mg/kg, meet 268.48 |
| D039 | Tetrachlorethylene | N/A | 1 | TCLP | 6.0 mg/kg, meet 268.48 |
| D040 | Trichloroethylene | N/A | 3.17 | TCLP | 6.0 mg/kg, meet 268.48 |
| D041 | 2,4,5-Trichlorophenol | N/A | 89000 | TCLP | 7.4 mg/kg, meet 268.48 |
| D042 | 2,4,6-Trichlorophenol | N/A | 89000 | TCLP | 7.4 mg/kg, meet 268.48 |
| D043 | Vinyl Chloride | N/A | 2.65 | TCLP | 6.0 mg/kg, meet 268.48 |
| F003 | Methyl isobutyl ketone | Spent Solvent | 28000 | lab data | 33 mg/kg |
| UHC | 1,1,2,2-tetrachloroethane | N/A | 54.5 | analytical data | 6 mg/kg |
| UHC | 1,1,2-trichloroethane | N/A | 82.5 | analytical data | 6 mg/kg |

# LDR REPORT TREATABILITY GROUP DATA SHEET

| EPA/ State Number | Waste Description | LDR Sub-Category* | Concentration (Typical or Range)** | Basis | LDR Treatment Concentration Standard or Technology Code |
|---|---|---|---|---|---|
| UHC | 1,2,4-Trichlorobenzene | N/A | 89000 | analytical data | 19 mg/kg |
| UHC | 1,2-Dichlorobenzene | N/A | 89000 | analytical data | 6 mg/kg |
| UHC | 1,3-Dichlorobenzene | N/A | 89000 | analytical data | 6 mg/kg |
| UHC | 2,4-Dichlorophenol | N/A | 89000 | analytical data | 14 mg/kg |
| UHC | 2,4-Dimethylphenol | N/A | 89000 | analytical data | 14 mg/kg |
| UHC | 2,4-Dinitrophenol | N/A | 89000 | analytical data | 160 mg/kg |
| UHC | 2,6-Dinitortoluene | N/A | 89000 | analytical data | 28 mg/kg |
| UHC | 2-Chloronaphthalene | N/A | 89000 | analytical data | 5.6 mg/kg |
| UHC | 2-Chlorophenol | N/A | 89000 | analytical data | 5.7 mg/kg |
| UHC | 2-Nitroaniline | N/A | 89000 | analytical data | 14 mg/kg |
| UHC | 2-Nitrophenol | N/A | 89000 | analytical data | 13 mg/kg |
| UHC | 4,6-Dinitro-2-cresol | N/A | 180000 | analytical data | 160 mg/kg |
| UHC | 4-Bromophenyl phenylether | N/A | 89000 | analytical data | 15 mg/kg |
| UHC | 4-Chloro-3-methylphenol | N/A | 89000 | analytical data | 14 mg/kg |
| UHC | 4-Chloroaniline | N/A | 89000 | analytical data | 16 mg/kg |
| UHC | 4-Nitroaniline | N/A | 89000 | analytical data | 28 mg/kg |
| UHC | 4-Nitrophenol | N/A | 89000 | analytical data | 29 mg/kg |
| UHC | Acenapthene | N/A | 89000 | analytical data | 3.4 mg/kg |
| UHC | Acenapthylene | N/A | 89000 | analytical data | 3.4 mg/kg |
| UHC | Anthracene | N/A | 89000 | analytical data | 3.4 mg/kg |
| UHC | Benzo(a)anthracene | N/A | 89000 | analytical data | 3.4 mg/kg |
| UHC | Benzo(a)pyrene | N/A | 89000 | analytical data | 3.4 mg/kg |
| UHC | Benzo(b)fluoranthene | N/A | 89000 | analytical data | 6.8 mg/kg |

# LDR REPORT TREATABILITY GROUP DATA SHEET

| EPA/ State Number | Waste Description | LDR Sub-Category* | Concentration (Typical or Range)** | Basis | LDR Treatment Concentration Standard or Technology Code |
|---|---|---|---|---|---|
| UHC | Benzo(g,h,i)perylene | N/A | 89000 | analytical data | 1.8 mg/kg |
| UHC | Benzo(k)fluoranthene | N/A | 89000 | analytical data | 6.8 mg/kg |
| UHC | bis(2-chloroethoxy)methane | N/A | 89000 | analytical data | 7.2 mg/kg |
| UHC | bis(2-chloroethyl)ether | N/A | 89000 | analytical data | 6 mg/kg |
| UHC | bis(2-ethylexyl)phthalate | N/A | 89000 | analytical data | 28 mg/kg |
| UHC | Butylbenzylphthalate | N/A | 89000 | analytical data | 28 mg/kg |
| UHC | Chrysene | N/A | 89000 | analytical data | 3.4 mg/kg |
| UHC | Di-n-butylphthalate | N/A | 89000 | analytical data | 28 mg/kg |
| UHC | Di-n-octylphthalate | N/A | 89000 | analytical data | 28 mg/kg |
| UHC | Dibenzo(a,h)anthracene | N/A | 89000 | analytical data | 8.2 mg/kg |
| UHC | Diethylphthalate | N/A | 89000 | analytical data | 28 mg/kg |
| UHC | Dimethylphthalate | N/A | 89000 | analytical data | 28 mg/kg |
| UHC | Fluoranthene | N/A | 89000 | analytical data | 3.4 mg/kg |
| UHC | Fluorene | N/A | 89000 | analytical data | 3.4 mg/kg |
| UHC | Hexachlorocyclopentadiene | N/A | 180000 | analytical data | 2.4 mg/kg |
| UHC | Indeno(1,2,3,-c,d)pyrene | N/A | 89000 | analytical data | 3.4 mg/kg |
| UHC | Lead | N/A | 0.995 | analytical data | 0.75 mg/kg |
| UHC | Napthalene | N/A | 89000 | analytical data | 5 mg/kg |
| UHC | PCB | N/A | 12.19 | analytical data | 10 mg/kg |
| UHC | Phenanthrene | N/A | 89000 | analytical data | 5.6 mg/kg |
| UHC | Phenol | N/A | 89000 | analytical data | 6.2 mg/kg |
| UHC | Pyrene | N/A | 89000 | analytical data | 8.2 mg/kg |

# LDR REPORT TREATABILITY GROUP DATA SHEET

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

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

*** All concentrations are in parts per million.

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

☒ List: benzene; carbon tetrachloride; 1,2-Dichloroethane; 1,1-Dichloroethylene; Tetrachloroethylene; Trichloroethylene; Vinyl Chloride

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

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

**3.3.4 Does this waste stream contain PCBs?**

☒ Yes ☐ No ☐ Unknown

If no or unknown, skip to Section 3.3.5.

**3.3.4.1 Is waste stream subject to TSCA regulations for PCBs?**

☐ Yes ☒ No ☐ Unknown

**3.3.4.2 Indicate the PCB concentration range.**

☒ < 50 ppm ☐ $ 50 ppm ☐ Unknown

**3.3.5 What is the confidence level for the regulated constituents?**

☐ Low ☐ Medium ☒ High

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

Tank waste was sampled in support of the interim stabilization effort.

## 4.0 WASTE STREAM TREATMENT

**4.1 Is this waste stream currently being treated?**

☐ Yes ☒ No

If yes, provide details: N/A

# LDR REPORT TREATABILITY GROUP DATA SHEET

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

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

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

Waste will be interim stabilized.

**4.4 Treatment schedule information:**

Interim stabilization was completed in FY 2002. Waste will be dispositioned with the TSD unit closure.

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

| Milestone Number | Due Date |
|---|---|
| N/A | N/A |

**4.6 Proposed new Tri-Party Agreement treatment milestones:**

N/A

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

☐ Yes ☐ No ☒ Unknown

If yes, describe: N/A 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:**

TSD closure will be corrdinated with the OU remediation in accordance with M-15 milestones for 200-IS-1 Operable Unit.

## 5.0 WASTE STREAM DISPOSAL

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

Closure of this TSD will be coordinated with the 200-IS-1 Operable Unit remediation.

# LDR REPORT WASTE LOCATION-SPECIFIC DATA SHEET

## 1.0 WASTE STREAM IDENTIFICATION AND SOURCE

1.1 **Unit/Plant name:** HSTF **Waste Stream:** HSTF 276-S-141/142

**Treatabilitiy Group Name:** HSTF

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

909, 647.

1.3 **Waste stream source information**

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

Tank and heel content.

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

The HSTF received liquid mixed waste from the Reduction/Oxidation (REDOX) Plant and possibly the Hot Semiworks Plant at shutdown of 202-S in 1967. In 1991 and 1992, the liquids were pumped from the tanks, distilled to reduce the volume, and transferred. The heels were all that remained in the tanks until the cement mixture was added to fill and stabalize the tanks.

1.3.3 **Source of the regulated constituents:**

The tanks were used to receive and store reagent-grade hexone used in the REDOX process. When the REDOX Plant was deactivated in 1967, the final cycle-recovered hexone from the plant was placed in the hexone storage tanks for storage. Tank 276-S-142 also contained kerosene and TBP from a one-time campaign to separate americium, curium, and promethium from Shippingport reactor blanket fuel in 1966. In 2002, the tank heel waste was stabilized in the interim by adding a cement material to the tanks according to Ecology approval.

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

Process knowledge and sampling data.

1.3.5 **Additional notes:**

Further information about the history of the TSD unit can be found in the Part A, Form 3, permit application.

## 2.0 WASTE STREAM STORAGE, INVENTORY, AND GENERATION INFORMATION

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

2.1 **Current storage method**

☐ Container (pad) ☐ Container (covered) ☐ Container (retrievably buried)

☒ Tank ☐ DST ☐ SST

☐ Other (explain):

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

Waste was stored in the tanks after being used in the REDOX Plant.

# LDR REPORT WASTE LOCATION-SPECIFIC DATA SHEET

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

Waste in the tanks was distilled in 1990-1992. The residual heel is a tar-like material and has been stored in the tanks since the distillation process was completed in 1992.

**2.2 Storage inventory locations:**

| Building/Room Number | Number of Containers/Tanks |
|---|---|
| 276-S-141 | 1 Tank |
| 276-S-142 | 1 Tank |

**2.3 Current stored inventory for this stream.**

Total volume (cubic meters): 2.100

Date of inventory values: 12/31/2003

Comments on waste inventory:

Waste is no longer generated. Volume is based on the quanitity of waste identified on the Part A, Form 3, Permit Application without the volume of the cement-like layer.

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

☐ Yes ☒ No

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

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

Bases and assumptions used:

N/A

**2.5 Planned storage areas for this waste:**

☒ Current Location ☐ CWC ☐ DST

☐ Other Area(s) (list):

☐ None

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

| Year | $m^3$ | and/or | kg |
|---|---|---|---|
| 2004 | 0.000 | | |
| 2005 | 0.000 | | |
| 2006 | 0.000 | | |
| 2007 | 0.000 | | |
| 2008 | 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 |
|---|---|
| | |

☐ Assessment has been scheduled. Scheduled date:

☒ Other. Explain: Not scheduled at this time.

**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.

Treatment will be determined as part of remediation of the 200-IS-1operable unit.

# LDR REPORT WASTE LOCATION-SPECIFIC DATA SHEET

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

☒ Yes ☐ No ☐ Unknown at this time

| Milestone Number | Due Date |
|---|---|
| N/A | N/A |

If yes or unknown, comment on characterization for disposal.

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

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

Tank waste was interim stabilized in place in accordance with Ecology approval. TSD closure will be coordinated with M-015 milestone for remediation of the 200-IS-1 Operable Unit.

## 3.0 WASTE MINIMIZATION

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

☐ Yes ☒ No

If yes, provide date assessment conducted: N/A

If yes, provide document number or other identification:

N/A

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

N/A. Waste stream is no longer generated.

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

None.

**3.3 Waste minimization schedule**

**3.3.1 Reduction achieved during calendar year 2003 (volume or mass)**

0.000 m3

**3.3.2 Projected future waste volume reductions**

| Year | $m^3$ | and/or | kg |
|---|---|---|---|
| 2004 | 0.000 | | |
| 2005 | 0.000 | | |
| 2006 | 0.000 | | |
| 2007 | 0.000 | | |
| 2008 | 0.000 | | |
| Total | 0.000 | | |

# LDR REPORT WASTE LOCATION-SPECIFIC DATA SHEET

**3.3.3 Bases and assumptions used in above estimates:**

The tanks are inactive. No waste is being generated.

# LDR REPORT TREATABILITY GROUP DATA SHEET

## 1.0 WASTE STREAM IDENTIFICATION

**1.1 Treatability Group Name:** LERF/ETF Liquid Waste

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

CERCLA and RCRA wastewaters.

## 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): 46,512.190

**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 |
|---|---|---|---|
| 2004 | 89,490.664 | | |
| 2005 | 94,490.664 | | |
| 2006 | 88,490.664 | | |
| 2007 | 84,490.664 | | |
| 2008 | 82,490.664 | | |
| Total | 439,453.320 | | |

## 3.0 WASTE STREAM CHARACTERIZATION

**3.1 Radiological Characteristics**

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

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

☒ Contact-handled ☐ Remote-handled

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

None.

### 3.2 Physical Form

**3.2.1 Physical form of the waste:**

☐ Solid ☒ Liquid ☐ Semi-solid ☐ Debris

☐ Other (Describe in comments.)

**3.2.2 Comments on physical form:**

None.

# LDR REPORT TREATABILITY GROUP DATA SHEET

**3.3 Regulated constituents and wastewater/non-wastewater category**

**3.3.1 Wastewater/non-wastewater under RCRA**

☒ Wastewater ☐ Non-wastewater ☐ Unknown

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

| EPA/ State Number | Waste Description | LDR Sub-Category* | Concentration (Typical or Range)** | Basis | LDR Treatment Concentration Standard or Technology Code |
|---|---|---|---|---|---|
| D008 | Lead | lead | > 5.0 mg/L | knowledge/ analysis | 0.69 mg/L (1) |
| D009 | Mercury | D009 wastewaters | >0.2 mg/L | knowledge/ analysis | 0.15 mg/L (1) |
| F001 | 1,1,1-trichloroethane, carbon tetrachloride | F001-F005 | *** | knowledge/ analysis | multiple |
| F002 | methylene chloride | F001-F005 | *** | knowledge/ analysis | 0.089 mg/L |
| F003 | acetone, methyl isobutyl ketone | F001-F005 | *** | knowledge/ analysis | multiple |
| F004 | cresols | F001-F005 | *** | knowledge/ analysis | 0.11 mg/L |
| F005 | methyl ethyl ketone | F001-F005 | *** | knowledge/ analysis | 0.28 mg/L |
| F039 | F001-F005 solvent wastes | N/A | *** | knowledge/ analysis | multiple |
| WT01 | Toxic EHW | N/A | *** | knowledge/ analysis | None(2) |
| WT02 | Toxic DW | N/A | *** | knowledge/ analysis | None |

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

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

*** The concentration varies.

(1) UHC's determinations do not apply based on LERF/ETF Waste Analysis Plan.

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

The ETF/LERF receives many different liquid waste types from many different generators. The generators are required to thoroughly characterize the waste per the ETF/LERF waste analysis plan. Information on actual consistuent concentrations and ranges can be found in the regulatory file for each of the generator waste located at the ETF.

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

☒ List: Some wastewaters meet treatment standards for F001-F005 and F039 on receipt.

# LDR REPORT TREATABILITY GROUP DATA SHEET

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

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

**3.3.4 Does this waste stream contain PCBs?**

☐ Yes ☒ No ☐ Unknown

If no or unknown, skip to Section 3.3.5.

**3.3.4.1 Is waste stream subject to TSCA regulations for PCBs?**

☐ Yes ☐ No ☐ Unknown

**3.3.4.2 Indicate the PCB concentration range.**

☐ < 50 ppm ☐ $ 50 ppm ☐ Unknown

**3.3.5 What is the confidence level for the regulated constituents?**

☐ Low ☐ Medium ☒ High

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

None.

## 4.0 WASTE STREAM TREATMENT

**4.1 Is this waste stream currently being treated?**

☒ Yes ☐ No

If yes, provide details: The 200 Area ETF is a final status RCRA TSD unit and treats RCRA and CERCLA aqueous wastewaters generated from various locations on the Hanford Site. The contaminants are destroyed or removed from the wastewaters and dried to a powder.

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

☐ No treatment required (skip to Section 5.0)

☒ Treating or plan to treat on site

☐ Treating or plan to treat off site

☐ Treatment options still being assessed

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

The ETF has pH adjustment, ultraviolet/oxidation, filtration, reverse osmosis, degasification, and ion exchange unit operations to remove the contaminants from the wastewaters.

**4.4 Treatment schedule information:**

Continuous based on LERF compaigns.

# LDR REPORT TREATABILITY GROUP DATA SHEET

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

| Milestone Number | Due Date |
|---|---|
| M-026-07A | 03/31/2004 |
| M-026-07B | 03/31/2009 |
| M-026-07C | 03/31/2014 |

**4.6 Proposed new Tri-Party Agreement treatment milestones:**

N/A

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

☒ Yes ☐ No ☐ Unknown

If yes, describe: The ETF/LERF does not generate liquid waste. However, the wastewaters are segregated and processed to minimize the generation of waste requiring further treatment.

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

N/A

**4.9 Key Assumptions:**

Assume PCB's are less than 0.5 ug/L in feed streams to the LERF/ETF during the forecast period.

## 5.0 WASTE STREAM DISPOSAL

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

Secondary waste (dry powder) generated from the treatment of wastewaters from the ETF is disposed at the Mixed Waste Burial Trenches or ERDF depending on whether the wastewater is designated as RCRA or CERCLA. The delisted wastewater is disposed to a State Approved Land Disposal Site under WAC 173-216. Delisting modification for LERF/ETF is needed to manage other waste streams that require treatment at the ETF.

# LDR REPORT WASTE LOCATION-SPECIFIC DATA SHEET

## 1.0 WASTE STREAM IDENTIFICATION AND SOURCE

**1.1 Unit/Plant name:** 200-UP-1 **Waste Stream:** 200-UP-1

**Treatabilitiy Group Name:** LERF/ETF Liquid Waste

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

Profile transmitted to the LERF/ETF via BHI letter dated 1/31/01; CCN #086036.

**1.3 Waste stream source information**

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

Groundwater contaminated with uranium, technetium, carbon tetrachloride, and nitrates from the UO3 Plant operations.

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

It is estimated that 4,000 kg of process waste from the UO3 Plant, consisting primarily of dilute nitric acid containing uranium, technetium-99, and small quantities of fission products, were discharged to the soil via the 261-U-1 and 216-U-2 Cribs. The mobile uranium was transported from the soil into the groundwater when large volumes of cooling water were discharged to the adjacent 216-U-16 Crib in 1984. In 1997, the 200-UP-1 Interim Record of Decision required the contaminated groundwater be extracted and transferred to LERF/ETF for treatment.

**1.3.3 Source of the regulated constituents:**

Resulted from liquid discharges to the soil from past Hanford Site operations.

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

Analytical data and process knowledge.

**1.3.5 Additional notes:**

Water is being treated at ETF pursuant to the 200-UP-1 Record of Decision.

## 2.0 WASTE STREAM STORAGE, INVENTORY, AND GENERATION INFORMATION

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

**2.1 Current storage method**

- ☐ Container (pad)
- ☐ Container (covered)
- ☐ Container (retrievably buried)
- ☐ Tank
- ☐ DST
- ☐ SST
- ☒ Other (explain): Transferred to LERF via underground pipeline.

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

Groundwater is transferred to LERF as it is being extracted.

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

N/A

# LDR REPORT WASTE LOCATION-SPECIFIC DATA SHEET

**2.2 Storage inventory locations:**

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

**2.3 Current stored inventory for this stream.**

Total volume (cubic meters): 0.000

Date of inventory values: 12/31/2003

Comments on waste inventory:

Water is transferred to LERF/ETF for treatment.

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

☐ Yes ☒ No

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

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

Bases and assumptions used:

N/A

**2.5 Planned storage areas for this waste:**

☐ Current Location ☐ CWC ☐ DST

☒ Other Area(s) (list): Groundwater is stored at LERF, treated at ETF, and discharged in accordance with the operating permit.

☐ None

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

| Year | $m^3$ | and/or | kg |
|---|---|---|---|
| 2004 | 77,270.000 | | |
| 2005 | 77,270.000 | | |
| 2006 | 77,270.000 | | |
| 2007 | 77,270.000 | | |
| 2008 | 77,270.000 | | |
| Total | 386,350.000 | | |

**2.7 DOE Storage Compliance Assessment information:**

☐ Assessment has been completed.

| Document Number | Date |
|---|---|
| | |

# LDR REPORT WASTE LOCATION-SPECIFIC DATA SHEET

☐ Assessment has been scheduled. Scheduled date:

☒ Other. Explain: 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.

Waste stream was fully characterized to support development of the 200-UP-1 Record of Decision. Quarterly sampling of groundwater is performed to assess the performance of the remedial action.

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

☒ Yes ☐ No ☐ Unknown at this time

| Milestone Number | Due Date |
|---|---|
| N/A | N/A |

If yes or unknown, comment on characterization for treatment.

See LERF wastewater LSDS.

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

☒ Yes ☐ No ☐ Unknown at this time

| Milestone Number | Due Date |
|---|---|
| N/A | N/A |

# LDR REPORT WASTE LOCATION-SPECIFIC DATA SHEET

If yes or unknown, comment on characterization for disposal.

See LERF wastewater LSDS.

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

Forecast assumes no changes to the 200-UP-1 Record of Decision. Groundwater remediation is being performed under the 200-UP-1 Interim Record of Decision.

## 3.0 WASTE MINIMIZATION

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

☐ Yes ☒ No

If yes, provide date assessment conducted: N/A

If yes, provide document number or other identification:

N/A

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

Assessment not warranted. See 3.2 below.

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

None. Generation of this waste stream occurs due to requirements in the 200-UP-1 Record of Decision to remove contaminated groundwater from the aquifer as mandated under the 200-UP-1 Interim Record of Decision.

**3.3 Waste minimization schedule**

**3.3.1 Reduction achieved during calendar year 2003 (volume or mass)**

0.000 m3

**3.3.2 Projected future waste volume reductions**

| Year | $m^3$ | and/or | kg |
|---|---|---|---|
| 2004 | 0.000 | | |
| 2005 | 0.000 | | |
| 2006 | 0.000 | | |
| 2007 | 0.000 | | |
| 2008 | 0.000 | | |
| Total | 0.000 | | |

**3.3.3 Bases and assumptions used in above estimates:**

N/A

# LDR REPORT WASTE LOCATION-SPECIFIC DATA SHEET

## 1.0 WASTE STREAM IDENTIFICATION AND SOURCE

1.1 **Unit/Plant name:** 242-A Evaporator **Waste Stream:** Evaporator Process Condensate

**Treatabilitiy Group Name:** LERF/ETF Liquid Waste

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

242-A Evaporator Process Condensate stored in condensate tank C-100 between campaigns.

1.3 **Waste stream source information**

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

Process condensate from treatment of DST Waste in 242-A Evaporator.

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

Waste is generated during evaporator campaigns that begin with waste staging and characterization activities in the tank farms.

1.3.3 **Source of the regulated constituents:**

DST Waste.

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

Analytical data is used to characterize feed to the 242-A Evaporator before it is treated. The RCRA waste analysis plans for 242-A and LERF/ETF govern characterization requirements.

1.3.5 **Additional notes:**

Most process condensate is sent to LERF/ETF for storage and treatment. Some process condensate is stored in condensate tank C-100 at 242-A between campaigns for use in priming the evaporator treatment system at the beginning of the next campaign (waste minimization).

## 2.0 WASTE STREAM STORAGE, INVENTORY, AND GENERATION INFORMATION

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

2.1 **Current storage method**

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

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

Prior to treatment and storage at the 242-A Evaporator, the waste was stored in the DST System.

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

During the last 242-A Evaporator campaign, August-September 2003.

# LDR REPORT WASTE LOCATION-SPECIFIC DATA SHEET

**2.2 Storage inventory locations:**

| Building/Room Number | Number of Containers/Tanks |
|---|---|
| 242-A/TK C-100 | 1 |
| N/A | N/A |

**2.3 Current stored inventory for this stream.**

Total volume (cubic meters): 30.350

Date of inventory values: 02/28/2003

Comments on waste inventory:

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

☐ Yes ☒ No

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

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

Bases and assumptions used:

**2.5 Planned storage areas for this waste:**

☒ Current Location ☐ CWC ☐ DST

☒ Other Area(s) (list): Adequate storage and treatment capacity is available through LERF/ETF.

☐ None

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

| Year | $m^3$ | and/or | kg |
|---|---|---|---|
| 2004 | 11,000.000 | | |
| 2005 | 16,000.000 | | |
| 2006 | 10,000.000 | | |
| 2007 | 6,000.000 | | |
| 2008 | 4,000.000 | | |
| Total | 47,000.000 | | |

**2.7 DOE Storage Compliance Assessment information:**

☒ Assessment has been completed.

| Document Number | Date |
|---|---|
| A&E-00-ASS-073 | 01/17/2001 |

# LDR REPORT WASTE LOCATION-SPECIFIC DATA SHEET

☐ Assessment has been scheduled. Scheduled date:

☐ Other. Explain:

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

| Milestone Number | Due Date |
|---|---|
| N/A | N/A |

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

☐ Yes ☒ No

If yes, summarize releases and quantities and provide date:

N/A

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

☐ Yes ☒ No

If yes, explain: N/A

**2.11 Characterization**

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

☐ Yes ☒ No ☐ Unknown at this time

| Milestone Number | Due Date |
|---|---|
| N/A | N/A |

If yes or unknown, comment on characterization for storage.

N/A

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

☒ Yes ☐ No ☐ Unknown at this time

| Milestone Number | Due Date |
|---|---|
| N/A | N/A |

If yes or unknown, comment on characterization for treatment.

See LERF wastewater LSDS.

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

☒ Yes ☐ No ☐ Unknown at this time

| Milestone Number | Due Date |
|---|---|
| N/A | N/A |

# LDR REPORT WASTE LOCATION-SPECIFIC DATA SHEET

If yes or unknown, comment on characterization for disposal.

See LERF wastewater LSDS.

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

242-A Evaporator campaigns are planned and conducted based on DST System needs.

## 3.0 WASTE MINIMIZATION

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

☐ Yes ☒ No

If yes, provide date assessment conducted: N/A

If yes, provide document number or other identification:

N/A

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

Evaporator treatment process is waste reduction.

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

It is desirable to increase the size of this waste stream--provided it reflects an overall decrease in DST Waste treatability group volume.

**3.3 Waste minimization schedule**

**3.3.1 Reduction achieved during calendar year 2003 (volume or mass)**

0.000 m3

**3.3.2 Projected future waste volume reductions**

| Year | $m^3$ | and/or | kg |
|---|---|---|---|
| 2004 | 0.000 | | |
| 2005 | 0.000 | | |
| 2006 | 0.000 | | |
| 2007 | 0.000 | | |
| 2008 | 0.000 | | |
| Total | 0.000 | | |

**3.3.3 Bases and assumptions used in above estimates:**

The evaporator process itself is a waste reduction/minimization process. The resultant volume reductions are accounted for in the DST System data sheet. A minor amount of liquid is retained from each run to prime the system for the subsequent run.

# LDR REPORT WASTE LOCATION-SPECIFIC DATA SHEET

## 1.0 WASTE STREAM IDENTIFICATION AND SOURCE

1.1 **Unit/Plant name:** LERF **Waste Stream:** Wastewater

**Treatabilitiy Group Name:** LERF/ETF Liquid Waste

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

N/A

1.3 **Waste stream source information**

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

Wastewaters generated during RCRA and CERCLA cleanup activities on the Hanford Site are transferred to LERF for interim storage prior to treatment through the ETF. Drummed wastewater generated during RCRA and CERCLA cleanup activities on the Hanford Site are received at the ETF for interim storage prior to treatment through the ETF.

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

Wastewaters generated under the RCRA and CERCLA programs on the Hanford Site. Refer to specific generator source wastewater information.

1.3.3 **Source of the regulated constituents:**

Refer to specific generator information.

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

Process knowledge and analytical information - per the RCRA waste analysis plan for LERF/ETF.

1.3.5 **Additional notes:**

None.

## 2.0 WASTE STREAM STORAGE, INVENTORY, AND GENERATION INFORMATION

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

2.1 **Current storage method**

| | | |
|---|---|---|
| ☐ Container (pad) | ☒ Container (covered) | ☐ Container (retrievably buried) |
| ☐ Tank | ☐ DST | ☐ SST |
| ☒ Other (explain): | Three surface impoundments (LERF Basins 42, 43, 44). | |

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

At the generator site.

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

Wastewater maybe received at any time depending on generator needs.

# LDR REPORT WASTE LOCATION-SPECIFIC DATA SHEET

**2.2 Storage inventory locations:**

| Building/Room Number | Number of Containers/Tanks |
|---|---|
| LERF Basins | 3 |
| ETF Containers | 15 |

**2.3 Current stored inventory for this stream.**

Total volume (cubic meters): 46,450.000

Date of inventory values: 12/30/2003

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:

**2.5 Planned storage areas for this waste:**

☒ Current Location ☐ CWC ☐ DST

☒ Other Area(s) (list): Wastewater will be treated through the ETF.

☐ None

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

| Year | $m^3$ | and/or | kg |
|---|---|---|---|
| 2004 | 0.000 | | |
| 2005 | 0.000 | | |
| 2006 | 0.000 | | |
| 2007 | 0.000 | | |
| 2008 | 0.000 | | |
| Total | 0.000 | | |

**2.7 DOE Storage Compliance Assessment information:**

☒ Assessment has been completed.

| Document Number | Date |
|---|---|
| 01-A&E-004 | 10/17/2001 |
| A&E-00-ASS-071 | 11/15/2000 |

# LDR REPORT WASTE LOCATION-SPECIFIC DATA SHEET

☐ Assessment has been scheduled. Scheduled date:

☐ Other. Explain:

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

| Milestone Number | Due Date |
|---|---|
| N/A | N/A |

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

☐ Yes ☒ No

If yes, summarize releases and quantities and provide date:

N/A

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

☐ Yes ☒ No

If yes, explain: N/A

**2.11 Characterization**

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

☐ Yes ☒ No ☐ Unknown at this time

| Milestone Number | Due Date |
|---|---|
| N/A | N/A |

If yes or unknown, comment on characterization for storage.

N/A

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

☒ Yes ☐ No ☐ Unknown at this time

| Milestone Number | Due Date |
|---|---|
| N/A | N/A |

If yes or unknown, comment on characterization for treatment.

Waste is sampled in accordance with the waste analysis plan to prior to transfer into 200 ETF.

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

☒ Yes ☐ No ☐ Unknown at this time

| Milestone Number | Due Date |
|---|---|
| N/A | N/A |

# LDR REPORT WASTE LOCATION-SPECIFIC DATA SHEET

If yes or unknown, comment on characterization for disposal.

Waste is sampled in the 200 ETF verification tanks according to Ecology approved documents prior to discharge to the soil columnn.

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

None.

## 3.0 WASTE MINIMIZATION

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

☐ Yes ☒ No

If yes, provide date assessment conducted: N/A

If yes, provide document number or other identification:

N/A

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

N/A

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

Generators will address waste minimization for their particular waste streams.

**3.3 Waste minimization schedule**

**3.3.1 Reduction achieved during calendar year 2003 (volume or mass)**

0.000 m3

**3.3.2 Projected future waste volume reductions**

| Year | $m^3$ | and/or | kg |
|---|---|---|---|
| 2004 | 0.000 | | |
| 2005 | 0.000 | | |
| 2006 | 0.000 | | |
| 2007 | 0.000 | | |
| 2008 | 0.000 | | |
| Total | 0.000 | | |

**3.3.3 Bases and assumptions used in above estimates:**

None.

# LDR REPORT WASTE LOCATION-SPECIFIC DATA SHEET

## 1.0 WASTE STREAM IDENTIFICATION AND SOURCE

1.1 **Unit/Plant name:** LLBG/MW Trench **Waste Stream:** TR34 Leachate

**Treatabilitiy Group Name:** LERF/ETF Liquid Waste

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

N/A

1.3 **Waste stream source information**

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

This waste is leachate from mixed waste disposal (Trench 34) in the 218-W-5 low-level burial ground.

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

Trench 34 has been accepting mixed waste for disposal since 1999 and the leachate has been generated since then.

1.3.3 **Source of the regulated constituents:**

Wastes with waste numbers derived from listed waste numbers F001-F005 are disposed in Trench 34 so the leachate is regulated as F039.

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

Analytical data and process knowledge.

1.3.5 **Additional notes:**

Trench 34 leachate is managed in a 90-day accumulation tank prior to transfer to LERF/ETF.

## 2.0 WASTE STREAM STORAGE, INVENTORY, AND GENERATION INFORMATION

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

2.1 **Current storage method**

☐ Container (pad) ☐ Container (covered) ☐ Container (retrievably buried)

☐ Tank ☐ DST ☐ SST

☐ Other (explain):

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

N/A

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

N/A

2.2 **Storage inventory locations:**

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

# LDR REPORT WASTE LOCATION-SPECIFIC DATA SHEET

**2.3 Current stored inventory for this stream.**

Total volume (cubic meters): 0.000

Date of inventory values: 12/31/2003

Comments on waste inventory:

Trench 34 leachate is managed in a 90 day accumulation tank prior to transfer to LERF/ETF. There is no waste stored.

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

Yes No

If yes, what is the total estimated storage capacity?

When is this capacity expected to be reached?

Bases and assumptions used:

**2.5 Planned storage areas for this waste:**

☐ Current Location ☐ CWC ☐ DST

☐ Other Area(s) (list):

☐ None

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

| Year | $m^3$ | and/or | kg |
|---|---|---|---|
| 2004 | 1,200.000 | | |
| 2005 | 1,200.000 | | |
| 2006 | 1,200.000 | | |
| 2007 | 1,200.000 | | |
| 2008 | 1,200.000 | | |
| Total | 6,000.000 | | |

**2.7 DOE Storage Compliance Assessment information:**

☒ Assessment has been completed.

| Document Number | Date |
|---|---|
| A&E-SEC-02-003 | 03/28/2002 |

☐ Assessment has been scheduled. Scheduled date:

☒ Other. Explain: N/A

# 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:**

Generation information is based on 2003 total. Actual generation is dependent upon the amount of precipitation received each year.

## 3.0 WASTE MINIMIZATION

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

☒ Yes ☐ No

If yes, provide date assessment conducted: 1997

If yes, provide document number or other identification:

Return on Investment: RMW Rain Curtain

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

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

Currently the trench is outfitted with a rain curtain that diverts approximately 85% of the precipitation received. The diverted precipitation never enters the disposal area and thus does not become mixed waste.

**3.3 Waste minimization schedule**

**3.3.1 Reduction achieved during calendar year 2003 (volume or mass)**

1,200.000 m3

**3.3.2 Projected future waste volume reductions**

| Year | $m^3$ | and/or | kg |
|---|---|---|---|
| 2004 | 1,130.000 | | |
| 2005 | 1,130.000 | | |
| 2006 | 1,130.000 | | |
| 2007 | 1,130.000 | | |
| 2008 | 1,130.000 | | |
| Total | 5,650.000 | | |

**3.3.3 Bases and assumptions used in above estimates:**

The projected future waste reduction is based on average Hanford Site precipitation and continued use of the current rain curtain.

# LDR REPORT WASTE LOCATION-SPECIFIC DATA SHEET

## 1.0 WASTE STREAM IDENTIFICATION AND SOURCE

1.1 **Unit/Plant name:** T Plant Complex/2706-T Tank System **Waste Stream:** 2706-T Tank System

**Treatability Group Name:** LERF/ETF Liquid Waste

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

None.

1.3 **Waste stream source information**

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

Liquid waste generated as a result of decontamination, treatment activities, and potentially radiologically contaminated precipitation.

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

Waste resulting from decontamination and treatment activities in the 2706-T and 2706-TA Buildings and various other sources (e.g., potentially contaminated rainwater, etc.).

1.3.3 **Source of the regulated constituents:**

See Section 1.3.1 and 1.3.2.

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

Analytical and process knowledge.

1.3.5 **Additional notes:**

None.

## 2.0 WASTE STREAM STORAGE, INVENTORY, AND GENERATION INFORMATION

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

2.1 **Current storage method**

☐ Container (pad) ☐ Container (covered) ☐ Container (retrievably buried)

☒ Tank ☐ DST ☐ SST

☐ Other (explain): N/A

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

Generated as part of decontamination and treatment activities.

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

1999 to present.

# LDR REPORT WASTE LOCATION-SPECIFIC DATA SHEET

**2.2 Storage inventory locations:**

| Building/Room Number | Number of Containers/Tanks |
|---|---|
| T Plant Complex | 2 |

**2.3 Current stored inventory for this stream.**

Total volume (cubic meters): 31.840

Date of inventory values: 12/31/2003

Comments on waste inventory:

Inventory subject to fluctuation from decontamination, treatment, and other waste management activities and subsequent transfer to ETF or to another approved location.

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

☐ Yes ☒ No

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

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

Bases and assumptions used:

N/A

**2.5 Planned storage areas for this waste:**

☒ Current Location ☐ CWC ☐ DST

☒ Other Area(s) (list): ETF or other approved location.

☐ None

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

| Year | $m^3$ | and/or | kg |
|---|---|---|---|
| 2004 | 19.000 | | |
| 2005 | 19.000 | | |
| 2006 | 19.000 | | |
| 2007 | 19.000 | | |
| 2008 | 19.000 | | |
| Total | 95.000 | | |

**2.7 DOE Storage Compliance Assessment information:**

☒ Assessment has been completed.

| Document Number | Date |
|---|---|
| 01-A&E-0-12 | 11/28/2000 |

# LDR REPORT WASTE LOCATION-SPECIFIC DATA SHEET

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

☐ Other. Explain: 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.

N/A

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

☒ Yes ☐ No ☐ Unknown at this time

| Milestone Number | Due Date |
|---|---|
| N/A | N/A |

If yes or unknown, comment on characterization for treatment.

See LERF wastewater LSDS.

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

☒ Yes ☐ No ☐ Unknown at this time

| Milestone Number | Due Date |
|---|---|
| N/A | N/A |

# LDR REPORT WASTE LOCATION-SPECIFIC DATA SHEET

If yes or unknown, comment on characterization for disposal.

See LERF wastewater LSDS.

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

Efforts are underway to prepare the 2706-T and TA to begin liquid decontamination/treatment efforts. As more information becomes available on types, quantities of equipment/material to be decontaminated, waste forecasts will be developed. Acceptance criteria for the ETF is the preferred target; the DST System remains a backup TSD unit for this waste, or another approved location.

## 3.0 WASTE MINIMIZATION

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

☐ Yes ☒ No

If yes, provide date assessment conducted: N/A

If yes, provide document number or other identification:

N/A

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

N/A

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

It is extremely difficult to determine how much waste will be generated for this particular waste stream. Will fluctuate greatly depending upon how much equipment needs decontaminating, treatment activities, and other waste management operations.

**3.3 Waste minimization schedule**

**3.3.1 Reduction achieved during calendar year 2003 (volume or mass)**

0.000 m3

**3.3.2 Projected future waste volume reductions**

| Year | $m^3$ | and/or | kg |
|---|---|---|---|
| 2004 | 0.000 | | |
| 2005 | 0.000 | | |
| 2006 | 0.000 | | |
| 2007 | 0.000 | | |
| 2008 | 0.000 | | |
| Total | 0.000 | | |

**3.3.3 Bases and assumptions used in above estimates:**

# LDR REPORT WASTE LOCATION-SPECIFIC DATA SHEET

The T Plant Complex, where possible, will use non-regulated decontamination solutions, as well as limiting the amount of liquid waste generated as a result of decontamination/treatment activities to the extent practical. This waste stream volume will fluctuate greatly depending upon decontamination and treatment activities.

# LDR REPORT WASTE LOCATION-SPECIFIC DATA SHEET

## 1.0 WASTE STREAM IDENTIFICATION AND SOURCE

1.1 **Unit/Plant name:** WSCF **Waste Stream:** LERF/ETF

**Treatabilitiy Group Name:** LERF/ETF Liquid Waste

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

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):**

This waste stream is generated from analytical processes within the laboratory. The aqueous based wastes are generally comprised of acids, bases, and other toxic constituents. The resulting liquids are drummed and transferred to the ETF for treatment.

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

WSCF has been sending waste to the ETF since approximately 1999, for treatment and disposal. The waste is generated as a result of laboratory operations.

1.3.3 **Source of the regulated constituents:**

The hazardous constituents are derived from listed waste sample contribution and/or the addition of reagents during the analytical process.

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

Information to characterize this waste stream is obtained from both process knowledge and analytical data.

1.3.5 **Additional notes:**

WSCF waste is managed in a SAA or a 90-day accumulation area. WSCF has no TSD unit.

## 2.0 WASTE STREAM STORAGE, INVENTORY, AND GENERATION INFORMATION

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

2.1 **Current storage method**

☐ Container (pad) ☐ Container (covered) ☐ Container (retrievably buried)

☐ Tank ☐ DST ☐ SST

☐ Other (explain):

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

WSCF waste is managed in a SAA or 90-day accumulation area. WSCF has no TSD unit.

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

N/A

# LDR REPORT WASTE LOCATION-SPECIFIC DATA SHEET

**2.2 Storage inventory locations:**

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

**2.3 Current stored inventory for this stream.**

Total volume (cubic meters): 0.000

Date of inventory values: 01/23/2003

Comments on waste inventory:

See section 2.1.1 of this data sheet.

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

☐ Yes ☒ No

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

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

Bases and assumptions used:

N/A; WSCF does not store waste, as it has no TSD.

**2.5 Planned storage areas for this waste:**

☐ Current Location ☐ CWC ☐ DST

☒ Other Area(s) (list): LERF/ETF

☐ None

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

| Year | $m^3$ | and/or | kg |
|---|---|---|---|
| 2004 | 1.664 | | |
| 2005 | 1.664 | | |
| 2006 | 1.664 | | |
| 2007 | 1.664 | | |
| 2008 | 1.664 | | |
| Total | 8.320 | | |

**2.7 DOE Storage Compliance Assessment information:**

☐ Assessment has been completed.

| Document Number | Date |
|---|---|
| | |

☐ Assessment has been scheduled. Scheduled date:

☒ Other. Explain: N/A

# 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.

Characterization is performed as necessary to meet LERF/ETF waste acceptance criteria. A commitment is not necessary to complete characterization because a cradle-to-grave process is being implemented.

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

☒ Yes ☐ No ☐ Unknown at this time

| Milestone Number | Due Date |
|---|---|
| N/A | N/A |

If yes or unknown, comment on characterization for treatment.

See LERF wastewater LSDS.

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

☒ Yes ☐ No ☐ Unknown at this time

| Milestone Number | Due Date |
|---|---|
| N/A | N/A |

If yes or unknown, comment on characterization for disposal.

See LERF wastewater LSDS.

# LDR REPORT WASTE LOCATION-SPECIFIC DATA SHEET

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

None.

## 3.0 WASTE MINIMIZATION

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

☒ Yes ☐ No

If yes, provide date assessment conducted: 1996

If yes, provide document number or other identification:

Return on Investment. Waste Water Feed Reduced by Removal of Chloride. Tracking Code Number YP219

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

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

None. ETF has changed its acceptance criteria and this waste stream is now acceptable as is without removing chlorides. No other waste minimization has been identified for this waste stream.

**3.3 Waste minimization schedule**

**3.3.1 Reduction achieved during calendar year 2003 (volume or mass)**

0.000 kg

**3.3.2 Projected future waste volume reductions**

| Year | $m^3$ | and/or | kg |
|---|---|---|---|
| 2004 | 0.000 | | |
| 2005 | 0.000 | | |
| 2006 | 0.000 | | |
| 2007 | 0.000 | | |
| 2008 | 0.000 | | |
| Total | 0.000 | | |

**3.3.3 Bases and assumptions used in above estimates:**

No waste minimization techniques for this waste stream have been identified. The return on investment for reverse osmosis is no longer in effect as ETF changed its acceptance criteria and now accepts the wastes with higher chloride content.

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# LDR REPORT TREATABILITY GROUP DATA SHEET

## 1.0 WASTE STREAM IDENTIFICATION

**1.1 Treatability Group Name:** MLLW-01 - LDR Compliant Waste

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

WSRds: BLS,EH3, EHM, EHR, EHB, EHS, 930, 931; Waste with WSRd BLS consists of soils (dirt, sand, gravel, rocks, etc.) excavated from the various waste 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 is typically 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 183H Basin wastes and the forecast LDR compliant waste that comes directly from the generator (e.g., debris waste items, deactivated waste, stabilized waste, and waste meeting LDRs as generated).

## 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): 647.248

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

| Year | $m^3$ | and/or | kg |
|---|---|---|---|
| 2004 | 34.040 | | |
| 2005 | 51.150 | | |
| 2006 | 75.830 | | |
| 2007 | 50.730 | | |
| 2008 | 33.710 | | |
| Total | 245.460 | | |

## 3.0 WASTE STREAM CHARACTERIZATION

**3.1 Radiological Characteristics**

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

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

☒ Contact-handled ☐ Remote-handled

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

This waste is a general category based on dangerous waste characteristics, hence, the radiological characteristics are expected to vary greatly. However, there is high confidence that the waste is MLLW. The LDR compliant treatability group will consist of both RH and CH waste packages, however, the majority of the waste will be CH. Category 3 waste will either meet radiological stabilization requirements as delivered to the disposal unit, or it will be radiologically stabilized in the unit by means of placing the waste inside of a high integrity container (HIC).

# LDR REPORT TREATABILITY GROUP DATA SHEET

## 3.2 Physical Form

**3.2.1 Physical form of the waste:**

☒ Solid ☐ Liquid ☒ Semi-solid ☒ Debris

☒ Other (Describe in comments.)

**3.2.2 Comments on physical form:**

Waste with WSRd BLS has a medium confidence level. The waste has been verified through the Backlog Waste Program per the Backlog Waste Analysis Plan (BWAP). A contained-in determination was approved for the subject waste by Ecology. The waste is acceptable for disposal into the LLW portion of the LLBGs after it is screened for PCB constituents and debris type items are removed from the waste. Waste with numerical WSRds (e.g., 930, etc.) meet the requirements of the Waste Specification System and has a high confidence level. If some of the waste does not meet direct disposal criteria (i.e., does not meet all LDRs), the waste will be reassigned into the appropriate waste stream that requires treatment (e.g., MLLW-02 through -10). This waste stream can consist of many different physical matrix characteristic types since it is based on LDR requirements for disposal of a dangerous waste. Although this waste meets RCRA and state LDRs, it may not meet all LLBG disposal criteria (i.e., void space requirements) and may require repackaging or void fill prior to disposal.

## 3.3 Regulated constituents and wastewater/non-wastewater category

**3.3.1 Wastewater/non-wastewater under RCRA**

☐ Wastewater ☒ Non-wastewater ☐ Unknown

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

| EPA/ State Number | Waste Description | LDR Sub-Category* | Concentration (Typical or Range)** | Basis | LDR Treatment Concentration Standard or Technology Code |
|---|---|---|---|---|---|
| | See Footnote (1) | | | | |

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

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

(1) Subject treatability group has been assigned those waste codes that are listed on the current CWC and/or LLBG Part A Form 3. Individual waste packages assigned to the treatability group may have one or more of these waste codes. The waste meets (or will meet) the treatment standards listed in 40 CFR 268.40, 40 CFR 268.45, and/or WAC 173-303-140.

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

☐ List:

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

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

# LDR REPORT TREATABILITY GROUP DATA SHEET

**3.3.4 Does this waste stream contain PCBs?**

☒ Yes ☐ No ☐ Unknown

If no or unknown, skip to Section 3.3.5.

**3.3.4.1 Is waste stream subject to TSCA regulations for PCBs?**

☒ Yes ☐ No ☐ Unknown

**3.3.4.2 Indicate the PCB concentration range.**

☒ < 50 ppm ☐ $ 50 ppm ☐ Unknown

**3.3.5 What is the confidence level for the regulated constituents?**

☐ Low ☐ Medium ☒ High

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

Confidence level for this waste treatability group is high. Waste with WSRd BLS has been verified through the backlog waste program per the Backlog Waste Analysis Plan (BWAP). A contained-in determination was approved for the subject waste by Ecology. The waste is acceptable for disposal into the LLW portion of the LLBGs. The other waste has been verified via the WSS and is awaiting disposal. For waste with WSRd BLS, all hazardous constituents are below the LDR limits. Furthermore, a "contained-in" determination was granted by Ecology to allow disposal of the subject waste into the LLW portion of the LLBGs. Waste with numerical WSRds (e.g., 930, etc.) meets all applicable LDR treatment standards including applicable UHCs. Treatment per 40 CFR 268.40, 40 CFR 268.45 and/or WAC 173-303-140.

## 4.0 WASTE STREAM TREATMENT

**4.1 Is this waste stream currently being treated?**

☐ Yes ☒ No

If yes, provide details: N/A

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

☒ No treatment required (skip to Section 5.0)

☐ Treating or plan to treat on site

☐ Treating or plan to treat off site

☐ Treatment options still being assessed

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

N/A

**4.4 Treatment schedule information:**

N/A

# LDR REPORT TREATABILITY GROUP DATA SHEET

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

| Milestone Number | Due Date |
|---|---|
| N/A | N/A |

**4.6 Proposed new Tri-Party Agreement treatment milestones:**

N/A

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

☐ Yes ☐ No ☐ Unknown

If yes, describe: 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.**

Contained-in determination for WSRd BLS, the backlog soils, allows this portion of waste stream to be disposed of in the low-level waste portion of the LLBGs. A delisting modification for the ETF unit was submitted to Ecology in November 1998 and then revised again in December 2001. This delisting modification if approved would allow for the disposal of additional F coded waste, and of P and U coded waste into the LLBG mixed waste trenches.

**4.9 Key Assumptions:**

Although "no" is marked in Section 4.1, some of this waste stream is treated at the generators facilities under treatment-by-generator (TBG) provisions prior to receipt at the LLBG mixed waste trenches. Deactivation, stabilization and alternative debris treatment technologies are used.

## 5.0 WASTE STREAM DISPOSAL

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

The LLBG (LLW portion) is planned to receive the portion of this stream that has WSRd BLS. Other waste in this waste treatability group will be disposed of in mixed waste trenches located on the Hanford Site. The majority of the existing stored inventory of this waste treatability group is designated with P and U waste codes and came from the closure of the 183-H Basins. This waste cannot currently be disposed of until a disposition pathway is achieved for the F039 leachate that would be generated from the disposal unit.

# LDR REPORT WASTE LOCATION-SPECIFIC DATA SHEET

## 1.0 WASTE STREAM IDENTIFICATION AND SOURCE

**1.1 Unit/Plant name:** 200 ETF **Waste Stream:** RCRA Powder, LDR Compliant

**Treatabilitiy Group Name:** MLLW-01 - LDR Compliant Waste

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

2LEF-930/931-0001

**1.3 Waste stream source information**

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

The ETF process generates secondary waste (dry powder) from the treatment of dangerous wastewaters from various generators on the Hanford Site.

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

Secondary waste (dry powder) generated from the treatment of wastewater through the ETF. The contaminants are destroyed or removed from the wastewater and dried to powder.

**1.3.3 Source of the regulated constituents:**

Wastewaters from various generators on the Hanford Site, for example, 242-A Evaporator process condensate, LLBG mixed waste trench leachate, WSCF laboratory wastewater, etc.

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

Wastewaters are characterized using analytical data and process knowledge in accordance with the RCRA Waste Analysis Plan for LERF/ETF.

**1.3.5 Additional notes:**

None.

## 2.0 WASTE STREAM STORAGE, INVENTORY, AND GENERATION INFORMATION

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

**2.1 Current storage method**

☐ Container (pad) ☒ Container (covered) ☐ Container (retrievably buried)

☐ Tank ☐ DST ☐ SST

☐ Other (explain):

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

The waste was in the process of being generated.

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

November/December of 2003 for current inventory. This type waste has been generated at this location since 1995.

# LDR REPORT WASTE LOCATION-SPECIFIC DATA SHEET

**2.2 Storage inventory locations:**

| Building/Room Number | Number of Containers/Tanks |
|---|---|
| ETF | 12 drums |

**2.3 Current stored inventory for this stream.**

Total volume (cubic meters): 2.500

Date of inventory values: 12/30/2003

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:

**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 |
|---|---|---|---|
| 2004 | 33.000 | | |
| 2005 | 50.000 | | |
| 2006 | 75.000 | | |
| 2007 | 50.000 | | |
| 2008 | 33.000 | | |
| Total | 241.000 | | |

**2.7 DOE Storage Compliance Assessment information:**

☒ Assessment has been completed.

| Document Number | Date |
|---|---|
| 01-A&E-004 | 10/17/2000 |

☐ Assessment has been scheduled. Scheduled date:

☐ Other. Explain:

# LDR REPORT WASTE LOCATION-SPECIFIC DATA SHEET

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

| Milestone Number | Due Date |
|---|---|
| N/A | N/A |

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

☐ Yes ☒ No

If yes, summarize releases and quantities and provide date:

N/A

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

☐ Yes ☒ No

If yes, explain: N/A

**2.11 Characterization**

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

☒ Yes ☐ No ☐ Unknown at this time

| Milestone Number | Due Date |
|---|---|
| N/A | N/A |

If yes or unknown, comment on characterization for storage.

Characterization required as normal process when a cradle-to-grave process is being implemented.

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

☐ Yes ☒ No ☐ Unknown at this time

| Milestone Number | Due Date |
|---|---|
| N/A | N/A |

If yes or unknown, comment on characterization for treatment.

N/A

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

☐ Yes ☒ No ☐ Unknown at this time

| Milestone Number | Due Date |
|---|---|
| N/A | N/A |

If yes or unknown, comment on characterization for disposal.

N/A

# LDR REPORT WASTE LOCATION-SPECIFIC DATA SHEET

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

None.

## 3.0 WASTE MINIMIZATION

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

☐ Yes ☒ No

If yes, provide date assessment conducted: N/A

If yes, provide document number or other identification:

N/A

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

No assessment planned at this time.

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

The ETF removes contaminants from wastewater and dries them to a powder. The wastewaters are segregated and processed to minimize the generation of secondary waste.

**3.3 Waste minimization schedule**

**3.3.1 Reduction achieved during calendar year 2003 (volume or mass)**

0.000 m3

**3.3.2 Projected future waste volume reductions**

| Year | $m^3$ | and/or | kg |
|---|---|---|---|
| 2004 | 0.000 | | |
| 2005 | 0.000 | | |
| 2006 | 0.000 | | |
| 2007 | 0.000 | | |
| 2008 | 0.000 | | |
| Total | 0.000 | | |

**3.3.3 Bases and assumptions used in above estimates:**

N/A

# LDR REPORT WASTE LOCATION-SPECIFIC DATA SHEET

## 1.0 WASTE STREAM IDENTIFICATION AND SOURCE

1.1 **Unit/Plant name:** 222-S Laboratory Complex **Waste Stream:** 222-S LDR Compliant

**Treatabilitiy Group Name:** MLLW-01 - LDR Compliant Waste

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

Waste that complies with state and federal LDRs. This waste is generated by analytical procedures, maintenance, and 219-S WHF operations. This is an inorganic solid non-acidic waste.

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 from general maintenance, analytical procedure operations, hot cell operations and 219-S WHF operations. This waste is LDR compliant because it meets the requirements in WAC 173-303-140.

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

Analytical operations, 219-S operations, and hot cell operations.

1.3.3 **Source of the regulated constituents:**

Hazardous constituents are already contained in samples from Hanford generating locations (e.g. Tank Farms, K-Basins, N-Reactor Fuel, PFP). Unused samples, unused or expired standards or reagents.

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

Waste Stream Fact Sheet (WSFS), Container Disposal Request (CDR), Request for Sample Analysis.

1.3.5 **Additional notes:**

None.

## 2.0 WASTE STREAM STORAGE, INVENTORY, AND GENERATION INFORMATION

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

2.1 **Current storage method**

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

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

It was being generated at other locations (see section 1.3.3 of this data sheet).

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

Since 3/1998.

# LDR REPORT WASTE LOCATION-SPECIFIC DATA SHEET

**2.2 Storage inventory locations:**

| Building/Room Number | Number of Containers/Tanks |
|---|---|
| HS-0083A | 1 |

**2.3 Current stored inventory for this stream.**

Total volume (cubic meters): 0.208

Date of inventory values: 12/31/2002

Comments on waste inventory:

Inventory is based on Solid Waste Information and Tracking System (SWITS).

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

☐ Yes ☒ No

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

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

Bases and assumptions used:

N/A

**2.5 Planned storage areas for this waste:**

☒ Current Location ☒ CWC ☐ DST

☒ Other Area(s) (list): Disposed of in the LLBG mixed waste trench. A container may be temporarily stored in CWC prior to disposal.

☐ None

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

| Year | $m^3$ | and/or | kg |
|---|---|---|---|
| 2004 | 0.310 | | |
| 2005 | 0.310 | | |
| 2006 | 0.310 | | |
| 2007 | 0.310 | | |
| 2008 | 0.310 | | |
| Total | 1.550 | | |

**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: 9/2000

If yes, provide document number or other identification:

Operating and analytical procedures at 222S Laboratory Complex.

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

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

The 222-S Laboratory personnel minimizes waste by proper planning during AJHA and pre-jobs and by optimizing the use of labware. Personnel constantly seek innovative opportunities to reduce waste by being aware of current waste minimizing technology.

**3.3 Waste minimization schedule**

**3.3.1 Reduction achieved during calendar year 2003 (volume or mass)**

7.300 m3

**3.3.2 Projected future waste volume reductions**

| Year | $m^3$ | and/or | kg |
|---|---|---|---|
| 2004 | 0.000 | | |
| 2005 | 0.000 | | |
| 2006 | 0.000 | | |
| 2007 | 0.000 | | |
| 2008 | 0.000 | | |
| Total | 0.000 | | |

**3.3.3 Bases and assumptions used in above estimates:**

DOE/RL-2000-79 "Pollution Prevention Accomplishments", document reported waste reductions for CY 2000. The waste reduction volume reported in Section 3.3.1 is a total waste minimization volume for similar waste streams across the 222-S Laboratory; this waste stream may be a portion of what was reported. 222-S has no waste minimization goals for this waste stream; therefore, no projected future waste volume reductions are reported in Section 3.3.2. However, the analytical process generating this stream is continuously evaluated for waste minimization opportunities.

# LDR REPORT WASTE LOCATION-SPECIFIC DATA SHEET

## 1.0 WASTE STREAM IDENTIFICATION AND SOURCE

1.1 **Unit/Plant name:** CWC **Waste Stream:** LDR Compliant

**Treatability Group Name:** MLLW-01 - LDR Compliant Waste

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

N/A

1.3 **Waste stream source information**

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

Backlog soils from around the waste tank farms, debris, particulates, and solidified liquids. All waste forms contain LDR compliant levels of dangerous waste constituents.

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

Some of subject waste was generated in the early 1990s through various operation activities at the 200 East and 200 West DST and SST Systems. Other portion of subject waste was generated and put into CWC storage in boxes and drums prior to the implementation of the WSS.

1.3.3 **Source of the regulated constituents:**

Portions of the waste were incidentally contaminated with tank waste. Other waste is equipment from operations and maintenance of DST/SST systems.

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

Analytical data, process knowledge.

1.3.5 **Additional notes:**

The backlog soils were selected as a direct disposal waste stream per DOE/RL/95-35, "Direct Disposal Team Report" (RL 1995a). The general past-practice and WSS LDR compliant waste is anticipated not to be restricted by LDRs; however, the waste will continue to be managed under dangerous waste regulation and be directly disposed of into a RCRA Subtitle-C or equivelent disposal cell located on the Hanford Site.

## 2.0 WASTE STREAM STORAGE, INVENTORY, AND GENERATION INFORMATION

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

2.1 **Current storage method**

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

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

Waste was placed in boxes and drums by generators.

# LDR REPORT WASTE LOCATION-SPECIFIC DATA SHEET

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

Waste storage at CWC began in 1988 and continues.

**2.2 Storage inventory locations:**

| Building/Room Number | Number of Containers/Tanks |
|---|---|
| CWC | 1798 |
| N/A | N/A |
| N/A | N/A |

**2.3 Current stored inventory for this stream.**

Total volume (cubic meters): 584.610

Date of inventory values: 12/30/2003

Comments on waste inventory:

Inventory data based on SWITS under WSRds 930, 931, BLS, EHB, EHM, EHR, and EHS.

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

☐ Yes ☒ No

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

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

Bases and assumptions used:

No issues with CWC storage based on 20-year waste generation forecast.

**2.5 Planned storage areas for this waste:**

☒ Current Location ☒ CWC ☐ DST

☐ Other Area(s) (list):

☐ None

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

| Year | $m^3$ | and/or | kg |
|---|---|---|---|
| 2004 | 0.000 | | |
| 2005 | 0.000 | | |
| 2006 | 0.000 | | |
| 2007 | 0.000 | | |
| 2008 | 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 |
|---|---|
| A&E-SEC-02-001 | 01/21/2002 |

☐ Assessment has been scheduled. Scheduled date:

☐ Other. Explain:

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

| Milestone Number | Due Date |
|---|---|
| M-020-12 | 10/31/1991 |

**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.

# LDR REPORT WASTE LOCATION-SPECIFIC DATA SHEET

Should further treatment be required due to changing regulations, waste will be re-characterized for most efficient use of resources. Characterization will be performed as necessary to support the results of the active M-91 TPA negotiations.

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

☐ Yes ☐ No ☒ Unknown at this time

| Milestone Number | Due Date |
|---|---|
| N/A | N/A |

If yes or unknown, comment on characterization for disposal.

Should further characterization be required due to changing regulations, waste will be re-characterized for most efficient use of resources. Characterization will be performed as necessary to support the results of the active M-91 TPA negotiations.

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

None.

## 3.0 WASTE MINIMIZATION

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

☐ Yes ☒ No

If yes, provide date assessment conducted: N/A

If yes, provide document number or other identification:

N/A

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

None planned - waste not generated at CWC.

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

These activities occur before the wastes are transferred/shipped to CWC. There are few opportunities to reduce waste volumes placed into storage.

**3.3 Waste minimization schedule**

**3.3.1 Reduction achieved during calendar year 2003 (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 |
|---|---|---|---|
| 2004 | 0.000 | | |
| 2005 | 0.000 | | |
| 2006 | 0.000 | | |
| 2007 | 0.000 | | |
| 2008 | 0.000 | | |
| Total | 0.000 | | |

**3.3.3 Bases and assumptions used in above estimates:**

There is no projected waste generation by CWC.

# LDR REPORT WASTE LOCATION-SPECIFIC DATA SHEET

## 1.0 WASTE STREAM IDENTIFICATION AND SOURCE

1.1 **Unit/Plant name:** LLBG **Waste Stream:** LDR Compliant Waste

**Treatabilitiy Group Name:** MLLW-01 - LDR Compliant Waste

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

N/A

1.3 **Waste stream source information**

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

LEF powder drums, tank farm heel jet pump and large T Plant box. All waste forms contain LDR compliant levels of dangerous waste constituents.

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

Waste was recently generated (since 2002), however the size and/or radionuclide type (category III) preclude disposal until operational layer is placed over the first tier of waste in Trench 34.

1.3.3 **Source of the regulated constituents:**

See 1.3.1 and 1.3.2.

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

Analytical data and process knowledge.

1.3.5 **Additional notes:**

N/A

## 2.0 WASTE STREAM STORAGE, INVENTORY, AND GENERATION INFORMATION

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

2.1 **Current storage method**

| | | |
|---|---|---|
| ☐ Container (pad) | ☐ Container (covered) | ☐ Container (retrievably buried) |
| ☐ Tank | ☐ DST | ☐ SST |
| ☒ Other (explain): | Placed in disposal trench (double liner, leachate collection system) that is permitted for greater than 90 day container storage. | |

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

Waste was placed in boxes, drums and poly containers by generators.

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

# LDR REPORT WASTE LOCATION-SPECIFIC DATA SHEET

**2.2 Storage inventory locations:**

| Building/Room Number | Number of Containers/Tanks |
|---|---|
| 218-W-5, Trench 31 | 186 |

**2.3 Current stored inventory for this stream.**

Total volume (cubic meters): 58.550

Date of inventory values: 12/30/2003

Comments on waste inventory:

Inventory data based on SWITS under WSRd 931.

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

☐ Yes ☒ No

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

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

Bases and assumptions used:

No issues with LLBG storage based on 20-year waste generation forecast.

**2.5 Planned storage areas for this waste:**

☒ Current Location ☐ CWC ☐ DST

☐ Other Area(s) (list):

☐ None

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

| Year | $m^3$ | and/or | kg |
|---|---|---|---|
| 2004 | 0.000 | | |
| 2005 | 0.000 | | |
| 2006 | 0.000 | | |
| 2007 | 0.000 | | |
| 2008 | 0.000 | | |
| Total | 0.000 | | |

**2.7 DOE Storage Compliance Assessment information:**

☒ Assessment has been completed.

| Document Number | Date |
|---|---|
| A&E-SEC-02-003 | 03/28/2002 |

☐ Assessment has been scheduled. Scheduled date:

☐ Other. Explain:

# 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:

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

☐ Yes ☒ No

If yes, explain:

**2.11 Characterization**

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

☐ Yes ☒ No ☐ Unknown at this time

| Milestone Number | Due Date |
|---|---|
| N/A | N/A |

If yes or unknown, comment on characterization for storage.

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

☐ Yes ☒ No ☐ Unknown at this time

| Milestone Number | Due Date |
|---|---|
| N/A | N/A |

If yes or unknown, comment on characterization for treatment.

N/A

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

☐ Yes ☒ No ☐ Unknown at this time

| Milestone Number | Due Date |
|---|---|
| N/A | N/A |

If yes or unknown, comment on characterization for disposal.

N/A

# LDR REPORT WASTE LOCATION-SPECIFIC DATA SHEET

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

None.

## 3.0 WASTE MINIMIZATION

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

☐ Yes ☒ No

If yes, provide date assessment conducted:

If yes, provide document number or other identification:

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

None Planned - waste not generated at LLBG.

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

These activities occur before the wastes are transferred/shipped to the LLBG. There are few opportunities to reduce waste volumes placed into storage.

**3.3 Waste minimization schedule**

**3.3.1 Reduction achieved during calendar year 2003 (volume or mass)**

0.000 m3

**3.3.2 Projected future waste volume reductions**

| Year | $m^3$ | and/or | kg |
|---|---|---|---|
| 2004 | 0.000 | | |
| 2005 | 0.000 | | |
| 2006 | 0.000 | | |
| 2007 | 0.000 | | |
| 2008 | 0.000 | | |
| Total | 0.000 | | |

**3.3.3 Bases and assumptions used in above estimates:**

There is no projected waste generation by the LLBG.

# LDR REPORT WASTE LOCATION-SPECIFIC DATA SHEET

## 1.0 WASTE STREAM IDENTIFICATION AND SOURCE

1.1 **Unit/Plant name:** PFP **Waste Stream:** Lab Chemicals/Reagents, LDR Compliant

**Treatabilitiy Group Name:** MLLW-01 - LDR Compliant Waste

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

PFPX-930-0001

1.3 **Waste stream source information**

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

Spent or expired lab chemicals/reagents.

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

Laboratory operations.

1.3.3 **Source of the regulated constituents:**

Intrinsically hazardous.

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

Analytical data, process knowledge.

1.3.5 **Additional notes:**

None.

## 2.0 WASTE STREAM STORAGE, INVENTORY, AND GENERATION INFORMATION

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

2.1 **Current storage method**

☐ Container (pad) ☐ Container (covered) ☐ Container (retrievably buried)

☐ Tank ☐ DST ☐ SST

☐ Other (explain):

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

N/A

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

N/A

2.2 **Storage inventory locations:**

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

# LDR REPORT WASTE LOCATION-SPECIFIC DATA SHEET

**2.3 Current stored inventory for this stream.**

Total volume (cubic meters): 0.000

Date of inventory values: 12/31/2003

Comments on waste inventory:

Chemical product. When declared as waste, it is either placed into a SAA or placed in a 90-day accumulation area. Not stored at this location. Transferred to the LLBG mixed waste trench.

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

☐ Yes ☒ No

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

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

Bases and assumptions used:

None.

**2.5 Planned storage areas for this waste:**

☐ Current Location ☐ CWC ☐ DST

☐ Other Area(s) (list):

☒ None

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

| Year | $m^3$ | and/or | kg |
|---|---|---|---|
| 2004 | 0.330 | | |
| 2005 | 0.640 | | |
| 2006 | 0.320 | | |
| 2007 | 0.220 | | |
| 2008 | 0.200 | | |
| Total | 1.710 | | |

**2.7 DOE Storage Compliance Assessment information:**

☒ Assessment has been completed.

| Document Number | Date |
|---|---|
| PFP Env. Compliance Assess.; Ltr. # 01-A&E-129 | 09/13/2001 |

☐ Assessment has been scheduled. Scheduled date:

☐ Other. Explain:

# LDR REPORT WASTE LOCATION-SPECIFIC DATA SHEET

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

| Milestone Number | Due Date |
|---|---|
| N/A | N/A |

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

☐ Yes ☒ No

If yes, summarize releases and quantities and provide date:

N/A

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

☐ Yes ☒ No

If yes, explain: N/A

**2.11 Characterization**

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

☒ Yes ☐ No ☐ Unknown at this time

| Milestone Number | Due Date |
|---|---|
| N/A | N/A |

If yes or unknown, comment on characterization for storage.

Will be charcterized after being declared waste. No commitment is necessary for the characterization needs on this MLLW.

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

☐ Yes ☒ No ☐ Unknown at this time

| Milestone Number | Due Date |
|---|---|
| N/A | N/A |

If yes or unknown, comment on characterization for treatment.

N/A

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

☐ Yes ☒ No ☐ Unknown at this time

| Milestone Number | Due Date |
|---|---|
| N/A | N/A |

If yes or unknown, comment on characterization for disposal.

N/A

# LDR REPORT WASTE LOCATION-SPECIFIC DATA SHEET

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

None.

## 3.0 WASTE MINIMIZATION

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

☒ Yes ☐ No

If yes, provide date assessment conducted: CY 2001

If yes, provide document number or other identification:

PFP 2001 Waste Minimization Evaluation for LDR Report Waste Streams, Letter# M2100-02-016.

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

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

PFP routinely evaluates the chemicals in the labs to ensure that there is an identified use for them. Chemicals with no justifiable use will be either recycled, if possible, or discarded as waste and not reordered.

**3.3 Waste minimization schedule**

**3.3.1 Reduction achieved during calendar year 2003 (volume or mass)**

0.000 m3

**3.3.2 Projected future waste volume reductions**

| Year | $m^3$ | and/or | kg |
|---|---|---|---|
| 2004 | 0.000 | | |
| 2005 | 0.000 | | |
| 2006 | 0.000 | | |
| 2007 | 0.000 | | |
| 2008 | 0.000 | | |
| Total | 0.000 | | |

**3.3.3 Bases and assumptions used in above estimates:**

N/A

# LDR REPORT WASTE LOCATION-SPECIFIC DATA SHEET

## 1.0 WASTE STREAM IDENTIFICATION AND SOURCE

1.1 **Unit/Plant name:** T Plant Complex **Waste Stream:** LDR Compliant

**Treatability Group Name:** MLLW-01 - LDR Compliant Waste

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

WSRd BLS, and 930.

1.3 **Waste stream source information**

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

Expired/excess chemicals from 221-T canyon cleanout, materials generated during routine maintenance and operations, and contaminated soil. Federal and state LDR compliant waste that does not require additional treatment.

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

This waste is generated as a result of cleanout activities from the 221-T Canyon and from routine maintenance and operations. In addition, this waste is generated from various onsite locations and by offsite generators.

1.3.3 **Source of the regulated constituents:**

See 1.3.1 and 1.3.2.

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

Analytical data and process knowledge.

1.3.5 **Additional notes:**

None.

## 2.0 WASTE STREAM STORAGE, INVENTORY, AND GENERATION INFORMATION

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

2.1 **Current storage method**

| | | |
|---|---|---|
| ☒ Container (pad) | ☒ Container (covered) | ☐ Container (retrievably buried) |
| ☐ Tank | ☐ DST | ☐ SST |
| ☐ Other (explain): | T Plant Complex has a combination of covered and uncovered storage areas to support various waste management operations/activities. Depending upon the type of waste being managed, the waste can be stored in covered or uncovered storage locations. As an example: If the waste is bulk liquid, this waste might be stored in a storage building equipped with HVAC to prevent freezing. | |

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

Generated by various onsite and offsite generators.

# LDR REPORT WASTE LOCATION-SPECIFIC DATA SHEET

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

1993 to present.

**2.2 Storage inventory locations:**

| Building/Room Number | Number of Containers/Tanks |
|---|---|
| T Plant | 5 |

**2.3 Current stored inventory for this stream.**

Total volume (cubic meters): 1.380

Date of inventory values: 12/31/2003

Comments on waste inventory:

Inventory fluctuates as T Plant Complex generates waste, or perform waste treatment/verification for onsite/offsite generators.

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

☐ Yes ☒ No

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

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

Bases and assumptions used:

N/A

**2.5 Planned storage areas for this waste:**

☒ Current Location ☒ CWC ☐ DST

☒ Other Area(s) (list): e.g., LLBG mixed waste trenches.

☐ None

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

| Year | $m^3$ | and/or | kg |
|---|---|---|---|
| 2004 | 0.200 | | |
| 2005 | 0.200 | | |
| 2006 | 0.200 | | |
| 2007 | 0.200 | | |
| 2008 | 0.200 | | |
| Total | 1.000 | | |

**2.7 DOE Storage Compliance Assessment information:**

☒ Assessment has been completed.

# LDR REPORT WASTE LOCATION-SPECIFIC DATA SHEET

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

☒ Assessment has been scheduled. Scheduled date: 3rd quarter 2005.

☐ Other. Explain: 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.

N/A

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

☐ Yes ☒ No ☐ Unknown at this time

| Milestone Number | Due Date |
|---|---|
| N/A | N/A |

If yes or unknown, comment on characterization for treatment.

N/A

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

☐ Yes ☒ No ☐ Unknown at this time

# LDR REPORT WASTE LOCATION-SPECIFIC DATA SHEET

| Milestone Number | Due Date |
|---|---|
| N/A | N/A |

If yes or unknown, comment on characterization for disposal.

N/A

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

Projection volumes for this waste stream are expected to fluctuate as 221-T Canyon cleanout continues as well as from maintenance and other operation activities. The generation rates will be updated as necessary.

## 3.0 WASTE MINIMIZATION

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

☐ Yes ☒ No

If yes, provide date assessment conducted: N/A

If yes, provide document number or other identification:

N/A

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

See Section 3.3.3 for discussion on waste minimization.

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

This waste will be generated as part of cleanup activities from the 221-T, maintenance, and operations. In addition, this waste is generated from various onsite and offsite generators. Waste minimization techniques are incorporated to the extent practical at the T Plant Complex including segregation of low-level waste from mixed waste.

**3.3 Waste minimization schedule**

**3.3.1 Reduction achieved during calendar year 2003 (volume or mass)**

0.000 m3

**3.3.2 Projected future waste volume reductions**

| Year | $m^3$ | and/or | kg |
|---|---|---|---|
| 2004 | 0.000 | | |
| 2005 | 0.000 | | |
| 2006 | 0.000 | | |
| 2007 | 0.000 | | |
| 2008 | 0.000 | | |
| Total | 0.000 | | |

**3.3.3 Bases and assumptions used in above estimates:**

# LDR REPORT WASTE LOCATION-SPECIFIC DATA SHEET

The T Plant Complex has submitted a P2/Wmin fiscal year 2004 goal to reduce, where possible, mixed waste generation. For FY 2004 to 2008, new goals will be evaluated and identified on a year-by-year basis. The T Plant Complex does not track waste reduction by treatability groups. Routine and non-routine generated waste is reported quarterly to the Waste Minimization/Pollution Prevention Group.

# LDR REPORT WASTE LOCATION-SPECIFIC DATA SHEET

## 1.0 WASTE STREAM IDENTIFICATION AND SOURCE

**1.1 Unit/Plant name:** WRAP **Waste Stream:** LDR Compliant

**Treatabilitiy Group Name:** MLLW-01 - LDR Compliant Waste

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

WSRd 931-3.

**1.3 Waste stream source information**

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

Can consist of soils, debris, particulates, etc. with LDR compliant levels of hazardous constituents, and/or state-only dangerous constituents. This waste does not include hazardous debris other than incidental debris material commingled with the non-debris.

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

The waste was generated at many onsite locations and also by offsite generators.

**1.3.3 Source of the regulated constituents:**

See 1.3.1 and 1.3.2.

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

Process knowledge.

**1.3.5 Additional notes:**

Waste at WRAP comes from various generators and generating processes around the Hanford Site due to WRAP's verification and repackaging mission.

## 2.0 WASTE STREAM STORAGE, INVENTORY, AND GENERATION INFORMATION

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

**2.1 Current storage method**

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

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

Waste was repackaged at WRAP.

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

MLLW at WRAP is recently generated waste that is being verified for waste shipment.

# LDR REPORT WASTE LOCATION-SPECIFIC DATA SHEET

**2.2 Storage inventory locations:**

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

**2.3 Current stored inventory for this stream.**

Total volume (cubic meters): 0.000

Date of inventory values: 12/31/2003

Comments on waste inventory:

Inventory is not expected to be generated in the future. Inventory based on Drum Management System (DMS) printout dated 12/31/2003.

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

☐ Yes ☒ No

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

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

Bases and assumptions used:

Due to proximity to and interchange with CWC, there is no storage capacity issue at WRAP.

**2.5 Planned storage areas for this waste:**

☒ Current Location ☒ CWC ☐ DST

☐ Other Area(s) (list):

☐ None

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

| Year | $m^3$ | and/or | kg |
|---|---|---|---|
| 2004 | 0.200 | | |
| 2005 | 0.000 | | |
| 2006 | 0.000 | | |
| 2007 | 0.000 | | |
| 2008 | 0.000 | | |
| Total | 0.200 | | |

**2.7 DOE Storage Compliance Assessment information:**

☒ Assessment has been completed.

| Document Number | Date |
|---|---|
| DE-AC06-96RL13200 | 09/26/2001 |

# LDR REPORT WASTE LOCATION-SPECIFIC DATA SHEET

☐ Assessment has been scheduled. Scheduled date:

☐ Other. Explain:

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

| Milestone Number | Due Date |
|---|---|
| N/A | N/A |

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

☐ Yes ☒ No

If yes, summarize releases and quantities and provide date:

N/A

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

☐ Yes ☒ No

If yes, explain: N/A

**2.11 Characterization**

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

☐ Yes ☒ No ☐ Unknown at this time

| Milestone Number | Due Date |
|---|---|
| N/A | N/A |

If yes or unknown, comment on characterization for storage.

N/A

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

☐ Yes ☐ No ☒ Unknown at this time

| Milestone Number | Due Date |
|---|---|
| N/A | N/A |

If yes or unknown, comment on characterization for treatment.

Sampling will be preformed by a treatment unit or offsite facility subject to treatment being preformed.

**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.

Sampling will be preformed by a treatment unit or offsite facility subject to treatment being preformed.

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

None.

## 3.0 WASTE MINIMIZATION

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

☐ Yes ☒ No

If yes, provide date assessment conducted: N/A

If yes, provide document number or other identification:

N/A

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

N/A

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

To the extent practical, all mixed waste is segregated and packaged separately from LLW or TRU wastes. To minimize the generation of mixed waste, WRAP actively seeks nondangerous alternatives for the dangerous constituents in their processes. Minimization goals are set annually and tracked quarterly, and waste treatment is used to destroy the hazardous constituents, as allowable.

**3.3 Waste minimization schedule**

**3.3.1 Reduction achieved during calendar year 2003 (volume or mass)**

0.000 m3

**3.3.2 Projected future waste volume reductions**

| Year | $m^3$ | and/or | kg |
|---|---|---|---|
| 2004 | 0.000 | | |
| 2005 | 0.000 | | |
| 2006 | 0.000 | | |
| 2007 | 0.000 | | |
| 2008 | 0.000 | | |
| Total | 0.000 | | |

**3.3.3 Bases and assumptions used in above estimates:**

Since subject waste has already been generated and is being directly disposed of, no additional waste minimization activities are planned.

# LDR REPORT TREATABILITY GROUP DATA SHEET

## 1.0 WASTE STREAM IDENTIFICATION

**1.1 Treatability Group Name:** MLLW-02 - Inorganic Non-Debris

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

This treatability group is for non-debris waste that contains hazardous constituents that either requires non-thermal treatment (specified technology) or non-thermal treatment is BDAT for meeting the applicable LDR treatment standards (concentration-based standards). The applicable WSRds for this treatability group are: ALI, EH4, EHP, IXI, LPI, PAI, SSA, 420, 421, 422, 425, 426, 428, 521, 523, 524, 525, 900, 901, 902, 903, 904. This waste consists of many different inorganic solids (e.g., particulates, absorbed liquids, sludges, resin beads, soils) and lab packs that are contaminated with regulated metals and other inorganics. This waste treatability group does not include hazardous debris other than incidental debris material commingled with the non-debris. Mixed waste generated from closure of the 183-H Solar Evaporation Basins is planned for treatment at ERDF. The volume of waste that will be treated at ERDF is included in storage inventory being reported on the location-specific data sheet for CWC under treatability group MLLW-02.

## 2.0 WASTE INVENTORY AND GENERATION

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

Total volume (cubic meters): 2,139.585

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

| Year | $m^3$ | and/or | kg |
|---|---|---|---|
| 2004 | 8.606 | | |
| 2005 | 14.938 | | |
| 2006 | 11.144 | | |
| 2007 | 14.094 | | |
| 2008 | 5.850 | | |
| Total | 54.632 | | |

## 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):**

Since this waste is a general category based on dangerous waste characteristics, the radiological characteristics are expected to vary greatly. There is a high level of confidence that this waste is MLLW. The waste as packaged is considered Contact-Handled (i.e., less than or equal to 200mR/hr on outside package surface); however, the dose rate of some waste inside the package may exceed 200mR/hr.

# LDR REPORT TREATABILITY GROUP DATA SHEET

## 3.2 Physical Form

**3.2.1 Physical form of the waste:**

☒ Solid ☒ Liquid ☒ Semi-solid ☐ Debris

☒ Other (Describe in comments.)

**3.2.2 Comments on physical form:**

Waste received under the Waste Specification System (WSS) has a high confidence level. Waste received prior to the WSS has a medium to low confidence level and will require matrix characterization verifications prior to treatment and disposal. If, during the verification process, it is determined that some of the waste does not meet the MLLW-02 waste stream description, then it will be reassigned into the appropriate waste stream (e.g., MLLW-03 through -10). The majority of this waste is from the closure of the 183-H Solar Evaporation Basins which has been characterized extensively.

## 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 | Ignitable Charac. | *** | *** | DEACT and meet 40 CFR 268.48 |
| D002 | Corrosive | Corrosive Charac. | *** | *** | DEACT and meet 40 CFR 268.48 |
| D003 | Reactive | Reactive Cyanides | *** | *** | 590/30 mg/kg |
| D004 | TC-Arsenic | N/A | *** | *** | 5.0 mg/l TCLP and meet 40 CFR 268.48 |
| D005 | TC-Barium | N/A | *** | *** | 21 mg/l TCLP and meet 40 CFR 268.48 |
| D006 | TC-Cadmium | Cadmium Charac. | *** | *** | 0.11 mg/l TCLP and meet 40 CFR 268.48 |
| D007 | TC-Chromium | N/A | *** | *** | 0.60 mg/l TCLP and meet 40 CFR 268.48 |
| D008 | TC-Lead | Lead Charac. | *** | *** | 0.75 mg/l TCLP and meet 40 CFR 268.48 |
| D009 | TC-Mercury | Low Mercury | <260 mg/kg | *** | 0.20 mg/l TCLP and meet 40 CFR 268.48 |
| D010 | TC-Selenium | N/A | *** | *** | 5.7 mg/l TCLP and meet 40 CFR 268.48 |
| D011 | TC-Silver | N/A | *** | *** | 0.14 mg/l TCLP and meet 40 CFR 268.48 |
| F001 | 1,1,1-Trichloroethane | Spent Solvent | <6.0 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 |
| P029 | Copper Cyanide | N/A | 10/0.32 mg/kg | Analysis | 590/30 mg/kg |
| P030 | Cyanides | N/A | 10/0.32 mg/kg | Analysis | 590/30 mg/kg |
| P098 | Potassium Cyanide | N/A | 10/0.32 mg/kg | Analysis | 590/30 mg/kg |
| P106 | Sodium Cyanide | N/A | 10/0.32 mg/kg | Analysis | 590/30 mg/kg |
| P120 | Vanadium Pentoxide | N/A | 32.3 mg/kg (max) | Analysis | STABL |
| U123 | Formic Acid (Formate) | N/A | 366 mg/kg (max) | Analysis | STABL (equivalency) |
| WP02 | Persistent, DW | N/A | *** | *** | N/A |
| WSC2 | Solid Corrosive | N/A | <=2.5 pH | Process Knowledge | Remove Solid Acid Charac. |
| WT01 | Toxic, EHW | N/A | *** | *** | None (1) |
| WT02 | Toxic, DW | N/A | *** | *** | N/A |

# LDR REPORT TREATABILITY GROUP DATA SHEET

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

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

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

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

UHCs to be determined on a per-package basis during waste receipt, from characterization activities, or when the waste is sent for treatment.
(1) Mixed extremely hazardous wastes may be land-disposed in Washington State in DOE facilities in accordance with RCW 70.105.050 (2)

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

☒ List: F001-F005 (Tank Farm contacted waste); P030, P098, P106 and P029 (183H Basin Waste).

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

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

**3.3.4 Does this waste stream contain PCBs?**

☐ Yes ☒ No ☐ Unknown

If no or unknown, skip to Section 3.3.5.

**3.3.4.1 Is waste stream subject to TSCA regulations for PCBs?**

☐ Yes ☐ No ☐ Unknown

**3.3.4.2 Indicate the PCB concentration range.**

☐ < 50 ppm ☐ $ 50 ppm ☐ Unknown

**3.3.5 What is the confidence level for the regulated constituents?**

☐ Low ☒ Medium ☐ High

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

Waste received under the Waste Specification System (WSS) has a high confidence level. With the exception of the 183-H waste that was verified to the WSS during FY1998, waste received prior to establishment of the WSS has a medium to low confidence level and may require characterization verifications prior to treatment and disposal. If, during the verification process, it is determined that some of the waste does not meet the MLLW-02 waste stream description, then it will be reassigned into the appropriate waste stream (e.g., MLLW-03 through -10).

# LDR REPORT TREATABILITY GROUP DATA SHEET

## 4.0 WASTE STREAM TREATMENT

**4.1 Is this waste stream currently being treated?**

☐ Yes ☒ No

If yes, provide details: N/A

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

☐ No treatment required (skip to Section 5.0)

☒ Treating or plan to treat on site

☒ Treating or plan to treat off site

☒ Treatment options still being assessed

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

Future characterization will determine treatment method, facility, and schedule for a portion of the subject waste. Commercial stabilization is a targeted primary treatment technology for subject waste. Treatment will be performed by means of onsite and offsite commercial treatment contracts, and/or by onsite treatment units (mainly T Plant Complex). The onsite treatment capability for this type of waste is very limited at this time (i.e., less than 10 cubic meters per year). Additional onsite treatment capacity or offsite contracts will need to be obtained to meet Hanford's treatment needs.

**4.4 Treatment schedule information:**

Treatment will be performed in accordance with M-91 milestones and target dates after they have been finalized.

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

| Milestone Number | Due Date |
|---|---|
| N/A | N/A |

**4.6 Proposed new Tri-Party Agreement treatment milestones:**

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: To the extent practical, all mixed waste is segregated and packaged separately from LLW or TRU wastes. The volume of mixed waste is reduced by in-drum compaction when possible, and where it does not interfere with future treatment activities. To minimize the generation of mixed waste, generators actively seek nondangerous alternatives for the dangerous constituents in their processes. Minimization goals are set annually and tracked quarterly, and waste treatment is used to destroy the hazardous constituents, as allowable.

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

# LDR REPORT TREATABILITY GROUP DATA SHEET

Obtained a treatability equivalency from EPA/Ecology to allow stabilization in lieu of combustion treatment for formic acid (U123) for waste originating from the closure of the 183-H Solar Evaporation Basins.

4.9 **Key Assumptions:**

None.

## 5.0 WASTE STREAM DISPOSAL

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

Subject waste will be disposed of in mixed waste trenches located on the Hanford Site.

# LDR REPORT WASTE LOCATION-SPECIFIC DATA SHEET

## 1.0 WASTE STREAM IDENTIFICATION AND SOURCE

**1.1 Unit/Plant name:** 200 LEF **Waste Stream:** RCRA Powder, Inorganic Non-Debris Non-LDR Compliant

**Treatabilitiy Group Name:** MLLW-02 - Inorganic Non-Debris

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

2LEF-525-0001

**1.3 Waste stream source information**

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

Secondary waste (dry powder) generated during treatment of RCRA wastewaters from various generators on the Hanford Site.

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

Generated from the treatment of wastewater through ETF. The contaminants are destroyed or removed from the wastewater and dried to powder.

**1.3.3 Source of the regulated constituents:**

Wastewaters from various generators on the Hanford Site, for example, 242-A Evaporator Process Condensate, Mixed Waste Burial Trench leachate, WSCF laboratory wastewater, etc.

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

Wastewaters are characterized using analytical data and process knowledge in accordance with the RCRA waste analysis plan for LERF/ETF.

**1.3.5 Additional notes:**

None.

## 2.0 WASTE STREAM STORAGE, INVENTORY, AND GENERATION INFORMATION

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

**2.1 Current storage method**

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

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

Waste was in the process of being generated.

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

02/02 for current inventory.

# LDR REPORT WASTE LOCATION-SPECIFIC DATA SHEET

**2.2 Storage inventory locations:**

| Building/Room Number | Number of Containers/Tanks |
|---|---|
| ETF | 1 drum |

**2.3 Current stored inventory for this stream.**

Total volume (cubic meters): 0.200

Date of inventory values: 12/30/2003

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:

**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 |
|---|---|---|---|
| 2004 | 0.200 | | |
| 2005 | 0.200 | | |
| 2006 | 0.200 | | |
| 2007 | 0.200 | | |
| 2008 | 0.200 | | |
| Total | 1.000 | | |

**2.7 DOE Storage Compliance Assessment information:**

☒ Assessment has been completed.

| Document Number | Date |
|---|---|
| 01-A&E-004 | 10/17/2000 |

☐ Assessment has been scheduled. Scheduled date:

☐ Other. Explain:

# LDR REPORT WASTE LOCATION-SPECIFIC DATA SHEET

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

| Milestone Number | Due Date |
|---|---|
| N/A | 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 reqnests 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.

Sampling and analysis is performed to determine compliance with treatability standard on a case-by-case basis. No commitment is necessary because characterization occurs as part of normal waste transfer activities. CWC will be required to perform any further sampling and analysis after treament.

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

☒ Yes ☐ No ☐ Unknown at this time

| Milestone Number | Due Date |
|---|---|
| N/A | N/A |

If yes or unknown, comment on characterization for treatment.

Will be completed during activities to facilitate transfer of the container to CWC. No commitment is necessary for the characterization needs on this MLLW.

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

☒ Yes ☐ No ☐ Unknown at this time

| Milestone Number | Due Date |
|---|---|
| N/A | N/A |

# LDR REPORT WASTE LOCATION-SPECIFIC DATA SHEET

If yes or unknown, comment on characterization for disposal.

To meet concentration based treatment standards applicable for the residues, sampling will be required after treatment. No commitment is necessary for the characterization needs on this MLLW.

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

None.

## 3.0 WASTE MINIMIZATION

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

☐ Yes ☒ No

If yes, provide date assessment conducted: N/A

If yes, provide document number or other identification:

N/A

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

No assessment planned at this time.

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

The ETF destroys or removes contaminants from wastewater and dries them to powder. The wastewaters are segregated and processed to minimize the generation of secondary wastes which require further treatment.

**3.3 Waste minimization schedule**

**3.3.1 Reduction achieved during calendar year 2003 (volume or mass)**

0.000 m3

**3.3.2 Projected future waste volume reductions**

| Year | $m^3$ | and/or | kg |
|---|---|---|---|
| 2004 | 0.000 | | |
| 2005 | 0.000 | | |
| 2006 | 0.000 | | |
| 2007 | 0.000 | | |
| 2008 | 0.000 | | |
| Total | 0.000 | | |

**3.3.3 Bases and assumptions used in above estimates:**

N/A

# LDR REPORT WASTE LOCATION-SPECIFIC DATA SHEET

## 1.0 WASTE STREAM IDENTIFICATION AND SOURCE

1.1 **Unit/Plant name:** 222-S Laboratory Complex **Waste Stream:** 222-S Inorganic Non-debris

**Treatabilitiy Group Name:** MLLW-02 - Inorganic Non-Debris

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

222S-420-0001-CR, 222S-422-0001-CR; CR-Current Revision

1.3 **Waste stream source information**

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

Liquid and/or solid waste generated as unused or expired standards and reagents, as unused samples, and from the use of chemicals during analytical procedures.

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

222-S generates waste during laboratory activity (e.g. analytical procedures, 219-S, maintenance operations and hot cell operations).

1.3.3 **Source of the regulated constituents:**

Hazardous constituents were already in the samples received from Hanford Site generating locations or entered the waste stream during sample analysis, or as unused/expired standards and reagents.

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

Waste Stream Fact Sheet, Content Inventory Sheet, and Generator knowledge.

1.3.5 **Additional notes:**

None.

## 2.0 WASTE STREAM STORAGE, INVENTORY, AND GENERATION INFORMATION

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

2.1 **Current storage method**

☐ Container (pad) ☒ Container (covered) ☐ Container (retrievably buried)

☐ Tank ☐ DST ☐ SST

☐ Other (explain):

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

Per the Hanford Facility Dangerous Waste Permit Application, 222-S Laboratory Complex (DOE/RL-91-27 Revision 1).

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

4/1997 - 12/31/2003.

# LDR REPORT WASTE LOCATION-SPECIFIC DATA SHEET

**2.2 Storage inventory locations:**

| Building/Room Number | Number of Containers/Tanks |
|---|---|
| HS-0083A | 2 |
| HS-0083B | 1 |

**2.3 Current stored inventory for this stream.**

Total volume (cubic meters): 0.625

Date of inventory values: 12/31/2003

Comments on waste inventory:

This data is from SWITS specific to 222-S Laboratory Complex.

**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 |
|---|---|---|---|
| 2004 | 0.000 | | |
| 2005 | 0.000 | | |
| 2006 | 0.000 | | |
| 2007 | 0.000 | | |
| 2008 | 0.000 | | |
| Total | 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.

Will be completed during activities to facilitate transfer of the container to CWC. No commitment is necessary for the characterization needs on this MLLW.

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

☒ Yes ☐ No ☐ Unknown at this time

| Milestone Number | Due Date |
|---|---|
| N/A | N/A |

# LDR REPORT WASTE LOCATION-SPECIFIC DATA SHEET

If yes or unknown, comment on characterization for disposal.

To meet concentration based treatment standards applicable for the residues, sampling will be required after treatment. No commitment is necessary for the characterization needs on this MLLW.

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

This waste stream would routinely enter 219-S WHF. In some cases, non-routine generated waste may be lab-packed and stored in the dangerous mixed waste storage area (DMWSA).

## 3.0 WASTE MINIMIZATION

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

☒ Yes ☐ No

If yes, provide date assessment conducted: 9/2000

If yes, provide document number or other identification:

Operating and analytical procedures at 222S Laboratory.

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

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

222-S personnel minimize waste through proper planning during AJHA and pre-jobs and by optimizing use of lab ware. 222-S personnel seek innovative technology that will allow waste minimization.

**3.3 Waste minimization schedule**

**3.3.1 Reduction achieved during calendar year 2003 (volume or mass)**

7.300 m3

**3.3.2 Projected future waste volume reductions**

| Year | $m^3$ | and/or | kg |
|---|---|---|---|
| 2004 | 0.000 | | |
| 2005 | 0.000 | | |
| 2006 | 0.000 | | |
| 2007 | 0.000 | | |
| 2008 | 0.000 | | |
| Total | 0.000 | | |

**3.3.3 Bases and assumptions used in above estimates:**

# LDR REPORT WASTE LOCATION-SPECIFIC DATA SHEET

DOE/RL-2000-79 -"Pollution Prevention Accomplishments" document reported waste reductions for CY 2000. The waste reduction volume reported in Section 3.3.1 is a total waste minimization volume for similar waste streams across the 222-S Laboratory; this waste stream may be a portion of what was reported. 222-S has no waste minimization goals for this waste stream; therefore, no projected future waste volume reductions are reported in Section 3.3.2. However, the analytical process generating this stream is continuously evaluated for waste minimization opportunities.

# LDR REPORT WASTE LOCATION-SPECIFIC DATA SHEET

## 1.0 WASTE STREAM IDENTIFICATION AND SOURCE

**1.1 Unit/Plant name:** 324 **Waste Stream:** Inorganic Non-Debris Discarded Chemical/Waste

**Treatabilitiy Group Name:** MLLW-02 - Inorganic Non-Debris

**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):**

Discarded/unused chemical products or waste.

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

Chemical products were used for maintenance or clean-up activities.

**1.3.3 Source of the regulated constituents:**

In the chemical products.

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

Process knowledge.

**1.3.5 Additional notes:**

None.

## 2.0 WASTE STREAM STORAGE, INVENTORY, AND GENERATION INFORMATION

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

**2.1 Current storage method**

☐ Container (pad) ☐ Container (covered) ☐ Container (retrievably buried)

☐ Tank ☐ DST ☐ SST

☐ Other (explain):

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

N/A

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

N/A

**2.2 Storage inventory locations:**

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

# LDR REPORT WASTE LOCATION-SPECIFIC DATA SHEET

**2.3 Current stored inventory for this stream.**

Total volume (cubic meters): 0.000

Date of inventory values: 12/31/2003

Comments on waste inventory:

Waste is being accumulated in SAA.

**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 |
|---|---|---|---|
| 2004 | 0.600 | | |
| 2005 | 1.200 | | |
| 2006 | 2.400 | | |
| 2007 | 7.400 | | |
| 2008 | 2.100 | | |
| Total | 13.700 | | |

**2.7 DOE Storage Compliance Assessment information:**

☐ Assessment has been completed.

| Document Number | Date |
|---|---|
| | |

☐ Assessment has been scheduled. Scheduled date:

☒ 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 |

# LDR REPORT WASTE LOCATION-SPECIFIC DATA SHEET

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

☐ Yes ☒ No

If yes, summarize releases and quantities and provide date:

N/A

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

☐ Yes ☒ No

If yes, explain: N/A

**2.11 Characterization**

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

☐ Yes ☒ No ☐ Unknown at this time

| Milestone Number | Due Date |
|---|---|
| N/A | N/A |

If yes or unknown, comment on characterization for storage.

N/A

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

☒ Yes ☐ No ☐ Unknown at this time

| Milestone Number | Due Date |
|---|---|
| N/A | N/A |

If yes or unknown, comment on characterization for treatment.

Will be completed during activities to facilitate transfer of the container to CWC. No commitment is necessary for the characterization needs on this MLLW.

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

☒ Yes ☐ No ☐ Unknown at this time

| Milestone Number | Due Date |
|---|---|
| N/A | N/A |

If yes or unknown, comment on characterization for disposal.

To meet concentration based treatment standards applicable for the residues, sampling will be required after treatment. No commitment is necessary for the characterization needs on this MLLW.

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

None.

# LDR REPORT WASTE LOCATION-SPECIFIC DATA SHEET

## 3.0 WASTE MINIMIZATION

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

☐ Yes ☒ No

If yes, provide date assessment conducted: N/A

If yes, provide document number or other identification:

N/A

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

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 achieved by substitution of less hazardous materials, waste segregation, and disposal of hazardous waste.

**3.3 Waste minimization schedule**

**3.3.1 Reduction achieved during calendar year 2003 (volume or mass)**

0.000 m3

**3.3.2 Projected future waste volume reductions**

| Year | $m^3$ | and/or | kg |
|---|---|---|---|
| 2004 | 0.000 | | |
| 2005 | 0.000 | | |
| 2006 | 0.000 | | |
| 2007 | 0.000 | | |
| 2008 | 0.000 | | |
| Total | 0.000 | | |

**3.3.3 Bases and assumptions used in above estimates:**

Facility deactivation planning

# LDR REPORT WASTE LOCATION-SPECIFIC DATA SHEET

## 1.0 WASTE STREAM IDENTIFICATION AND SOURCE

1.1 **Unit/Plant name:** 327 **Waste Stream:** Inorganic Non-Debris Discarded Chemical/Waste

**Treatabilitiy Group Name:** MLLW-02 - Inorganic Non-Debris

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):**

Discarded/unused chemical products or waste.

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

Chemical products were used for maintenance or clean-up activities.

1.3.3 **Source of the regulated constituents:**

In the chemical products.

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

Process knowledge.

1.3.5 **Additional notes:**

None.

## 2.0 WASTE STREAM STORAGE, INVENTORY, AND GENERATION INFORMATION

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

2.1 **Current storage method**

☐ Container (pad) ☐ Container (covered) ☐ Container (retrievably buried)

☐ Tank ☐ DST ☐ SST

☐ Other (explain):

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

N/A

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

N/A

2.2 **Storage inventory locations:**

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

# LDR REPORT WASTE LOCATION-SPECIFIC DATA SHEET

**2.3 Current stored inventory for this stream.**

Total volume (cubic meters): 0.000

Date of inventory values: 12/31/2003

Comments on waste inventory:

Waste is being accumulated in SAA.

**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 |
|---|---|---|---|
| 2004 | 1.000 | | |
| 2005 | 1.600 | | |
| 2006 | 2.000 | | |
| 2007 | 1.600 | | |
| 2008 | 2.000 | | |
| *Total* | *8.200* | | |

**2.7 DOE Storage Compliance Assessment information:**

☐ Assessment has been completed.

| Document Number | Date |
|---|---|
| | |

☐ Assessment has been scheduled. Scheduled date:

☒ 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 |

# LDR REPORT WASTE LOCATION-SPECIFIC DATA SHEET

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

☐ Yes ☒ No

If yes, summarize releases and quantities and provide date:

N/A

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

☐ Yes ☒ No

If yes, explain: N/A

**2.11 Characterization**

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

☐ Yes ☒ No ☐ Unknown at this time

| Milestone Number | Due Date |
|---|---|
| N/A | N/A |

If yes or unknown, comment on characterization for storage.

N/A

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

☒ Yes ☐ No ☐ Unknown at this time

| Milestone Number | Due Date |
|---|---|
| N/A | N/A |

If yes or unknown, comment on characterization for treatment.

Will be completed during activities to facilitate transfer of the container to CWC. No commitment is necessary for the characterization needs on this MLLW.

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

☒ Yes ☐ No ☐ Unknown at this time

| Milestone Number | Due Date |
|---|---|
| N/A | N/A |

If yes or unknown, comment on characterization for disposal.

To meet concentration based treatment standards applicable for the residues, sampling will be required after treatment. No commitment is necessary for the characterization needs on this MLLW.

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

None.

# LDR REPORT WASTE LOCATION-SPECIFIC DATA SHEET

## 3.0 WASTE MINIMIZATION

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

☐ Yes ☒ No

If yes, provide date assessment conducted: N/A

If yes, provide document number or other identification:

N/A

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

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 achieved by substitution of less hazardous materials, waste segregation and disposal of hazardous waste.

**3.3 Waste minimization schedule**

**3.3.1 Reduction achieved during calendar year 2003 (volume or mass)**

0.000 m3

**3.3.2 Projected future waste volume reductions**

| Year | $m^3$ | and/or | kg |
|---|---|---|---|
| 2004 | 0.000 | | |
| 2005 | 0.000 | | |
| 2006 | 0.000 | | |
| 2007 | 0.000 | | |
| 2008 | 0.000 | | |
| Total | 0.000 | | |

**3.3.3 Bases and assumptions used in above estimates:**

Facility deactivation and surveillance/maintenance planning.

# LDR REPORT WASTE LOCATION-SPECIFIC DATA SHEET

## 1.0 WASTE STREAM IDENTIFICATION AND SOURCE

1.1 **Unit/Plant name:** CWC **Waste Stream:** Inorganic Non-Debris Solids and Labpacks

**Treatabilitiy Group Name:** MLLW-02 - Inorganic Non-Debris

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

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):**

This waste stream consists of many different inorganic solids including particulates, absorbed liquids, sludges, labpacks, paint waste, salt waste, etc. This waste does not include hazardous debris other than incidental debris material commingled with the non-debris.

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

The waste was generated at many onsite locations and by offsite generators. The inventory was primarily from the closure of the 183-H Solar Evaporation Basins.

1.3.3 **Source of the regulated constituents:**

See 1.3.1 and 1.3.2.

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

Analytical data and process knowledge.

1.3.5 **Additional notes:**

None.

## 2.0 WASTE STREAM STORAGE, INVENTORY, AND GENERATION INFORMATION

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

2.1 **Current storage method**

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

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

Accumulated and packaged by waste generators prior to storage at CWC.

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

Waste storage in CWC began in 1988 and continues.

# LDR REPORT WASTE LOCATION-SPECIFIC DATA SHEET

**2.2 Storage inventory locations:**

| Building/Room Number | Number of Containers/Tanks |
|---|---|
| CWC | 6,915 |

**2.3 Current stored inventory for this stream.**

Total volume (cubic meters): 2,137.760

Date of inventory values: 12/30/2003

Comments on waste inventory:

Based on the inventory residing at CWC as reported in SWITS for WSRds 420, 421, 422, 425, 428, 521, 523, 524, 525, 900, 901, 902, 903, 904, ALI, EH4, EHP, IXI, LPI, PAI, and SSA.

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

☐ Yes ☒ No

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

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

Bases and assumptions used:

No issues with CWC storage based on 20-year waste generation forecast.

**2.5 Planned storage areas for this waste:**

☒ Current Location ☒ CWC ☐ DST

☐ Other Area(s) (list):

☐ None

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

| Year | $m^3$ | and/or | kg |
|---|---|---|---|
| 2004 | 0.000 | | |
| 2005 | 0.000 | | |
| 2006 | 0.000 | | |
| 2007 | 0.000 | | |
| 2008 | 0.000 | | |
| Total | 0.000 | | |

**2.7 DOE Storage Compliance Assessment information:**

☒ Assessment has been completed.

| Document Number | Date |
|---|---|
| A&E-SEC-02-001 | 01/21/2002 |

# LDR REPORT WASTE LOCATION-SPECIFIC DATA SHEET

☐ Assessment has been scheduled. Scheduled date:

☐ Other. Explain:

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

| Milestone Number | Due Date |
|---|---|
| M-020-12 | 10/31/1991 |

**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.

To meet concentration based treatment standards applicable for the residues, sampling will be required after treatment. No commitment is necessary for the characterization needs on this MLLW.

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

N/A

## 3.0 WASTE MINIMIZATION

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

☐ Yes ☒ No

If yes, provide date assessment conducted: N/A

If yes, provide document number or other identification:

N/A

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

None planned - waste not generated at CWC.

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

These activities occur before the wastes are transferred/shipped to CWC. There are few opportunities to reduce waste volumes placed into storage.

**3.3 Waste minimization schedule**

**3.3.1 Reduction achieved during calendar year 2003 (volume or mass)**

0.000 m3

**3.3.2 Projected future waste volume reductions**

| Year | $m^3$ | and/or | kg |
|---|---|---|---|
| 2004 | 0.000 | | |
| 2005 | 0.000 | | |
| 2006 | 0.000 | | |
| 2007 | 0.000 | | |
| 2008 | 0.000 | | |
| Total | 0.000 | | |

**3.3.3 Bases and assumptions used in above estimates:**

There is no projected waste generation by CWC.

# LDR REPORT WASTE LOCATION-SPECIFIC DATA SHEET

## 1.0 WASTE STREAM IDENTIFICATION AND SOURCE

1.1 **Unit/Plant name:** PFP **Waste Stream:** Laboratory Chemical Wastes, Inorganic Non-Debris

**Treatabilitiy Group Name:** MLLW-02 - Inorganic Non-Debris

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

PFPX-420-0001, PFPX-428-0001, PFPX-428-0002, PFPX-421-0001.

1.3 **Waste stream source information**

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

Spent expired chemicals or lab generated waste.

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

Laboratory operations.

1.3.3 **Source of the regulated constituents:**

Intrinsically hazardous.

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

Analytical data, process knowledge.

1.3.5 **Additional notes:**

None.

## 2.0 WASTE STREAM STORAGE, INVENTORY, AND GENERATION INFORMATION

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

2.1 **Current storage method**

☐ Container (pad) ☐ Container (covered) ☐ Container (retrievably buried)

☐ Tank ☐ DST ☐ SST

☐ Other (explain):

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

N/A

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

N/A

2.2 **Storage inventory locations:**

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

# LDR REPORT WASTE LOCATION-SPECIFIC DATA SHEET

**2.3 Current stored inventory for this stream.**

Total volume (cubic meters): 0.000

Date of inventory values: 12/31/2003

Comments on waste inventory:

Waste is placed directly into SAA area upon generation.

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

☐ Yes ☒ No

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

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

Bases and assumptions used:

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 |
|---|---|---|---|
| 2004 | 5.590 | | |
| 2005 | 10.880 | | |
| 2006 | 5.440 | | |
| 2007 | 3.740 | | |
| 2008 | 0.340 | | |
| Total | 25.990 | | |

**2.7 DOE Storage Compliance Assessment information:**

☒ Assessment has been completed.

| Document Number | Date |
|---|---|
| PFP Env. Compliance Assess.; Ltr. #01-A&E-129 | 09/13/2001 |

☐ Assessment has been scheduled. Scheduled date:

☐ Other. Explain:

# LDR REPORT WASTE LOCATION-SPECIFIC DATA SHEET

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

| Milestone Number | Due Date |
|---|---|
| N/A | N/A |

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

☐ Yes ☒ No

If yes, summarize releases and quantities and provide date:

N/A

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

☐ Yes ☒ No

If yes, explain: N/A

**2.11 Characterization**

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

☒ Yes ☐ No ☐ Unknown at this time

| Milestone Number | Due Date |
|---|---|
| N/A | N/A |

If yes or unknown, comment on characterization for storage.

Will be characterized before transfer to CWC. No commitment is necessary for the characterization needs on this MLLW.

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

☒ Yes ☐ No ☐ Unknown at this time

| Milestone Number | Due Date |
|---|---|
| N/A | N/A |

If yes or unknown, comment on characterization for treatment.

Will be completed during activities to facilitate transfer of the container to CWC. No commitment is necessary for the characterization needs on this MLLW.

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

☒ Yes ☐ No ☐ Unknown at this time

| Milestone Number | Due Date |
|---|---|
| N/A | N/A |

If yes or unknown, comment on characterization for disposal.

# LDR REPORT WASTE LOCATION-SPECIFIC DATA SHEET

To meet concentration based treatment standards applicable for the residues, sampling will be required after treatment. No commitment is necessary for the characterization needs on this MLLW.

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

None.

## 3.0 WASTE MINIMIZATION

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

☒ Yes ☐ No

If yes, provide date assessment conducted: CY2001

If yes, provide document number or other identification:

PFP 2001 Waste Minimization Evaluation for LDR Report Waste Streams, Letter #M2100-02-016

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

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

PFP routinely evaluates the chemicals in the labs to ensure that there is an identified use for them. Chemicals with no justifiable use will be either recycled, if possible, or discarded as waste and not reordered.

**3.3 Waste minimization schedule**

**3.3.1 Reduction achieved during calendar year 2003 (volume or mass)**

0.000 m3

**3.3.2 Projected future waste volume reductions**

| Year | $m^3$ | and/or | kg |
|---|---|---|---|
| 2004 | 0.000 | | |
| 2005 | 0.000 | | |
| 2006 | 0.000 | | |
| 2007 | 0.000 | | |
| 2008 | 0.000 | | |
| Total | 0.000 | | |

**3.3.3 Bases and assumptions used in above estimates:**

N/A

# LDR REPORT WASTE LOCATION-SPECIFIC DATA SHEET

## 1.0 WASTE STREAM IDENTIFICATION AND SOURCE

1.1 **Unit/Plant name:** T Plant Complex **Waste Stream:** Inorganic Non-Debris

**Treatabilitiy Group Name:** MLLW-02 - Inorganic Non-Debris

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

WSRd: 420.

1.3 **Waste stream source information**

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

Mixed waste solids, sorbed liquids and soils, subcategory - other solids (non-thermal treatment). This waste does not include hazardous debris other than incidental debris material commingled with the non-debris.

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

The waste was generated at many onsite locations and also by offsite generators.

1.3.3 **Source of the regulated constituents:**

See 1.3.1 and 1.3.2.

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

Analytical data and/or process knowledge.

1.3.5 **Additional notes:**

None.

## 2.0 WASTE STREAM STORAGE, INVENTORY, AND GENERATION INFORMATION

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

2.1 **Current storage method**

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

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

Waste generated at numerous onsite locations and by offsite generators.

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

1994 to present.

2.2 **Storage inventory locations:**

| Building/Room Number | Number of Containers/Tanks |
|---|---|
| T Plant Complex | 4 |

# LDR REPORT WASTE LOCATION-SPECIFIC DATA SHEET

**2.3 Current stored inventory for this stream.**

Total volume (cubic meters): 1.000

Date of inventory values: 12/31/2003

Comments on waste inventory:

Inventory will fluctuate as T Plant Complex generates or performs treatment/verification of onsite/offsite generators waste.

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

☐ Yes ☒ No

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

When is this capacity expected to be reached? N/A

Bases and assumptions used:

N/A

**2.5 Planned storage areas for this waste:**

☒ Current Location ☒ CWC ☐ DST

☐ Other Area(s) (list): N/A

☐ None

**2.6 Estimated generation projection by calendar year (includes waste in satellite and 90-day accumulation areas):**

| Year | $m^3$ | and/or | kg |
|---|---|---|---|
| 2004 | 0.200 | | |
| 2005 | 0.200 | | |
| 2006 | 0.200 | | |
| 2007 | 0.200 | | |
| 2008 | 0.200 | | |
| Total | 1.000 | | |

**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: N/A

# 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.

Will be completed during activities to facilitate transfer of the container to CWC. No commitment is necessary for the characterization needs on this MLLW.

**2.11.3 Is further characterization needed about the waste prior to acceptance for disposal?**

☒ Yes ☐ No ☐ Unknown at this time

| Milestone Number | Due Date |
|---|---|
| N/A | N/A |

If yes or unknown, comment on characterization for disposal.

To meet concentration based treatment standards applicable for the residues, sampling will be required after treatment. No commitment is necessary for the characterization needs on this MLLW.

# LDR REPORT WASTE LOCATION-SPECIFIC DATA SHEET

**2.12 Other key assumptions related to storage, inventory, and generation information:**

None.

## 3.0 WASTE MINIMIZATION

**3.1 Has a waste minimization assessment been completed for this stream?**

☐ Yes ☒ No

If yes, provide date assessment conducted:

If yes, provide document number or other identification:

N/A

If no, provide date assessment will be completed, or if waste stream is no longer generated, then indicate N/A:

See Section 3.3.3 for discussion on waste minimization.

**3.2 Provide details of current and proposed methods for minimizing the generation of this stream (e.g., process changes to reduce or eliminate LDR waste, methods to reduce volume through segregation and avoidance of commingling, substitution of less-toxic materials):**

To the extent practical, all mixed waste is segregated and packaged separately from LLW or TRU wastes. To minimize the generation of mixed waste, T Plant actively seeks nondangerous alternatives for the dangerous constituents in their processes. Minimization goals are set annually and tracked quarterly, and waste treatment is used to destroy the hazardous constituents, as allowable.

**3.3 Waste minimization schedule**

**3.3.1 Reduction achieved during calendar year 2003 (volume or mass)**

0.000 m3

**3.3.2 Projected future waste volume reductions**

| Year | $m^3$ | and/or | kg |
|---|---|---|---|
| 2004 | 0.000 | | |
| 2005 | 0.000 | | |
| 2006 | 0.000 | | |
| 2007 | 0.000 | | |
| 2008 | 0.000 | | |
| Total | 0.000 | | |

**3.3.3 Bases and assumptions used in above estimates:**

The T Plant Complex has submitted a P2/Wmin fiscal year 2004 goal to reduce, where possible, mixed waste generation. For FY 2004 to 2008, new goals will be evaluated and identified on a year-by-year basis. T Plant Complex does not track waste reduction by treatability groups. Routine and non-routine generated waste is reported quarterly to the Waste Minimization/Pollution Prevention Group.

# LDR REPORT WASTE LOCATION-SPECIFIC DATA SHEET

## 1.0 WASTE STREAM IDENTIFICATION AND SOURCE

1.1 **Unit/Plant name:** Tank Farm Facilities **Waste Stream:** Inorganic Non-Debris

**Treatabilitiy Group Name:** MLLW-02 - Inorganic Non-Debris

1.2 **Applicable profile number(s) for this waste stream:**

420-01 and 421-01.

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):**

Unused sample portions returned from the analytical laboratories derived from secondary waste associated with tank farm activities, including rain water, soil sample, etc.

1.3.2 **History of how and where the waste was/is generated:**

Portions of samples which were not used for analysis, and are returned to the generator for disposal.

1.3.3 **Source of the regulated constituents:**

The sample content, or the method of sampling (e.g. sample preservation).

1.3.4 **Source of the information (e.g., analytical data, process knowledge, document number, etc.)**

Process knowledge, analytical data, and MSDS.

1.3.5 **Additional notes:**

None.

## 2.0 WASTE STREAM STORAGE, INVENTORY, AND GENERATION INFORMATION

(NOTE: For waste in satellite accumulation areas and 90-day accumulation areas, skip to Section 2.6.)

2.1 **Current storage method**

☐ Container (pad) ☐ Container (covered) ☐ Container (retrievably buried)

☐ Tank ☐ DST ☐ SST

☐ Other (explain):

2.1.1 **How was the waste managed prior to storage?**

N/A

2.1.2 **Timeframe when waste was placed to storage?**

N/A

2.2 **Storage inventory locations:**

| Building/Room Number | Number of Containers/Tanks |
|---|---|
| N/A | N/A |

# LDR REPORT WASTE LOCATION-SPECIFIC DATA SHEET

**2.3 Current stored inventory for this stream.**

Total volume (cubic meters): 0.000

Date of inventory values: 12/31/2003

Comments on waste inventory:

Managed in SAA or 90-day accumulation areas.

**2.4 Is storage capacity at this location potentially an issue for this waste stream?**

Yes No

If yes, what is the total estimated storage capacity?

When is this capacity expected to be reached?

Bases and assumptions used:

**2.5 Planned storage areas for this waste:**

☐ Current Location ☒ CWC ☐ DST

☐ Other Area(s) (list):

☐ None

**2.6 Estimated generation projection by calendar year (includes waste in satellite and 90-day accumulation areas):**

| Year | $m^3$ | and/or | kg |
|---|---|---|---|
| 2004 | 0.416 | | |
| 2005 | 0.458 | | |
| 2006 | 0.504 | | |
| 2007 | 0.554 | | |
| 2008 | 0.610 | | |
| Total | 2.542 | | |

**2.7 DOE Storage Compliance Assessment information:**

☐ Assessment has been completed.

| Document Number | Date |
|---|---|
| | |

☐ Assessment has been scheduled. Scheduled date: N/A

☒ 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 |

# LDR REPORT WASTE LOCATION-SPECIFIC DATA SHEET

**2.9 Has there ever been any non-permitted, unauthorized release of this waste stream from this storage unit to the environment?**

☐ Yes ☒ No

If yes, summarize releases and quantities and provide date:

N/A

**2.10 Are there any plans to submit requests for variances or other exemptions related to storage?**

☐ Yes ☒ No

If yes, explain: N/A

**2.11 Characterization**

**2.11.1 Is further characterization needed about the waste prior to acceptance for storage?**

☐ Yes ☒ No ☐ Unknown at this time

| Milestone Number | Due Date |
|---|---|
| N/A | N/A |

If yes or unknown, comment on characterization for storage.

N/A

**2.11.2 Is further characterization needed about the waste prior to acceptance for treatment?**

☒ Yes ☐ No ☐ Unknown at this time

| Milestone Number | Due Date |
|---|---|
| N/A | N/A |

If yes or unknown, comment on characterization for treatment.

Will be completed during activities to facilitate transfer of the container to CWC. No commitment is necessary for the characterization needs on this MLLW.

**2.11.3 Is further characterization needed about the waste prior to acceptance for disposal?**

☒ Yes ☐ No ☐ Unknown at this time

| Milestone Number | Due Date |
|---|---|
| N/A | N/A |

If yes or unknown, comment on characterization for disposal.

To meet concentration based treatment standards applicable for the residues, sampling will be required after treatment. No commitment is necessary for the characterization needs on this MLLW.

**2.12 Other key assumptions related to storage, inventory, and generation information:**

None.

# LDR REPORT WASTE LOCATION-SPECIFIC DATA SHEET

## 3.0 WASTE MINIMIZATION

**3.1 Has a waste minimization assessment been completed for this stream?**

☐ Yes ☒ No

If yes, provide date assessment conducted: N/A

If yes, provide document number or other identification:

N/A

If no, provide date assessment will be completed, or if waste stream is no longer generated, then indicate N/A:

Unknown at this time.

**3.2 Provide details of current and proposed methods for minimizing the generation of this stream (e.g., process changes to reduce or eliminate LDR waste, methods to reduce volume through segregation and avoidance of commingling, substitution of less-toxic materials):**

Discuss with labs ways to reduce the required sample volumes.

**3.3 Waste minimization schedule**

**3.3.1 Reduction achieved during calendar year 2003 (volume or mass)**

0.000 m3

**3.3.2 Projected future waste volume reductions**

| Year | $m^3$ | and/or | kg |
|---|---|---|---|
| 2004 | 2.860 | | |
| 2005 | 2.390 | | |
| 2006 | 2.580 | | |
| 2007 | 2.510 | | |
| 2008 | 2.120 | | |
| Total | 12.460 | | |

**3.3.3 Bases and assumptions used in above estimates:**

No reduction is expected. Tank famrs will continue to sample waste streams and receive sample residue and returns.

# LDR REPORT WASTE LOCATION-SPECIFIC DATA SHEET

## 1.0 WASTE STREAM IDENTIFICATION AND SOURCE

1.1 **Unit/Plant name:** WRAP **Waste Stream:** Inorganic Non-Debris

**Treatabilitiy Group Name:** MLLW-02 - Inorganic Non-Debris

1.2 **Applicable profile number(s) for this waste stream:**

None in current inventory.

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):**

N/A

1.3.2 **History of how and where the waste was/is generated:**

N/A

1.3.3 **Source of the regulated constituents:**

N/A

1.3.4 **Source of the information (e.g., analytical data, process knowledge, document number, etc.)**

N/A

1.3.5 **Additional notes:**

N/A

## 2.0 WASTE STREAM STORAGE, INVENTORY, AND GENERATION INFORMATION

(NOTE: For waste in satellite accumulation areas and 90-day accumulation areas, skip to Section 2.6.)

2.1 **Current storage method**

☐ Container (pad) ☒ Container (covered) ☐ Container (retrievably buried)

☐ Tank ☐ DST ☐ SST

☒ Other (explain): Not in current inventory.

2.1.1 **How was the waste managed prior to storage?**

N/A

2.1.2 **Timeframe when waste was placed to storage?**

N/A

2.2 **Storage inventory locations:**

| Building/Room Number | Number of Containers/Tanks |
|---|---|
| N/A | N/A |

# LDR REPORT WASTE LOCATION-SPECIFIC DATA SHEET

**2.3 Current stored inventory for this stream.**

Total volume (cubic meters): 0.000

Date of inventory values: 12/31/2003

Comments on waste inventory:

**2.4 Is storage capacity at this location potentially an issue for this waste stream?**

☐ Yes ☒ No

If yes, what is the total estimated storage capacity? N/A

When is this capacity expected to be reached? N/A

Bases and assumptions used:

N/A

**2.5 Planned storage areas for this waste:**

☐ Current Location ☒ CWC ☐ DST

☐ Other Area(s) (list): N/A

☐ None

**2.6 Estimated generation projection by calendar year (includes waste in satellite and 90-day accumulation areas):**

| Year | $m^3$ | and/or | kg |
|---|---|---|---|
| 2004 | 0.200 | | |
| 2005 | 0.000 | | |
| 2006 | 0.000 | | |
| 2007 | 0.000 | | |
| 2008 | 0.000 | | |
| Total | 0.200 | | |

**2.7 DOE Storage Compliance Assessment information:**

☒ Assessment has been completed.

| Document Number | Date |
|---|---|
| DE-AC06-96RL13200 | 09/26/2001 |

☐ Assessment has been scheduled. Scheduled date:

☐ Other. Explain: N/A

## 2.8 Applicable Tri-Party Agreement milestones related to storage at this location:

| Milestone Number | Due Date |
|---|---|
| N/A | N/A |

# LDR REPORT WASTE LOCATION-SPECIFIC DATA SHEET

**2.9 Has there ever been any non-permitted, unauthorized release of this waste stream from this storage unit to the environment?**

☐ Yes ☒ No

If yes, summarize releases and quantities and provide date:

N/A

**2.10 Are there any plans to submit requests for variances or other exemptions related to storage?**

☐ Yes ☒ No

If yes, explain: N/A

**2.11 Characterization**

**2.11.1 Is further characterization needed about the waste prior to acceptance for storage?**

☐ Yes ☒ No ☐ Unknown at this time

| Milestone Number | Due Date |
|---|---|
| N/A | N/A |

If yes or unknown, comment on characterization for storage.

N/A

**2.11.2 Is further characterization needed about the waste prior to acceptance for treatment?**

☐ Yes ☒ No ☐ Unknown at this time

| Milestone Number | Due Date |
|---|---|
| N/A | N/A |

If yes or unknown, comment on characterization for treatment.

N/A

**2.11.3 Is further characterization needed about the waste prior to acceptance for disposal?**

☐ Yes ☒ No ☐ Unknown at this time

| Milestone Number | Due Date |
|---|---|
| N/A | N/A |

If yes or unknown, comment on characterization for disposal.

N/A

**2.12 Other key assumptions related to storage, inventory, and generation information:**

None.

# LDR REPORT WASTE LOCATION-SPECIFIC DATA SHEET

## 3.0 WASTE MINIMIZATION

**3.1 Has a waste minimization assessment been completed for this stream?**

☐ Yes ☒ No

If yes, provide date assessment conducted:

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 cnrrent 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 2003 (volume or mass)**

0.000 m3

**3.3.2 Projected future waste volume reductions**

| Year | $m^3$ | and/or | kg |
|---|---|---|---|
| 2004 | 0.000 | | |
| 2005 | 0.000 | | |
| 2006 | 0.000 | | |
| 2007 | 0.000 | | |
| 2008 | 0.000 | | |
| Total | 0.000 | | |

**3.3.3 Bases and assumptions used in above estimates:**

# LDR REPORT WASTE LOCATION-SPECIFIC DATA SHEET

## 1.0 WASTE STREAM IDENTIFICATION AND SOURCE

1.1 **Unit/Plant name:** WSCF **Waste Stream:** Inorganic Non-Debris

**Treatabilitiy Group Name:** MLLW-02 - Inorganic Non-Debris

1.2 **Applicable profile number(s) for this waste stream:**

WSCF-505-0003

1.3 **Waste stream source information**

1.3.1 **General description of the waste (e.g., spill clean-up waste, discarded lab materials, maintenance waste):**

The inorganic non-debris waste stream, sodium sulfate, is generated during analytical processes in the laboratory. Additionally, a silver zeolite waste stream will be managed under the same treatability group as the sodium sulfate waste stream.

1.3.2 **History of how and where the waste was/is generated:**

The sodium sulfate waste stream is a product of an analytical process within the laboratory. Sodium sulfate is generated as a result of analytical methods that utilize accelerated solvent extraction and liquid/liquid extractions. The silver zeolite waste stream is produced as a result of Gamma Energy Analysis (GEA) analysis within the lab. However, this waste stream does not produce large quantities of silver zeolite.

1.3.3 **Source of the regulated constituents:**

The hazardous constituents are derived from sample contribution and/or the addition of reagents and lab standards during the analytical process. The reagents and standards may be considered regulated constituents and contribute to the hazardous nature of the waste stream.

1.3.4 **Source of the information (e.g., analytical data, process knowledge, document number, etc.)**

Information to characterize these waste streams is obtained from process knowledge and analytical data.

1.3.5 **Additional notes:**

SAA/90-Day accumulation areas only; no TSD units at WSCF.

## 2.0 WASTE STREAM STORAGE, INVENTORY, AND GENERATION INFORMATION

(NOTE: For waste in satellite accumulation areas and 90-day accumulation areas, skip to Section 2.6.)

2.1 **Current storage method**

☐ Container (pad) ☐ Container (covered) ☐ Container (retrievably buried)

☐ Tank ☐ DST ☐ SST

☐ Other (explain): N/A

2.1.1 **How was the waste managed prior to storage?**

N/A

# LDR REPORT WASTE LOCATION-SPECIFIC DATA SHEET

**2.1.2 Timeframe when waste was placed to storage?**

N/A

**2.2 Storage inventory locations:**

| Building/Room Number | Number of Containers/Tanks |
|---|---|
| N/A | N/A |

**2.3 Current stored inventory for this stream.**

Total volume (cubic meters): 0.000

Date of inventory values: 12/31/2003

Comments on waste inventory:

WSCF has no TSD unit, all waste is managed in an SAA or 90 day pad.

**2.4 Is storage capacity at this location potentially an issue for this waste stream?**

Yes No

If yes, what is the total estimated storage capacity?

When is this capacity expected to be reached?

Bases and assumptions used:

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 |
|---|---|---|---|
| 2004 | 0.400 | | |
| 2005 | 0.400 | | |
| 2006 | 0.400 | | |
| 2007 | 0.400 | | |
| 2008 | 0.400 | | |
| Total | 2.000 | | |

**2.7 DOE Storage Compliance Assessment information:**

☐ Assessment has been completed.

| Document Number | Date |
|---|---|
| | |

# LDR REPORT WASTE LOCATION-SPECIFIC DATA SHEET

☐ Assessment has been scheduled. Scheduled date:

☒ Other. Explain: 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.

N/A

**2.11.2 Is further characterization needed about the waste prior to acceptance for treatment?**

☒ Yes ☐ No ☐ Unknown at this time

| Milestone Number | Due Date |
|---|---|
| N/A | N/A |

If yes or unknown, comment on characterization for treatment.

Will be completed during activities to facilitate transfer of the container to CWC. No commitment is necessary for the characterization needs on this MLLW.

**2.11.3 Is further characterization needed about the waste prior to acceptance for disposal?**

☒ Yes ☐ No ☐ Unknown at this time

| Milestone Number | Due Date |
|---|---|
| N/A | N/A |

# LDR REPORT WASTE LOCATION-SPECIFIC DATA SHEET

If yes or unknown, comment on characterization for disposal.

To meet concentration based treatment standards applicable for the residues, sampling will be required after treatment. No commitment is necessary for the characterization needs on this MLLW.

**2.12 Other key assumptions related to storage, inventory, and generation information:**

N/A

## 3.0 WASTE MINIMIZATION

**3.1 Has a waste minimization assessment been completed for this stream?**

☐ Yes ☒ No

If yes, provide date assessment conducted: N/A

If yes, provide document number or other identification:

N/A

If no, provide date assessment will be completed, or if waste stream is no longer generated, then indicate N/A:

No date established 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):**

None. Waste is generated from laboratory operations during analysis of samples.

**3.3 Waste minimization schedule**

**3.3.1 Reduction achieved during calendar year 2003 (volume or mass)**

0.000 kg

**3.3.2 Projected future waste volume reductions**

| Year | $m^3$ | and/or | kg |
|---|---|---|---|
| 2004 | 0.000 | | |
| 2005 | 0.000 | | |
| 2006 | 0.000 | | |
| 2007 | 0.000 | | |
| 2008 | 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:** MLLW-03 - Organic Non-Debris

**1.2 Description of waste (list WSRd numbers for this waste stream, as applicable)**

This treatability group is for non-debris waste that contains hazardous constituents that either requires thermal treatment (specified technology) or thermal treatment is BDAT for meeting the applicable LDR treatment standards (concentration-based standards). Stabilization of the thermal treatment residue may also be required. The applicable WSRds for this treatability group are: ALO, IDW, IXO, LPA, LPO, PAO, SOC, SOE, SOW, TFS, TSC, 300, 301, 302, 303, 304, 305, 310, 311, 315, 320, 321, 330, 331, 400, 401, 402, 403, 404, 405, 406, 407, 408, 409, 40A, 40B, 427, 429, 430, 431, 432, 43C, 45A, 47A, 500, 501, 502, 503, 504, 505, 506, 507, 50A, 50B, 50C, 520, 522, 52A, 53A, 700, 701, 720, 721, 90A, 920, 921, 922, 923. This waste stream consists of many different inorganic and organic solids (e.g., particulates, absorbed liquids, sludges, resins, soils) and labpacks that are contaminated with organic regulated dangerous waste constituents, including PCBs. This waste stream does not include hazardous debris other than incidental debris material commingled with the non-debris.

## 2.0 WASTE INVENTORY AND GENERATION

**2.1 Current total inventory for this waste stream (stored waste only, not accumulation areas). [Equals sum of location-specific data sheets for this treatability group.]**

Total volume (cubic meters): 976.045

**2.2 Estimated generation projection by calendar year: [equals annual sums of location-specfic data sheets for this treatability group].**

| Year | $m^3$ | and/or | kg |
|---|---|---|---|
| 2004 | 118.920 | | |
| 2005 | 186.139 | | |
| 2006 | 208.644 | | |
| 2007 | 253.409 | | |
| 2008 | 387.031 | | |
| Total | 1,154.143 | | |

## 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):**

Since this waste is a general category based on dangerous waste characteristics, the radiological characteristics are expected to vary greatly. However there is high confidence that the waste is MLLW. The waste as packaged is considered Contact-Handled (i.e., less than or equal to 200mR/hr on outside package surface); however, the dose rate of some waste inside the package may exceed 200mR/hr.

# LDR REPORT TREATABILITY GROUP DATA SHEET

## 3.2 Physical Form

**3.2.1 Physical form of the waste:**

☒ Solid ☒ Liquid ☒ Semi-solid ☐ Debris

☒ Other (Describe in comments.)

**3.2.2 Comments on physical form:**

Waste received under the Waste Specification System (WSS) has a high confidence level that subject waste stream will not contain physical matrix characteristics that do not meet the waste stream description. Waste received prior to the WSS has a medium confidence level and will require matrix characterization verifications prior to treatment and disposal. If, during the verification process, it is determined that some of the waste does not meet the MLLW-03 waste stream description, then it will be reassigned into the appropriate waste stream (e.g., MLLW-02 or 04 through 10).

## 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 | Low TOC | *** | *** | DEACT & meet 40 CFR 268.48 |
| D002 | Corrosive | Corrosive Charac. | *** | *** | DEACT & meet 40 CFR 268.48 |
| D004 | TC-Arsenic | N/A | *** | *** | 5.0 mg/l TCLP & meet 40 CFR 268.48 |
| D005 | TC-Barium | N/A | *** | *** | 21 mg/l TCLP & meet 40 CFR 268.48 |
| D006 | TC-Cadmium | Cadmium Charac. | *** | *** | 0.11 mg/l TCLP & meet 40 CFR 268.48 |
| D007 | TC-Chromium | N/A | *** | *** | 0.60 mg/l TCLP & meet 40 CFR 268.48 |
| D008 | TC-Lead | Lead Charac. | *** | *** | 0.75 mg/l TCLP & meet 40 CFR 268.48 |
| D009 | TC-Mercury | Low Mercury | <260 mg/kg | *** | 0.20 mg/l TCLP & meet 40 CFR 268.48 |
| D010 | TC-Selenium | N/A | *** | *** | 5.7 mg/l TCLP & meet 40 CFR 268.48 |
| D011 | TC-Silver | N/A | *** | *** | 0.14 mg/l TCLP & meet 40 CFR 268.48 |
| D012 | Endrin | N/A | *** | *** | 0.13 mg/kg & meet 40 CFR 268.48 |
| D016 | 2,4-D | N/A | *** | *** | 10 mg/kg & meet 40 CFR 268.48 |
| D018 | Benzene | N/A | *** | *** | 10 mg/kg & meet 40 CFR 268.48 |
| D019 | Carbon Tetrachloride | N/A | *** | *** | 6.0 mg/kg & meet 40 CFR 268.48 |
| D020 | Chlordane | N/A | *** | *** | 0.26 mg/kg & meet 40 CFR 268.48 |
| D021 | Chlorobenzene | N/A | *** | *** | 6.0 mg/kg & meet 40 CFR 268.48 |
| D022 | Chloroform | N/A | *** | *** | 6.0 mg/kg & meet 40 CFR 268.48 |
| D023 | o-Cresol | N/A | *** | *** | 5.6 mg/kg & meet 40 CFR 268.48 |
| D026 | Cresol | N/A | *** | *** | 11.2 mg/kg & meet 40 CFR 268.48 |
| D027 | p-Dichlorobenzene | N/A | *** | *** | 6.0 mg/kg & meet 40 CFR 268.48 |
| D028 | 1,2-Dichloroethane | N/A | *** | *** | 6.0 mg/kg & meet 40 CFR 268.48 |
| D029 | 1,1-Dichloroethylene | N/A | *** | *** | 6.0 mg/kg & meet 40 CFR 268.48 |
| D030 | 2,4-Dinitrotoluene | N/A | *** | *** | 140 mg/kg & meet 40 CFR 268.48 |

# 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 |
|---|---|---|---|---|---|
| D031 | Heptachlor | N/A | *** | *** | 0.066 mg/kg & meet 40 CFR 268.48 |
| D033 | Hexachlorobutadiene | N/A | *** | *** | 5.6 mg/kg & meet 40 CFR 268.48 |
| D034 | Hexachloroethane | N/A | *** | *** | 30 mg/kg & meet 40 CFR 268.48 |
| D035 | Methyl Ethyl Ketone | N/A | *** | *** | 36 mg/kg & meet 40 CFR 268.48 |
| D036 | Nitrobenzene | N/A | *** | *** | 14 mg/kg & meet 40 CFR 268.48 |
| D037 | Pentachlorophenol | N/A | *** | *** | 7.4 mg/kg & meet 40 CFR 268.48 |
| D038 | Pyridine | N/A | *** | *** | 16 mg/kg & meet 40 CFR 268.48 |
| D039 | Tetrachloroethylene | N/A | *** | *** | 6.0 mg/kg & meet 40 CFR 268.48 |
| D040 | Trichlorethylene | N/A | *** | *** | 6.0 mg/kg & meet 40 CFR 268.48 |
| D043 | Vinyl Chloride | N/A | *** | *** | 6.0 mg/kg & meet 40 CFR 268.48 |
| F001 | 1,1,1-Trichloroethane | Spent Solvent | *** | *** | 6.0 mg/kg |
| F002 | Methylene Chloride | Spent Solvent | *** | *** | 30 mg/kg |
| F003 | Acetone & Hexone | Spent Solvent | *** | *** | 160 mg/kg |
| F004 | o-Cresol & p-Cresol | Spent Solvent | *** | *** | 5.6 mg/kg |
| F005 | Methyl Ethyl Ketone | Spent Solvent | *** | *** | 36 mg/kg |
| F022 | Process Waste Tetra-penta- or hexachloro-benzenes | N/A | *** | *** | Various |
| P012 | Arsenic Trioxide | N/A | *** | *** | 5.0 mg/l |
| P022 | Carbon Disulfide | N/A | *** | *** | CMBST |
| P023 | Chloreacetaldehyde | N/A | *** | *** | CMBST |
| P030 | Cyanide | N/A | *** | *** | 590/30 mg/kg |
| P102 | Propargyl Alcohol | N/A | *** | *** | CMBST |
| U001 | Acetaldeyde | N/A | *** | *** | CMBST |
| U002 | Acetone | N/A | *** | *** | 160 mg/kg |
| U003 | Acetonitrile | N/A | *** | *** | CMBST |
| U004 | Acetophenone | N/A | *** | *** | 9.7 mg/kg |
| U006 | Acteyl Chloride | N/A | *** | *** | CMBST |
| U019 | Benzene | N/A | *** | *** | 10 mg/kg |
| U025 | Bis(2-Chloroethyl)ether | N/A | *** | *** | 6.0 mg/kg |
| U031 | n-Butyl Alcohol | N/A | *** | *** | 2.6 mg/kg |

# LDR REPORT TREATABILITY GROUP DATA SHEET

| EPA/ State Number | Waste Description | LDR Sub-Category* | Concentration (Typical or Range)** | Basis | LDR Treatment Concentration Standard or Technology Code |
|---|---|---|---|---|---|
| U044 | Chloroform | N/A | *** | *** | 6.0 mg/kg |
| U056 | Cyclohexane | N/A | *** | *** | CMBST |
| U057 | Cyclohexanone | N/A | *** | *** | CMBST |
| U080 | Methylene Chloride | N/A | *** | *** | 30 mg/kg |
| U103 | Dimethyl Sulfate | N/A | *** | *** | CMBST |
| U108 | 1,4-Dioaxane | N/A | *** | *** | CMBST |
| U112 | Ethyl Acetate | N/A | *** | *** | CMBST |
| U117 | Ethyl Ether | N/A | *** | *** | 160 mg/kg |
| U121 | Trichloromonofluoromethane | N/A | *** | *** | 30 mg/kg |
| U123 | Formic Acid | N/A | *** | *** | CMBST |
| U133 | Hydrazine | N/A | *** | *** | CMBST |
| U134 | Hydrogen Fluoride | N/A | *** | *** | NEUTR |
| U144 | Lead Acetate | N/A | *** | *** | 0.37 mg/kg |
| U154 | Methanol | N/A | *** | *** | CMBST |
| U159 | Methyl Ethyl Ketone | N/A | *** | *** | 36 mg/kg |
| U160 | Methyl Ethyl Ketone Peroxide | N/A | *** | *** | CMBST |
| U161 | Methyl Isobutyl Ketone | N/A | *** | *** | 33 mg/kg |
| U162 | Methyl Methacrylate | N/A | *** | *** | 160 mg/kg |
| U165 | Naphthalene | N/A | *** | *** | 5.6 mg/kg |
| U169 | Nitrobenzene | N/A | *** | *** | 14 mg/kg |
| U170 | p-Nitropropane | N/A | *** | *** | 29 mg/kg |
| U187 | Phenacetin | N/A | *** | *** | 16 mg/kg |
| U188 | Phenol | N/A | *** | *** | 6.2 mg/kg |
| U189 | Phosphorus Sulfide | N/A | *** | *** | CMBST |
| U196 | Pyridine | N/A | *** | *** | 16 mg/kg |
| U203 | Safrole | N/A | *** | *** | 22 mg/kg |
| U210 | Tetrachloroetylene | N/A | *** | *** | 6.0 mg/kg |
| U211 | Carbon Tetrachloride | N/A | *** | *** | 6.0 mg/kg |
| U213 | Tetrahydrofuran | N/A | *** | *** | CMBST |
| U218 | Thioacetamide | N/A | *** | *** | CMBST |
| U220 | Toluene | N/A | *** | *** | 10 mg/kg |
| U226 | 1,1,1-Trichloroethane | N/A | *** | *** | 6.0 mg/kg |
| U228 | Trichloroethylene | N/A | *** | *** | 6.0 mg/kg |
| U239 | Xylenes | N/A | *** | *** | 30 mg/kg |

# 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 |
|---|---|---|---|---|---|
| U359 | 2-Ethoxyethanol | N/A | *** | *** | CMBST |
| WP01 | Persistent, EHW | N/A | *** | *** | None (1) |
| WP02 | Persistent, DW | N/A | *** | *** | N/A |
| WSC2 | Solid Corrosive | N/A | *** | *** | Remove Solid Acid Charac. |
| WT01 | Toxic, EHW | N/A | *** | *** | None(1) |
| WT02 | Toxic, DW | N/A | *** | *** | N/A |

* LDR Subcategory marked N/A if no existing subcategory adequately describes this waste, or if there are no defined subcategories for the waste number (40 CFR 268.40).

** If waste is not consistent in concentration, this may not apply. Described in Section 3.3.6.

***The concentration varies and is based on process knowledge and/or analytical data.

(1) Mixed extremely hazardous wastes may be land-disposed in Washington State in DOE facilities in accordance with RCW 70.105.050(2).

UHCs to be determined on a per-package basis during waste receipt, from characterization activities, or when waste is sent for treatment, unless waste package is a lab pack eligible for the alternative treatment standards in 40 CFR 268.42.

**3.3.3 List any waste numbers from Section 3.3.2 for which the waste stream already meets established LDR treatment standards.**

☒ List: Some of the F001-F005 designated waste may meet LDR treatment standards with out the need for further treatment. This may include soils from the various Tank Farm facilities, and some pump-and-treat filter media, WT02, WP02.

☐ 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:**

Waste received under the Waste Specification System (WSS) has a high confidence level that subject waste stream will not have contaminant characteristics that do not meet the waste stream description. Waste received prior to implementation of the WSS has a medium to low confidence level and will require characterization verifications prior to treatment and disposal. If, during the verification process, it is determined that some of the waste does not meet the MLLW-03 waste stream description, then it will be reassigned into the appropriate waste stream (e.g., MLLW-02 or -04 through -10). Some of the waste in this waste stream does contain a wide range of PCB concentrations subject to TSCA regulation. If a waste package is regulated by TSCA, it is identified as such on storage records and tracked in SWITS. Some of the waste has already met the rigors of the WSS for waste storage and treatment that came into effect in 1995. However, there have been several changes to the dangerous waste regulations since then that impose additional characterization requirements on the generator, namely identification of UHCs for all waste designated with a characteristic waste code (i.e., D001 through D043).

## 4.0 WASTE STREAM TREATMENT

**4.1 Is this waste stream currently being treated?**

☒ Yes ☐ No

If yes, provide details: Thermal treatment at Allied Technology Group (ATG), including waste from this waste stream, began 12/31/2000 and continued in 2001. ATG thermal treatment meets the requirements for CMBST, organic destruction, and stabilization. The capability of thermal treatment at ATG ended with the disposal of 11.6 cubic meters of thermal residue in 2002. There are continued efforts to acquire thermal treatment capability.

**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 waste in this waste stream may require further characterization before treatment. Thermal treatment is targeted as the primary treatment technology for the subject waste. Treatment will be performed by means of an offsite commercial treatment contract.

# LDR REPORT TREATABILITY GROUP DATA SHEET

**4.4 Treatment schedule information:**

Treatment will be performed in accordance with M-91 milestones and target dates after they have been finalized.

**4.5 Applicable Tri-Party Agreement treatment milestone numbers (including permitting):**

| Milestone Number | Due Date |
|---|---|
| M-091-12 | 12/31/2005 |
| M-091-12A | 12/31/2004 |

**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 currently identified.

**4.9 Key Assumptions:**

None.

## 5.0 WASTE STREAM DISPOSAL

**After treatment, how will the waste stream be disposed of (include locations, milestone numbers, variances required, etc. as applicable):**

Subject waste will ultimately be disposed of in mixed waste trenches located on the Hanford Site or at commercial facilities.

# LDR REPORT WASTE LOCATION-SPECIFIC DATA SHEET

## 1.0 WASTE STREAM IDENTIFICATION AND SOURCE

1.1 **Unit/Plant name:** 100-Area Reactors **Waste Stream:** Waste oil from reactors

**Treatabilitiy Group Name:** MLLW-03 - Organic Non-Debris

1.2 **Applicable profile number(s) for this waste stream:**

BHIX-404-0001-00

1.3 **Waste stream source information**

1.3.1 **General description of the waste (e.g., spill clean-up waste, discarded lab materials, maintenauce waste):**

Waste stream consists of oils contaminated with metals and trace organics that were removed from equipment during the D, F, H Reactor Interim Safe Storage activities, and N Ancillary Facilities.

1.3.2 **History of how and where the waste was/is generated:**

Waste is generated during Interim Safe Storage activities at the D, H, and F Reactors, and N Area Ancillary Facilities in the 100 Areas.

1.3.3 **Source of the regulated constituents:**

Oil contaminated with radioactive materials during reactor operations.

1.3.4 **Source of the information (e.g., analytical data, process knowledge, document number, etc.)**

Process knowledge and analytical data.

1.3.5 **Additional notes:**

None.

## 2.0 WASTE STREAM STORAGE, INVENTORY, AND GENERATION INFORMATION

(NOTE: For waste in satellite accumulation areas and 90-day accumulation areas, skip to Section 2.6.)

2.1 **Current storage method**

☐ Container (pad) ☐ Container (covered) ☐ Container (retrievably buried)

☐ Tank ☐ DST ☐ SST

☒ Other (explain): Stored within CERCLA Area of Contamination or the onsite areas.

2.1.1 **How was the waste managed prior to storage?**

Waste is generated during reactor Interim Safe Storage activities and upcoming D&D activities in the 100-N Area.

2.1.2 **Timeframe when waste was placed to storage?**

Placed into storage as waste is generated.

2.2 **Storage inventory locations:**

| Building/Room Number | Number of Containers/Tanks |
|---|---|
| N/A | N/A |

# LDR REPORT WASTE LOCATION-SPECIFIC DATA SHEET

**2.3 Current stored inventory for this stream.**

Total volume (cubic meters): 0.000

Date of inventory values: 12/31/2003

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 |
|---|---|---|---|
| 2004 | 0.940 | | |
| 2005 | 0.400 | | |
| 2006 | 0.400 | | |
| 2007 | 0.400 | | |
| 2008 | 0.400 | | |
| Total | 2.540 | | |

**2.7 DOE Storage Compliance Assessment information:**

☐ Assessment has been completed.

| Document Number | Date |
|---|---|
| | |

☐ Assessment has been scheduled. Scheduled date:

☒ 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 |

# LDR REPORT WASTE LOCATION-SPECIFIC DATA SHEET

**2.9 Has there ever been any non-permitted, unauthorized release of this waste stream from this storage unit to the environment?**

☐ Yes ☒ No

If yes, summarize releases and quantities and provide date:

N/A

**2.10 Are there any plans to submit requests for variances or other exemptions related to storage?**

☐ Yes ☒ No

If yes, explain: N/A

**2.11 Characterization**

**2.11.1 Is further characterization needed about the waste prior to acceptance for storage?**

☒ Yes ☐ No ☐ Unknown at this time

| Milestone Number | Due Date |
|---|---|
| N/A | N/A |

If yes or unknown, comment on characterization for storage.

Characterization is performed in accordance with regulator approved facility/activity specific Waste Management Plans.

**2.11.2 Is further characterization needed about the waste prior to acceptance for treatment?**

☒ Yes ☐ No ☐ Unknown at this time

| Milestone Number | Due Date |
|---|---|
| N/A | N/A |

If yes or unknown, comment on characterization for treatment.

Will be completed during activities to facilitate transfer of the container to CWC. No commitment is necessary for the characterization needs on this MLLW.

**2.11.3 Is further characterization needed about the waste prior to acceptance for disposal?**

☒ Yes ☐ No ☐ Unknown at this time

| Milestone Number | Due Date |
|---|---|
| N/A | N/A |

If yes or unknown, comment on characterization for disposal.

To meet concentration based treatment standards applicable for the residues, sampling will be required after treatment. No commitment is necessary for the characterization needs on this MLLW.

**2.12 Other key assumptions related to storage, inventory, and generation information:**

# LDR REPORT WASTE LOCATION-SPECIFIC DATA SHEET

Assumes same levels of oil generated for the D, F, and H Reactors, and N Ancillary Facilities. This forecast excludes K Reactor. DOE is completing Interim Safe Storage and D&D of these facilities under Action Memos from EPA and Ecology.

## 3.0 WASTE MINIMIZATION

**3.1 Has a waste minimization assessment been completed for this stream?**

☐ Yes ☒ No

If yes, provide date assessment conducted: N/A

If yes, provide document number or other identification:

N/A

If no, provide date assessment will be completed, or if waste stream is no longer generated, then indicate N/A:

See item 3.2.

**3.2 Provide details of current and proposed methods for minimizing the generation of this stream (e.g., process changes to reduce or eliminate LDR waste, methods to reduce volume through segregation and avoidance of commingling, substitution of less-toxic materials):**

Waste oils are segregated to separate the mixed waste from the oil that designates as a hazardous waste.

**3.3 Waste minimization schedule**

**3.3.1 Reduction achieved during calendar year 2003 (volume or mass)**

0.000 m3

**3.3.2 Projected future waste volume reductions**

| Year | $m^3$ | and/or | kg |
|---|---|---|---|
| 2004 | 0.000 | | |
| 2005 | 0.000 | | |
| 2006 | 0.000 | | |
| 2007 | 0.000 | | |
| 2008 | 0.000 | | |
| Total | 0.000 | | |

**3.3.3 Bases and assumptions used in above estimates:**

N/A

# LDR REPORT WASTE LOCATION-SPECIFIC DATA SHEET

## 1.0 WASTE STREAM IDENTIFICATION AND SOURCE

1.1 **Unit/Plant name:** 222-S Laboratory Complex **Waste Stream:** 222-S Organic Non-debris

**Treatabilitiy Group Name:** MLLW-03 - Organic Non-Debris

1.2 **Applicable profile number(s) for this waste stream:**

222S-402-0001-CR; 222S-400-0001-CR; 222S-401-0001-CR; 222S-404-0001-CR; 222S-504-0001-CR; 222S-505-0001-CR; 222S-921-0001-CR; 222S-923-0001-CR; CR -Current Revision.

1.3 **Waste stream source information**

1.3.1 **General description of the waste (e.g., spill clean-up waste, discarded lab materials, maintenance waste):**

Liquid and solid organic non-debris waste generated during laboratory operations (e.g. chemicals used during analytical procedures, routine maintenance, etc.), unused samples, and unused and expired chemical standards and reagents.

1.3.2 **History of how and where the waste was/is generated:**

This waste is generated at the 222-S Laboratory Complex during analytical procedures, 219-S WHF general operations, and hot cell analytical procedures and operations.

1.3.3 **Source of the regulated constituents:**

The hazardous constituents come from laboratory standards and reagents and used and unused samples. The majority of samples that are received for analysis are from Tank farms. However, samples from any Hanford generator is possible (i.e. K-Basin East & West, 233S SDG, PFP, ETF, ERDF, etc.).

1.3.4 **Source of the information (e.g., analytical data, process knowledge, document number, etc.)**

Waste Stream Fact Sheets, Request for Sample Analysis (RSA), Materials Safety Data Sheet (MSDS) and Container Disposal Requests (CDR).

1.3.5 **Additional notes:**

None.

## 2.0 WASTE STREAM STORAGE, INVENTORY, AND GENERATION INFORMATION

(NOTE: For waste in satellite accumulation areas and 90-day accumulation areas, skip to Section 2.6.)

2.1 **Current storage method**

☐ Container (pad) ☒ Container (covered) ☐ Container (retrievably buried)

☐ Tank ☐ DST ☐ SST

☐ Other (explain):

2.1.1 **How was the waste managed prior to storage?**

Per the Hanford Facility Dangerous Waste Permit Application, 222-S Laboratory Complex (DOE/RL-91-27 Revision 1).

# LDR REPORT WASTE LOCATION-SPECIFIC DATA SHEET

**2.1.2 Timeframe when waste was placed to storage?**

From 08/1995 to the present.

**2.2 Storage inventory locations:**

| Building/Room Number | Number of Containers/Tanks |
|---|---|
| HS-0082B | 9 |
| HS-0083A | 5 |
| HS-0083B | 5 |
| HS-0082A | 4 |

**2.3 Current stored inventory for this stream.**

Total volume (cubic meters): 4.630

Date of inventory values: 12/31/2003

Comments on waste inventory:

This information is derived from the SWITS specific for 222S.

**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): One container going offsite for treatment.

☐ None

**2.6 Estimated generation projection by calendar year (includes waste in satellite and 90-day accumulation areas):**

| Year | $m^3$ | and/or | kg |
|---|---|---|---|
| 2004 | 2.770 | | |
| 2005 | 2.770 | | |
| 2006 | 2.770 | | |
| 2007 | 2.770 | | |
| 2008 | 2.770 | | |
| Total | 13.850 | | |

# LDR REPORT WASTE LOCATION-SPECIFIC DATA SHEET

**2.7 DOE Storage Compliance Assessment information:**

☒ Assessment has been completed.

| Document Number | Date |
|---|---|
| A&E-SEC-01-018 | 12/03/2001 |

☐ Assessment has been scheduled. Scheduled date:

☐ Other. Explain:

**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.

Will be completed during activities to facilitate transfer of the container to CWC. No commitment is necessary for the characterization needs on this MLLW.

# LDR REPORT WASTE LOCATION-SPECIFIC DATA SHEET

**2.11.3 Is further characterization needed about the waste prior to acceptance for disposal?**

☒ Yes ☐ No ☐ Unknown at this time

| Milestone Number | Due Date |
|---|---|
| N/A | N/A |

If yes or unknown, comment on characterization for disposal.

To meet concentration based treatment standards applicable for the residues, sampling will be required after treatment. No commitment is necessary for the characterization needs on this mixed waste.

**2.12 Other key assumptions related to storage, inventory, and generation information:**

This waste will be managed in accordance with facility operational procedures.

## 3.0 WASTE MINIMIZATION

**3.1 Has a waste minimization assessment been completed for this stream?**

☒ Yes ☐ No

If yes, provide date assessment conducted: 9/2000

If yes, provide document number or other identification:

Operating and analytical procedures at the 222-S Laboratory Complex.

If no, provide date assessment will be completed, or if waste stream is no longer generated, then indicate N/A:

**3.2 Provide details of current and proposed methods for minimizing the generation of this stream (e.g., process changes to reduce or eliminate LDR waste, methods to reduce volume through segregation and avoidance of commingling, substitution of less-toxic materials):**

222-S personnel optimize the use of lab ware when generating waste through proper planning during AJHA and pre-job planning. 222-S Laboratory Complex personnel seek innovative technology to reduce waste generation.

**3.3 Waste minimization schedule**

**3.3.1 Reduction achieved during calendar year 2003 (volume or mass)**

7.300 m3

**3.3.2 Projected future waste volume reductions**

| Year | $m^3$ | and/or | kg |
|---|---|---|---|
| 2004 | 0.000 | | |
| 2005 | 0.000 | | |
| 2006 | 0.000 | | |
| 2007 | 0.000 | | |
| 2008 | 0.000 | | |
| Total | 0.000 | | |

# LDR REPORT WASTE LOCATION-SPECIFIC DATA SHEET

**3.3.3 Bases and assumptions used in above estimates:**

D0E/RL-2000-79 - "Pollution Prevention Accomplishments" document reported waste reductions for CY 2000. The waste reduction volume reported in Section 3.3.1 is a total waste minimization volume for similar waste streams across the 222-S Laboratory; this waste stream may be a portion of what was reported. 222-S has no waste minimization goals for this waste stream; therefore, no projected future waste volume reductions are reported in Section 3.3.2. However, the analytical process generating this stream is continuously evaluated for waste minimization opportunities.

# LDR REPORT WASTE LOCATION-SPECIFIC DATA SHEET

## 1.0 WASTE STREAM IDENTIFICATION AND SOURCE

1.1 **Unit/Plant name:** 324 **Waste Stream:** Organic Non-Debris Discarded Chemical/Waste

**Treatabilitiy Group Name:** MLLW-03 - Organic Non-Debris

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):**

Discarded/unused chemical products or waste.

1.3.2 **History of how and where the waste was/is generated:**

Chemical products were used for maintenance or clean-up activities.

1.3.3 **Source of the regulated constituents:**

Hazardous constituents in chemical products.

1.3.4 **Source of the information (e.g., analytical data, process knowledge, document number, etc.)**

Process knowledge.

1.3.5 **Additional notes:**

None.

## 2.0 WASTE STREAM STORAGE, INVENTORY, AND GENERATION INFORMATION

(NOTE: For waste in satellite accumulation areas and 90-day accumulation areas, skip to Section 2.6.)

2.1 **Current storage method**

☐ Container (pad) ☐ Container (covered) ☐ Container (retrievably buried)

☐ Tank ☐ DST ☐ SST

☐ Other (explain):

2.1.1 **How was the waste managed prior to storage?**

N/A

2.1.2 **Timeframe when waste was placed to storage?**

N/A

2.2 **Storage inventory locations:**

| Building/Room Number | Number of Containers/Tanks |
|---|---|
| N/A | N/A |

# LDR REPORT WASTE LOCATION-SPECIFIC DATA SHEET

**2.3 Current stored inventory for this stream.**

Total volume (cubic meters): 0.000

Date of inventory values: 12/31/2003

Comments on waste inventory:

SAA waste.

**2.4 Is storage capacity at this location potentially an issue for this waste stream?**

☐ Yes ☒ No

If yes, what is the total estimated storage capacity? N/A

When is this capacity expected to be reached? N/A

Bases and assumptions used:

**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 |
|---|---|---|---|
| 2004 | 0.600 | | |
| 2005 | 3.000 | | |
| 2006 | 2.400 | | |
| 2007 | 6.000 | | |
| 2008 | 2.900 | | |
| Total | 14.900 | | |

**2.7 DOE Storage Compliance Assessment information:**

☐ Assessment has been completed.

| Document Number | Date |
|---|---|
| | |

☐ Assessment has been scheduled. Scheduled date:

☒ 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 |

# LDR REPORT WASTE LOCATION-SPECIFIC DATA SHEET

**2.9 Has there ever been any non-permitted, unauthorized release of this waste stream from this storage unit to the environment?**

☐ Yes ☒ No

If yes, summarize releases and quantities and provide date:

N/A

**2.10 Are there any plans to submit requests for variances or other exemptions related to storage?**

☐ Yes ☒ No

If yes, explain: N/A

**2.11 Characterization**

**2.11.1 Is further characterization needed about the waste prior to acceptance for storage?**

☐ Yes ☒ No ☐ Unknown at this time

| Milestone Number | Due Date |
|---|---|
| N/A | N/A |

If yes or unknown, comment on characterization for storage.

N/A

**2.11.2 Is further characterization needed about the waste prior to acceptance for treatment?**

☒ Yes ☐ No ☐ Unknown at this time

| Milestone Number | Due Date |
|---|---|
| N/A | N/A |

If yes or unknown, comment on characterization for treatment.

Will be completed during activities to facilitate transfer of the container to CWC. No commitment is necessary for the characterization needs on this MLLW.

**2.11.3 Is further characterization needed about the waste prior to acceptance for disposal?**

☒ Yes ☐ No ☐ Unknown at this time

| Milestone Number | Due Date |
|---|---|
| N/A | N/A |

If yes or unknown, comment on characterization for disposal.

To meet concentration based treatment standards applicable for the residues, sampling will be required after treatment. No commitment is necessary for the characterization needs on this MLLW.

**2.12 Other key assumptions related to storage, inventory, and generation information:**

None

# LDR REPORT WASTE LOCATION-SPECIFIC DATA SHEET

## 3.0 WASTE MINIMIZATION

**3.1 Has a waste minimization assessment been completed for this stream?**

☐ Yes ☒ No

If yes, provide date assessment conducted: N/A

If yes, provide document number or other identification:

N/A

If no, provide date assessment will be completed, or if waste stream is no longer generated, then indicate N/A:

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 achieved by substitution of less hazardous chemicals, waste segregation, and disposal of hazardous waste.

**3.3 Waste minimization schedule**

**3.3.1 Reduction achieved during calendar year 2003 (volume or mass)**

0.000 m3

**3.3.2 Projected future waste volume reductions**

| Year | $m^3$ | and/or | kg |
|---|---|---|---|
| 2004 | 0.000 | | |
| 2005 | 0.000 | | |
| 2006 | 0.000 | | |
| 2007 | 0.000 | | |
| 2008 | 0.000 | | |
| Total | 0.000 | | |

**3.3.3 Bases and assumptions used in above estimates:**

Facility deactivation and surveillance/maintenance planning.

# LDR REPORT WASTE LOCATION-SPECIFIC DATA SHEET

## 1.0 WASTE STREAM IDENTIFICATION AND SOURCE

**1.1 Unit/Plant name:** 327 **Waste Stream:** Organic Non-Debris Discarded Chemical/Waste

**Treatability Group Name:** MLLW-03 - Organic Non-Debris

**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):**

Discarded/unused chemical products or waste.

**1.3.2 History of how and where the waste was/is generated:**

Chemical products were used for maintenance or clean-up activities.

**1.3.3 Source of the regulated constituents:**

Chemical products containing hazardous constituents.

**1.3.4 Source of the information (e.g., analytical data, process knowledge, document number, etc.)**

Process knowledge.

**1.3.5 Additional notes:**

None.

## 2.0 WASTE STREAM STORAGE, INVENTORY, AND GENERATION INFORMATION

(NOTE: For waste in satellite accumulation areas and 90-day accumulation areas, skip to Section 2.6.)

**2.1 Current storage method**

☐ Container (pad) ☐ Container (covered) ☐ Container (retrievably buried)

☐ Tank ☐ DST ☐ SST

☐ Other (explain):

**2.1.1 How was the waste managed prior to storage?**

N/A

**2.1.2 Timeframe when waste was placed to storage?**

N/A

**2.2 Storage inventory locations:**

| Building/Room Number | Number of Containers/Tanks |
|---|---|
| N/A | N/A |

# LDR REPORT WASTE LOCATION-SPECIFIC DATA SHEET

**2.3 Current stored inventory for this stream.**

Total volume (cubic meters): 0.000

Date of inventory values: 12/31/2003

Comments on waste inventory:

Waste is being accumulated in SAA.

**2.4 Is storage capacity at this location potentially an issue for this waste stream?**

☐ Yes ☒ No

If yes, what is the total estimated storage capacity? N/A

When is this capacity expected to be reached? N/A

Bases and assumptions used:

**2.5 Planned storage areas for this waste:**

☐ Current Location ☒ CWC ☐ DST

☐ Other Area(s) (list): 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 |
|---|---|---|---|
| 2004 | 0.800 | | |
| 2005 | 1.200 | | |
| 2006 | 1.400 | | |
| 2007 | 1.200 | | |
| 2008 | 1.800 | | |
| Total | 6.400 | | |

**2.7 DOE Storage Compliance Assessment information:**

☐ Assessment has been completed.

| Document Number | Date |
|---|---|
| | |

☐ Assessment has been scheduled. Scheduled date:

☒ 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 |

# LDR REPORT WASTE LOCATION-SPECIFIC DATA SHEET

**2.9 Has there ever been any non-permitted, unauthorized release of this waste stream from this storage unit to the environment?**

☐ Yes ☒ No

If yes, summarize releases and quantities and provide date:

N/A

**2.10 Are there any plans to submit requests for variances or other exemptions related to storage?**

☐ Yes ☒ No

If yes, explain: N/A

**2.11 Characterization**

**2.11.1 Is further characterization needed about the waste prior to acceptance for storage?**

☐ Yes ☒ No ☐ Unknown at this time

| Milestone Number | Due Date |
|---|---|
| N/A | N/A |

If yes or unknown, comment on characterization for storage.

N/A

**2.11.2 Is further characterization needed about the waste prior to acceptance for treatment?**

☒ Yes ☐ No ☐ Unknown at this time

| Milestone Number | Due Date |
|---|---|
| N/A | N/A |

If yes or unknown, comment on characterization for treatment.

Will be completed during activities to facilitate transfer of the container to CWC. No commitment is necessary for the characterization needs on this MLLW.

**2.11.3 Is further characterization needed about the waste prior to acceptance for disposal?**

☒ Yes ☐ No ☐ Unknown at this time

| Milestone Number | Due Date |
|---|---|
| N/A | N/A |

If yes or unknown, comment on characterization for disposal.

To meet concentration based treatment standards applicable for the residues, sampling will be required after treatment. No commitment is necessary for the characterization needs on this MLLW.

**2.12 Other key assumptions related to storage, inventory, and generation information:**

None.

# LDR REPORT WASTE LOCATION-SPECIFIC DATA SHEET

## 3.0 WASTE MINIMIZATION

**3.1 Has a waste minimization assessment been completed for this stream?**

☐ Yes ☒ No

If yes, provide date assessment conducted: N/A

If yes, provide document number or other identification:

N/A

If no, provide date assessment will be completed, or if waste stream is no longer generated, then indicate N/A:

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 achieved by substitution of less hazardous materials, waste segregation, and disposal of hazardous waste.

**3.3 Waste minimization schedule**

**3.3.1 Reduction achieved during calendar year 2003 (volume or mass)**

0.000 m3

**3.3.2 Projected future waste volume reductions**

| Year | $m^3$ | and/or | kg |
|---|---|---|---|
| 2004 | 0.000 | | |
| 2005 | 0.000 | | |
| 2006 | 0.000 | | |
| 2007 | 0.000 | | |
| 2008 | 0.000 | | |
| Total | 0.000 | | |

**3.3.3 Bases and assumptions used in above estimates:**

Facility deactivation and surveillance/maintenance planning.

# LDR REPORT WASTE LOCATION-SPECIFIC DATA SHEET

## 1.0 WASTE STREAM IDENTIFICATION AND SOURCE

**1.1 Unit/Plant name:** CWC **Waste Stream:** Organic Non-Debris Solids and Labpacks

**Treatabilitiy Group Name:** MLLW-03 - Organic Non-Debris

**1.2 Applicable profile number(s) for this waste stream:**

N/A

**1.3 Waste stream source information**

**1.3.1 General description of the waste (e.g., spill clean-up waste, discarded lab materials, maintenance waste):**

The waste consists of many different inorganic and organic solids (e.g., particulates, absorbed liquids, sludges, resins, and soils) and labpacks that are contaminated with organic regulated dangerous waste constituents, including PCBs This waste does not include hazardous debris other than incidental debris material commingled with the non-debris.

**1.3.2 History of how and where the waste was/is generated:**

The waste was generated at many onsite locations and also by offsite generators.

**1.3.3 Source of the regulated constituents:**

See 1.3.1 and 1.3.2. Wastes are either contaminated with regulated organic constituents or are themselves regulated organic chemicals.

**1.3.4 Source of the information (e.g., analytical data, process knowledge, document number, etc.)**

Analytical data and process knowledge.

**1.3.5 Additional notes:**

None.

## 2.0 WASTE STREAM STORAGE, INVENTORY, AND GENERATION INFORMATION

(NOTE: For waste in satellite accumulation areas and 90-day accumulation areas, skip to Section 2.6.)

**2.1 Current storage method**

- ☐ Container (pad)
- ☒ Container (covered)
- ☐ Container (retrievably buried)
- ☐ Tank
- ☐ DST
- ☐ SST
- ☐ Other (explain):

**2.1.1 How was the waste managed prior to storage?**

Accumulated and packaged by waste generators prior to storage at CWC.

**2.1.2 Timeframe when waste was placed to storage?**

Waste storage in CWC began in 1988 and continues.

# LDR REPORT WASTE LOCATION-SPECIFIC DATA SHEET

**2.2 Storage inventory locations:**

| Building/Room Number | Number of Containers/Tanks |
|---|---|
| CWC | 4,052 |

**2.3 Current stored inventory for this stream.**

Total volume (cubic meters): 961.060

Date of inventory values: 12/30/2003

Comments on waste inventory:

Based on inventory residing at the CWC as reported in SWITS for WSRds 300, 302, 303, 304, 310, 311, 315, 331, 400, 401, 402, 403, 404, 404-CR, 405, 406, 407, 408, 409, 40A, 427, 430, 431, 45A, 500, 501, 502, 503, 504, 505, 506, 507, 50A, 50B, 522, 52A, 53A, 700, 701, 720, 721, 90A, 920, 921, 922, 923, ALO, LPA, LPO, PAO, SOC, SOE, SOW, TFS, and TSC.

**2.4 Is storage capacity at this location potentially an issue for this waste stream?**

☐ Yes ☒ No

If yes, what is the total estimated storage capacity? N/A

When is this capacity expected to be reached? N/A

Bases and assumptions used:

No issues with CWC storage based on life cycle waste generation forecast.

**2.5 Planned storage areas for this waste:**

☒ Current Location ☒ CWC ☐ DST

☐ Other Area(s) (list):

☐ None

**2.6 Estimated generation projection by calendar year (includes waste in satellite and 90-day accumulation areas):**

| Year | $m^3$ | and/or | kg |
|---|---|---|---|
| 2004 | 0.000 | | |
| 2005 | 0.000 | | |
| 2006 | 0.000 | | |
| 2007 | 0.000 | | |
| 2008 | 0.000 | | |
| Total | 0.000 | | |

**2.7 DOE Storage Compliance Assessment information:**

☒ Assessment has been completed.

| Document Number | Date |
|---|---|
| A&E-SEC-02-001 | 01/21/2002 |

# LDR REPORT WASTE LOCATION-SPECIFIC DATA SHEET

☐ Assessment has been scheduled. Scheduled date:

☐ Other. Explain:

**2.8 Applicable Tri-Party Agreement milestones related to storage at this location:**

| Milestone Number | Due Date |
|---|---|
| M-020-12 | 10/31/1991 |

**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.

To meet concentration based treatment standards applicable for the residues, sampling will be required after treatment. No commitment is necessary for the characterization needs on this MLLW.

**2.12 Other key assumptions related to storage, inventory, and generation information:**

None.

## 3.0 WASTE MINIMIZATION

**3.1 Has a waste minimization assessment been completed for this stream?**

☐ Yes ☒ No

If yes, provide date assessment conducted: N/A

If yes, provide document number or other identification:

N/A

If no, provide date assessment will be completed, or if waste stream is no longer generated, then indicate N/A:

None planned - waste not generated at CWC.

**3.2 Provide details of current and proposed methods for minimizing the generation of this stream (e.g., process changes to reduce or eliminate LDR waste, methods to reduce volume through segregation and avoidance of commingling, substitution of less-toxic materials):**

These activities occur before the wastes are transferred/shipped to CWC. There are few opportunities to reduce waste volumes placed into storage.

**3.3 Waste minimization schedule**

**3.3.1 Reduction achieved during calendar year 2003 (volume or mass)**

0.000 m3

**3.3.2 Projected future waste volume reductions**

| Year | $m^3$ | and/or | kg |
|---|---|---|---|
| 2004 | 0.000 | | |
| 2005 | 0.000 | | |
| 2006 | 0.000 | | |
| 2007 | 0.000 | | |
| 2008 | 0.000 | | |
| Total | 0.000 | | |

**3.3.3 Bases and assumptions used in above estimates:**

There is no generation projected by CWC.

# LDR REPORT WASTE LOCATION-SPECIFIC DATA SHEET

## 1.0 WASTE STREAM IDENTIFICATION AND SOURCE

**1.1 Unit/Plant name:** LLBG **Waste Stream:** MLLW Retrieval Organic Non-Debris

**Treatabilitiy Group Name:** MLLW-03 - Organic Non-Debris

**1.2 Applicable profile number(s) for this waste stream:**

N/A

**1.3 Waste stream source information**

**1.3.1 General description of the waste (e.g., spill clean-up waste, discarded lab materials, maintenance waste):**

The waste consists of many different inorganic and organic solids (e.g., particulates, absorbed liquids, sludges, resins and soils). This waste does not include hazardous debris other than incidental debris material commingled with non-debris.

**1.3.2 History of how and where the waste was/is generated:**

The waste was generated at many onsite locations and also by offsite generators.

**1.3.3 Source of the regulated constituents:**

See 1.3.1 and 1.3.2. Wastes are either contaminated with regulated organic constituents or are themselves regulated organic chemicals.

**1.3.4 Source of the information (e.g., analytical data, process knowledge, document number, etc.)**

Process knowledge.

**1.3.5 Additional notes:**

Per Settlement Agreement (draft TPA Milestone M-91-03-01) between DOE-RL and the Washington State Department of Ecology this entire waste stream is suspected of being mixed waste.

## 2.0 WASTE STREAM STORAGE, INVENTORY, AND GENERATION INFORMATION

(NOTE: For waste in satellite accumulation areas and 90-day accumulation areas, skip to Section 2.6.)

**2.1 Current storage method**

☐ Container (pad) ☐ Container (covered) ☐ Container (retrievably buried)

☐ Tank ☐ DST ☐ SST

☐ Other (explain):

**2.1.1 How was the waste managed prior to storage?**

**2.1.2 Timeframe when waste was placed to storage?**

# LDR REPORT WASTE LOCATION-SPECIFIC DATA SHEET

**2.2 Storage inventory locations:**

| Building/Room Number | Number of Containers/Tanks |
|---|---|
| N/A | N/A |

**2.3 Current stored inventory for this stream.**

Total volume (cubic meters): 0.000

Date of inventory values: 12/30/2003

Comments on waste inventory:

Per Settlement Agreement (draft TPA Milestone M-91-03-01) between DOE-RL and the Washington State Department of Ecology this entire waste stream is suspected of being mixed waste. There is no waste currently in storage.

**2.4 Is storage capacity at this location potentially an issue for this waste stream?**

☐ Yes ☒ No

If yes, what is the total estimated storage capacity? N/A

When is this capacity expected to be reached? N/A

Bases and assumptions used:

No issues with CWC storage based on life cycle waste generation forecasts.

**2.5 Planned storage areas for this waste:**

☐ Current Location ☒ CWC ☐ DST

☐ Other Area(s) (list):

☐ None

**2.6 Estimated generation projection by calendar year (includes waste in satellite and 90-day accumulation areas):**

| Year | $m^3$ | and/or | kg |
|---|---|---|---|
| 2004 | 89.000 | | |
| 2005 | 145.000 | | |
| 2006 | 174.000 | | |
| 2007 | 216.000 | | |
| 2008 | 355.000 | | |
| Total | 979.000 | | |

**2.7 DOE Storage Compliance Assessment information:**

☒ Assessment has been completed.

| Document Number | Date |
|---|---|
| A&E-SEC-02-003 | 03/28/2002 |

# LDR REPORT WASTE LOCATION-SPECIFIC DATA SHEET

☐ Assessment has been scheduled. Scheduled date:

☐ Other. Explain:

**2.8 Applicable Tri-Party Agreement milestones related to storage at this location:**

| Milestone Number | Due Date |
|---|---|
| P-091-40 | 12/31/2010 |

**2.9 Has there ever been any non-permitted, unauthorized release of this waste stream from this storage unit to the environment?**

☐ Yes ☒ No

If yes, summarize releases and quantities and provide date:

N/A

**2.10 Are there any plans to submit requests for variances or other exemptions related to storage?**

☐ Yes ☒ No

If yes, explain: N/A

**2.11 Characterization**

**2.11.1 Is further characterization needed about the waste prior to acceptance for storage?**

☐ Yes ☐ No ☒ Unknown at this time

| Milestone Number | Due Date |
|---|---|
| N/A | N/A |

If yes or unknown, comment on characterization for storage.

If information is not sufficient to ensure waste meets CWC acceptance criteria, further characterization may be necessary.

**2.11.2 Is further characterization needed about the waste prior to acceptance for treatment?**

☐ Yes ☐ No ☒ Unknown at this time

| Milestone Number | Due Date |
|---|---|
| N/A | N/A |

If yes or unknown, comment on characterization for treatment.

If information is not sufficient to ensure waste meets the treatment facilities acceptance criteria, further characterization may be necessary.

**2.11.3 Is further characterization needed about the waste prior to acceptance for disposal?**

☒ Yes ☐ No ☐ Unknown at this time

# LDR REPORT WASTE LOCATION-SPECIFIC DATA SHEET

| Milestone Number | Due Date |
|---|---|
| N/A | N/A |

If yes or unknown, comment on characterization for disposal.

To meet concentration based treatment standards applicable for the residues, sampling will be required after treatment. No commitment is necessary for the characterization needs on this MLLW.

**2.12 Other key assumptions related to storage, inventory, and generation information:**

None.

## 3.0 WASTE MINIMIZATION

**3.1 Has a waste minimization assessment been completed for this stream?**

☐ Yes ☒ No

If yes, provide date assessment conducted:

If yes, provide document number or other identification:

If no, provide date assessment will be completed, or if waste stream is no longer generated, then indicate N/A:

None planned. Waste has already been generated..

**3.2 Provide details of current and proposed methods for minimizing the generation of this stream (e.g., process changes to reduce or eliminate LDR waste, methods to reduce volume through segregation and avoidance of commingling, substitution of less-toxic materials):**

Waste has already been generated. There is no opportunity to reduce the existing volume.

**3.3 Waste minimization schedule**

**3.3.1 Reduction achieved during calendar year 2003 (volume or mass)**

0.000 m3

**3.3.2 Projected future waste volume reductions**

| Year | $m^3$ | and/or | kg |
|---|---|---|---|
| 2004 | 0.000 | | |
| 2005 | 0.000 | | |
| 2006 | 0.000 | | |
| 2007 | 0.000 | | |
| 2008 | 0.000 | | |
| Total | 0.000 | | |

**3.3.3 Bases and assumptions used in above estimates:**

There is no generation projected.

# LDR REPORT WASTE LOCATION-SPECIFIC DATA SHEET

## 1.0 WASTE STREAM IDENTIFICATION AND SOURCE

1.1 **Unit/Plant name:** PFP **Waste Stream:** Lab Chemicals/Waste, Organic Non-debris

**Treatabilitiy Group Name:** MLLW-03 - Organic Non-Debris

1.2 **Applicable profile number(s) for this waste stream:**

PFPX-505-000, PFPX-402-0001, PFPX-403-0001, PFPX-405-0001, PFPX-500-0001, PFPX-404-0001, PFPX-404-0002, PFPX-921-0001.

1.3 **Waste stream source information**

1.3.1 **General description of the waste (e.g., spill clean-up waste, discarded lab materials, maintenance waste):**

Spent/expired chemicals or lab generated wastes.

1.3.2 **History of how and where the waste was/is generated:**

Laboratory operations.

1.3.3 **Source of the regulated constituents:**

Intrinsically hazardous.

1.3.4 **Source of the information (e.g., analytical data, process knowledge, document number, etc.)**

Analytical data, process knowledge.

1.3.5 **Additional notes:**

None.

## 2.0 WASTE STREAM STORAGE, INVENTORY, AND GENERATION INFORMATION

(NOTE: For waste in satellite accumulation areas and 90-day accumulation areas, skip to Section 2.6.)

2.1 **Current storage method**

☐ Container (pad) ☐ Container (covered) ☐ Container (retrievably buried)

☐ Tank ☐ DST ☐ SST

☐ Other (explain):

2.1.1 **How was the waste managed prior to storage?**

N/A

2.1.2 **Timeframe when waste was placed to storage?**

N/A

2.2 **Storage inventory locations:**

| Building/Room Number | Number of Containers/Tanks |
|---|---|
| N/A | N/A |

# LDR REPORT WASTE LOCATION-SPECIFIC DATA SHEET

**2.3 Current stored inventory for this stream.**

Total volume (cubic meters): 0.000

Date of inventory values: 12/31/2003

Comments on waste inventory:

Waste is placed directly into SAA upon generation.

**2.4 Is storage capacity at this location potentially an issue for this waste stream?**

☐ Yes ☒ No

If yes, what is the total estimated storage capacity? N/A

When is this capacity expected to be reached? N/A

Bases and assumptions used:

None.

**2.5 Planned storage areas for this waste:**

☐ Current Location ☒ CWC ☐ DST

☐ Other Area(s) (list):

☐ None

**2.6 Estimated generation projection by calendar year (includes waste in satellite and 90-day accumulation areas):**

| Year | $m^3$ | and/or | kg |
|---|---|---|---|
| 2004 | 7.900 | | |
| 2005 | 15.400 | | |
| 2006 | 7.700 | | |
| 2007 | 5.300 | | |
| 2008 | 0.480 | | |
| Total | 36.780 | | |

**2.7 DOE Storage Compliance Assessment information:**

☒ Assessment has been completed.

| Document Number | Date |
|---|---|
| PFP Env. Compliance Assess.; Ltr. #0104940 | 09/13/2001 |

☐ Assessment has been scheduled. Scheduled date:

☐ Other. Explain:

# LDR REPORT WASTE LOCATION-SPECIFIC DATA SHEET

**2.8 Applicable Tri-Party Agreement milestones related to storage at this location:**

| Milestone Number | Due Date |
|---|---|
| N/A | N/A |

**2.9 Has there ever been any non-permitted, unauthorized release of this waste stream from this storage unit to the environment?**

☐ Yes ☒ No

If yes, summarize releases and quantities and provide date:

N/A

**2.10 Are there any plans to submit requests for variances or other exemptions related to storage?**

☐ Yes ☒ No

If yes, explain: N/A

**2.11 Characterization**

**2.11.1 Is further characterization needed about the waste prior to acceptance for storage?**

☒ Yes ☐ No ☐ Unknown at this time

| Milestone Number | Due Date |
|---|---|
| N/A | N/A |

If yes or unknown, comment on characterization for storage.

Will be characterized before transfer to CWC. No commitment is necessary for the characterization needs on this MLLW.

**2.11.2 Is further characterization needed about the waste prior to acceptance for treatment?**

☒ Yes ☐ No ☐ Unknown at this time

| Milestone Number | Due Date |
|---|---|
| N/A | N/A |

If yes or unknown, comment on characterization for treatment.

Will be completed during activities to facilitate transfer of the container to CWC. No commitment is necessary for the characterization needs on this MLLW.

**2.11.3 Is further characterization needed about the waste prior to acceptance for disposal?**

☒ Yes ☐ No ☐ Unknown at this time

| Milestone Number | Due Date |
|---|---|
| N/A | N/A |

If yes or unknown, comment on characterization for disposal.

# LDR REPORT WASTE LOCATION-SPECIFIC DATA SHEET

To meet concentration based treatment standards applicable for the residues, sampling will be required after treatment. No commitment is necessary for the characterization needs on this MLLW.

**2.12 Other key assumptions related to storage, inventory, and generation information:**

None.

## 3.0 WASTE MINIMIZATION

**3.1 Has a waste minimization assessment been completed for this stream?**

☒ Yes ☐ No

If yes, provide date assessment conducted: CY 2001

If yes, provide document number or other identification:

PFP 2001 Waste Minimization Evaluation for LDR Report Waste Streams, Letter# M2100-02-016

If no, provide date assessment will be completed, or if waste stream is no longer generated, then indicate N/A:

**3.2 Provide details of current and proposed methods for minimizing the generation of this stream (e.g., process changes to reduce or eliminate LDR waste, methods to reduce volume through segregation and avoidance of commingling, substitution of less-toxic materials):**

PFP routinely evaluates the chemicals in the labs to ensure that there is an identified use for them. Chemicals with no justifiable use will be either recycled, if possible, or discarded as waste and not reordered.

**3.3 Waste minimization schedule**

**3.3.1 Reduction achieved during calendar year 2003 (volume or mass)**

0.000 m3

**3.3.2 Projected future waste volume reductions**

| Year | $m^3$ | and/or | kg |
|---|---|---|---|
| 2004 | 0.000 | | |
| 2005 | 0.000 | | |
| 2006 | 0.000 | | |
| 2007 | 0.000 | | |
| 2008 | 0.000 | | |
| Total | 0.000 | | |

**3.3.3 Bases and assumptions used in above estimates:**

# LDR REPORT WASTE LOCATION-SPECIFIC DATA SHEET

## 1.0 WASTE STREAM IDENTIFICATION AND SOURCE

**1.1 Unit/Plant name:** T Plant Complex **Waste Stream:** Organic Non-Debris

**Treatabilitiy Group Name:** MLLW-03 - Organic Non-Debris

**1.2 Applicable profile number(s) for this waste stream:**

WSRd: 402, 403, 404, 405, 505, 923, LPO.

**1.3 Waste stream source information**

**1.3.1 General description of the waste (e.g., spill clean-up waste, discarded lab materials, maintenance waste):**

This waste consists of many different inorganic and organic solids (e.g., particulates, absorbed liquids, sludges, soils, labpacks, etc.) and could contain PCBs. This waste does not include hazardous debris other than incidental debris material commingled with the non-debris.

**1.3.2 History of how and where the waste was/is generated:**

The waste was generated by T Plant Complex and from various other onsite other locations, and also by offsite generators.

**1.3.3 Source of the regulated constituents:**

See 1.3.1 and 1.3.2.

**1.3.4 Source of the information (e.g., analytical data, process knowledge, document number, etc.)**

Analytical data and process knowledge.

**1.3.5 Additional notes:**

None.

## 2.0 WASTE STREAM STORAGE, INVENTORY, AND GENERATION INFORMATION

(NOTE: For waste in satellite accumulation areas and 90-day accumulation areas, skip to Section 2.6.)

**2.1 Current storage method**

| | | |
|---|---|---|
| ☒ Container (pad) | ☒ Container (covered) | ☐ Container (retrievably buried) |
| ☐ Tank | ☐ DST | ☐ SST |
| ☐ Other (explain): | N/A | |

**2.1.1 How was the waste managed prior to storage?**

Generated and accumulated and packaged at various onsite locations and by offsite generators before transfer/shipment to T Plant and from T Plant maintenance/operational activities.

**2.1.2 Timeframe when waste was placed to storage?**

1989 to present.

# LDR REPORT WASTE LOCATION-SPECIFIC DATA SHEET

**2.2 Storage inventory locations:**

| Building/Room Number | Number of Containers/Tanks |
|---|---|
| T Plant | 39 |

**2.3 Current stored inventory for this stream.**

Total volume (cubic meters): 9.555

Date of inventory values: 12/31/2003

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): 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 |
|---|---|---|---|
| 2004 | 0.240 | | |
| 2005 | 0.240 | | |
| 2006 | 0.240 | | |
| 2007 | 0.240 | | |
| 2008 | 0.240 | | |
| Total | 1.200 | | |

**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

# 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.

Will be completed during activities to facilitate transfer of the container to CWC. No commitment is necessary for the characterization needs on this MLLW.

**2.11.3 Is further characterization needed about the waste prior to acceptance for disposal?**

☒ Yes ☐ No ☐ Unknown at this time

| Milestone Number | Due Date |
|---|---|
| N/A | N/A |

If yes or unknown, comment on characterization for disposal.

To meet concentration based treatment standards applicable for the residues, sampling will be required after treatment. No commitment is necessary for the characterization needs on this MLLW.

# LDR REPORT WASTE LOCATION-SPECIFIC DATA SHEET

**2.12 Other key assumptions related to storage, inventory, and generation information:**

None.

## 3.0 WASTE MINIMIZATION

**3.1 Has a waste minimization assessment been completed for this stream?**

☐ Yes ☒ No

If yes, provide date assessment conducted:

If yes, provide document number or other identification:

N/A

If no, provide date assessment will be completed, or if waste stream is no longer generated, then indicate N/A:

See Section 3.3.3 for discussion on waste minimization.

**3.2 Provide details of current and proposed methods for minimizing the generation of this stream (e.g., process changes to reduce or eliminate LDR waste, methods to reduce volume through segregation and avoidance of commingling, substitution of less-toxic materials):**

To the extent practical, all mixed waste is segregated and packaged separately from LLW or TRUM. The volume of mixed waste is reduced by compaction when possible. To minimize the generation of mixed waste, T Plant Complex personnel actively seek nondangerous alternatives. In addition, waste minimization goals are set annually and tracked quarterly.

**3.3 Waste minimization schedule**

**3.3.1 Reduction achieved during calendar year 2003 (volume or mass)**

0.000 m3

**3.3.2 Projected future waste volume reductions**

| Year | $m^3$ | and/or | kg |
|---|---|---|---|
| 2004 | 0.000 | | |
| 2005 | 0.000 | | |
| 2006 | 0.000 | | |
| 2007 | 0.000 | | |
| 2008 | 0.000 | | |
| Total | 0.000 | | |

**3.3.3 Bases and assumptions used in above estimates:**

The T Plant Complex has submitted a P2/Wmin fiscal year 2004 goal to reduce, where possible, mixed waste generation. For FY 2004 to 2008, new goals will be evaluated and identified on a year-by-year basis. T Plant Complex does not track waste reduction by treatability groups. Routine and non-routine generated waste is reported quarterly to the Waste Minimization/Pollution Prevention Group.

# LDR REPORT WASTE LOCATION-SPECIFIC DATA SHEET

## 1.0 WASTE STREAM IDENTIFICATION AND SOURCE

1.1 **Unit/Plant name:** Tank Farm Facilities **Waste Stream:** Organic Non-Debris

**Treatabilitiy Group Name:** MLLW-03 - Organic Non-Debris

1.2 **Applicable profile number(s) for this waste stream:**

505-03.

1.3 **Waste stream source information**

1.3.1 **General description of the waste (e.g., spill clean-up waste, discarded lab materials, maintenance waste):**

Tank farms contaminated soil consisting of 80% or more soil, gravel, rock, and sand, containing small amounts of asbestos, animal feces, vegetation, and debris (including plastic, paper, cloth, and rubber). The contaminated soil is generated from the clean up of regulated fuel spills and other organic regulated chemical products.

1.3.2 **History of how and where the waste was/is generated:**

Tank farms contaminated soil is generated during the maintenance, operation and upgrades of the tank farms. Such activities can include contamination control and clean up; excavation for modifications and constructions; soil sampling; and spill clean up.

1.3.3 **Source of the regulated constituents:**

Tank farms soils are considered mixed waste because the soils are presumed to contain (as described by RCRA "contained in" provisions) tank waste. Another source of hazardous constituents are regulated fuels and other regulated chemical products.

1.3.4 **Source of the information (e.g., analytical data, process knowledge, document number, etc.)**

MSDS, process knowledge, and analytical data. The document "Tank Farm Solid Waste Characterization Guide with Sampling and Analysis Attachment", HNF-SD-WM-PLN-119, REV. 01, describes the basis for historical and process knowledge and sampling analysis plan.

1.3.5 **Additional notes:**

None.

## 2.0 WASTE STREAM STORAGE, INVENTORY, AND GENERATION INFORMATION

(NOTE: For waste in satellite accumulation areas and 90-day accumulation areas, skip to Section 2.6.)

2.1 **Current storage method**

☐ Container (pad) ☐ Container (covered) ☐ Container (retrievably buried)

☐ Tank ☐ DST ☐ SST

☐ Other (explain):

2.1.1 **How was the waste managed prior to storage?**

N/A

# LDR REPORT WASTE LOCATION-SPECIFIC DATA SHEET

**2.1.2 Timeframe when waste was placed to storage?**

N/A

**2.2 Storage inventory locations:**

| Building/Room Number | Number of Containers/Tanks |
|---|---|
| N/A | N/A |

**2.3 Current stored inventory for this stream.**

Total volume (cubic meters): 0.000

Date of inventory values: 12/31/2003

Comments on waste inventory:

Waste is managed in SAA and 90-day accumulation areas.

**2.4 Is storage capacity at this location potentially an issue for this waste stream?**

Yes No

If yes, what is the total estimated storage capacity?

When is this capacity expected to be reached?

Bases and assumptions used:

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 |
|---|---|---|---|
| 2004 | 14.590 | | |
| 2005 | 16.049 | | |
| 2006 | 17.654 | | |
| 2007 | 19.419 | | |
| 2008 | 21.361 | | |
| Total | 89.073 | | |

**2.7 DOE Storage Compliance Assessment information:**

☐ Assessment has been completed.

| Document Number | Date |
|---|---|
| | |

# LDR REPORT WASTE LOCATION-SPECIFIC DATA SHEET

☐ Assessment has been scheduled. Scheduled date: N/A

☒ 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.

N/A

**2.11.2 Is further characterization needed about the waste prior to acceptance for treatment?**

☒ Yes ☐ No ☐ Unknown at this time

| Milestone Number | Due Date |
|---|---|
| N/A | N/A |

If yes or unknown, comment on characterization for treatment.

Will be completed during activities to facilitate transfer of the container to CWC. No commitment is necessary for the characterization needs on this MLLW.

**2.11.3 Is further characterization needed about the waste prior to acceptance for disposal?**

☒ Yes ☐ No ☐ Unknown at this time

| Milestone Number | Due Date |
|---|---|
| N/A | N/A |

# LDR REPORT WASTE LOCATION-SPECIFIC DATA SHEET

If yes or unknown, comment on characterization for disposal.

To meet concentration based treatment standards applicable for the residues, sampling will be required after treatment. No commitment is necessary for the characterization needs on this MLLW.

**2.12 Other key assumptions related to storage, inventory, and generation information:**

Waste is being accumulated in SAA and 90-day accumulation area containers.

## 3.0 WASTE MINIMIZATION

**3.1 Has a waste minimization assessment been completed for this stream?**

☒ Yes ☐ No

If yes, provide date assessment conducted: 04/02/00

If yes, provide document number or other identification:

Soil and Vadose Characterization P2O No. 2.

If no, provide date assessment will be completed, or if waste stream is no longer generated, then indicate N/A:

**3.2 Provide details of current and proposed methods for minimizing the generation of this stream (e.g., process changes to reduce or eliminate LDR waste, methods to reduce volume through segregation and avoidance of commingling, substitution of less-toxic materials):**

1) Segregation of LLW and Mixed Waste; 2) Sample and Analysis; 3) Use non-regulated products; and 4) Spill avoidance.

**3.3 Waste minimization schedule**

**3.3.1 Reduction achieved during calendar year 2003 (volume or mass)**

0.000 m3

**3.3.2 Projected future waste volume reductions**

| Year | $m^3$ | and/or | kg |
|---|---|---|---|
| 2004 | 5.720 | | |
| 2005 | 4.780 | | |
| 2006 | 5.160 | | |
| 2007 | 5.020 | | |
| 2008 | 4.240 | | |
| Total | 24.920 | | |

**3.3.3 Bases and assumptions used in above estimates:**

Tank farms is in construction and upgrade mode. Non reduction is expected at this time.

# LDR REPORT WASTE LOCATION-SPECIFIC DATA SHEET

## 1.0 WASTE STREAM IDENTIFICATION AND SOURCE

1.1 **Unit/Plant name:** WRAP **Waste Stream:** Organic Non-Debris

**Treatabilitiy Group Name:** MLLW-03 - Organic Non-Debris

1.2 **Applicable profile number(s) for this waste stream:**

WSRd, 402, 404, 923

1.3 **Waste stream source information**

1.3.1 **General description of the waste (e.g., spill clean-up waste, discarded lab materials, maintenance waste):**

The waste consists of many different inorganic and organic solids (e.g., particulates, absorbed liquids, sludges, resins, and soils) and labpacks that are contaminated with organic regulated dangerous waste constituents, including PCBs This waste does not include hazardous debris other than incidental debris material commingled with the non-debris.

1.3.2 **History of how and where the waste was/is generated:**

The waste was generated at many onsite locations and also by offsite generators.

1.3.3 **Source of the regulated constituents:**

Hazardous constituents were generated at various Hanford Site generator locations (e.g. PFP, 222S, etc.)

1.3.4 **Source of the information (e.g., analytical data, process knowledge, document number, etc.)**

Analytical data, process knowledge.

1.3.5 **Additional notes:**

Waste at WRAP comes from various generators and generating processes around the Hanford Site due to WRAP's verification and repackaging mission.

## 2.0 WASTE STREAM STORAGE, INVENTORY, AND GENERATION INFORMATION

(NOTE: For waste in satellite accumulation areas and 90-day accumulation areas, skip to Section 2.6.)

2.1 **Current storage method**

| | | |
|---|---|---|
| ☐ Container (pad) | ☒ Container (covered) | ☐ Container (retrievably buried) |
| ☐ Tank | ☐ DST | ☐ SST |
| ☐ Other (explain): | N/A | |

2.1.1 **How was the waste managed prior to storage?**

Waste was generated and packaged at various Hanford generating facilities.

2.1.2 **Timeframe when waste was placed to storage?**

Most MLLW at WRAP is recently generated waste that is being verified as part of the waste acceptance process.

# LDR REPORT WASTE LOCATION-SPECIFIC DATA SHEET

**2.2 Storage inventory locations:**

| Building/Room Number | Number of Containers/Tanks |
|---|---|
| 2336W | 4 |

**2.3 Current stored inventory for this stream.**

Total volume (cubic meters): 0.800

Date of inventory values: 12/31/2003

Comments on waste inventory:

Inventory based on Drum Management System (DMS) printout dated 12/31/03.

**2.4 Is storage capacity at this location potentially an issue for this waste stream?**

☐ Yes ☒ No

If yes, what is the total estimated storage capacity? N/A

When is this capacity expected to be reached? N/A

Bases and assumptions used:

Due to proximity to and interchange with CWC, there is no storage capacity issue at WRAP.

**2.5 Planned storage areas for this waste:**

☒ Current Location ☒ CWC ☐ DST

☐ Other Area(s) (list):

☐ None

**2.6 Estimated generation projection by calendar year (includes waste in satellite and 90-day accumulation areas):**

| Year | $m^3$ | and/or | kg |
|---|---|---|---|
| 2004 | 0.000 | | |
| 2005 | 0.000 | | |
| 2006 | 0.000 | | |
| 2007 | 0.000 | | |
| 2008 | 0.000 | | |
| Total | 0.000 | | |

**2.7 DOE Storage Compliance Assessment information:**

☒ Assessment has been completed.

| Document Number | Date |
|---|---|
| DE-AC06-96RL13200 | 09/26/2001 |

☐ Assessment has been scheduled. Scheduled date:

☐ Other. Explain:

# LDR REPORT WASTE LOCATION-SPECIFIC DATA SHEET

**2.8 Applicable Tri-Party Agreement milestones related to storage at this location:**

| Milestone Number | Due Date |
|---|---|
| N/A | N/A |

**2.9 Has there ever been any non-permitted, unauthorized release of this waste stream from this storage unit to the environment?**

☐ Yes ☒ No

If yes, summarize releases and quantities and provide date:

N/A

**2.10 Are there any plans to submit requests for variances or other exemptions related to storage?**

☐ Yes ☒ No

If yes, explain: N/A

**2.11 Characterization**

**2.11.1 Is further characterization needed about the waste prior to acceptance for storage?**

☐ Yes ☒ No ☐ Unknown at this time

| Milestone Number | Due Date |
|---|---|
| N/A | N/A |

If yes or unknown, comment on characterization for storage.

N/A

**2.11.2 Is further characterization needed about the waste prior to acceptance for treatment?**

☒ Yes ☐ No ☐ Unknown at this time

| Milestone Number | Due Date |
|---|---|
| N/A | N/A |

If yes or unknown, comment on characterization for treatment.

Will be completed during activities to facilitate transfer of the container to CWC. No commitment is necessary for the characterization needs on this MLLW.

**2.11.3 Is further characterization needed about the waste prior to acceptance for disposal?**

☒ Yes ☐ No ☐ Unknown at this time

| Milestone Number | Due Date |
|---|---|
| N/A | N/A |

If yes or unknown, comment on characterization for disposal.

To meet concentration based treatment standards applicable for the residues, sampling will be required after treatment. No commitment is necessary for the characterization needs on this MLLW.

# LDR REPORT WASTE LOCATION-SPECIFIC DATA SHEET

**2.12 Other key assumptions related to storage, inventory, and generation information:**

None.

## 3.0 WASTE MINIMIZATION

**3.1 Has a waste minimization assessment been completed for this stream?**

☐ Yes ☒ No

If yes, provide date assessment conducted: 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:

**3.2 Provide details of current and proposed methods for minimizing the generation of this stream (e.g., process changes to reduce or eliminate LDR waste, methods to reduce volume through segregation and avoidance of commingling, substitution of less-toxic materials):**

Through source reduction, waste minimization practices are being employed to ensure that the generation of this stream is being minimized. Additional waste is not expected to be generated in the future.

**3.3 Waste minimization schedule**

**3.3.1 Reduction achieved during calendar year 2003 (volume or mass)**

0.000 m3

**3.3.2 Projected future waste volume reductions**

| Year | $m^3$ | and/or | kg |
|---|---|---|---|
| 2004 | 0.000 | | |
| 2005 | 0.000 | | |
| 2006 | 0.000 | | |
| 2007 | 0.000 | | |
| 2008 | 0.000 | | |
| Total | 0.000 | | |

**3.3.3 Bases and assumptions used in above estimates:**

Since subject waste has already been generated and will be treated for directly disposal, no additional waste minimization activities are planned. WRAP does not generate this waste stream, rather will receive waste for further processing from other generating facilities.

# LDR REPORT WASTE LOCATION-SPECIFIC DATA SHEET

## 1.0 WASTE STREAM IDENTIFICATION AND SOURCE

**1.1 Unit/Plant name:** WSCF **Waste Stream:** Organic Non-Debris

**Treatability Group Name:** MLLW-03 - Organic Non-Debris

**1.2 Applicable profile number(s) for this waste stream:**

WSCF-404-0003-00, WSCF-402-0003-01, WSCF-404-0004-00, WSCF-404-0005, WSCF-404-0003-03, WSCF-422-0001-00, WSCF-422-0002-00

**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):**

The waste stream is generated from analytical processes within the laboratory. The organic non-debris wastes are collected in the WSCF SAA's and packaged for transfer to the CWC.

**1.3.2 History of how and where the waste was/is generated:**

WSCF has been sending these waste streams to the CWC for approximately the last six years. This waste stream is generated as a result of analysis within the laboratory.

**1.3.3 Source of the regulated constituents:**

The hazardous constituents are derived from sample contributions and/or the addition of reagents during the analytical process. These reagents may be considered regulated constituents and contribute to the hazardous nature of the waste stream.

**1.3.4 Source of the information (e.g., analytical data, process knowledge, document number, etc.)**

Information to characterize this waste stream is obtained from process knowledge and analytical data.

**1.3.5 Additional notes:**

This material is managed in a SAA and 90-day accumulation area. WSCF has no TSD unit.

## 2.0 WASTE STREAM STORAGE, INVENTORY, AND GENERATION INFORMATION

(NOTE: For waste in satellite accumulation areas and 90-day accumulation areas, skip to Section 2.6.)

**2.1 Current storage method**

☐ Container (pad) ☐ Container (covered) ☐ Container (retrievably buried)

☐ Tank ☐ DST ☐ SST

☐ Other (explain):

**2.1.1 How was the waste managed prior to storage?**

N/A

**2.1.2 Timeframe when waste was placed to storage?**

N/A

# LDR REPORT WASTE LOCATION-SPECIFIC DATA SHEET

**2.2 Storage inventory locations:**

| Building/Room Number | Number of Containers/Tanks |
|---|---|
| N/A | N/A |

**2.3 Current stored inventory for this stream.**

Total volume (cubic meters): 0.000

Date of inventory values: 12/31/2003

Comments on waste inventory:

WSCF waste is managed in a SAA or 90 day accumulation area. WSCF has no TSD.

**2.4 Is storage capacity at this location potentially an issue for this waste stream?**

Yes No

If yes, what is the total estimated storage capacity?

When is this capacity expected to be reached?

Bases and assumptions used:

**2.5 Planned storage areas for this waste:**

☐ Current Location ☒ CWC ☐ DST

☐ Other Area(s) (list): 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 |
|---|---|---|---|
| 2004 | 2.080 | | |
| 2005 | 2.080 | | |
| 2006 | 2.080 | | |
| 2007 | 2.080 | | |
| 2008 | 2.080 | | |
| Total | 10.400 | | |

**2.7 DOE Storage Compliance Assessment information:**

☐ Assessment has been completed.

| Document Number | Date |
|---|---|
| | |

☐ Assessment has been scheduled. Scheduled date:

☒ Other. Explain: N/A

# 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.

Will be completed during activities to facilitate transfer of the container to CWC. No commitment is necessary for the characterization needs on this MLLW.

**2.11.3 Is further characterization needed about the waste prior to acceptance for disposal?**

☒ Yes ☐ No ☐ Unknown at this time

| Milestone Number | Due Date |
|---|---|
| N/A | N/A |

If yes or unknown, comment on characterization for disposal.

To meet concentration based treatment standards applicable for the residues, sampling will be required after treatment. No commitment is necessary for the characterization needs on this MLLW.

# LDR REPORT WASTE LOCATION-SPECIFIC DATA SHEET

**2.12 Other key assumptions related to storage, inventory, and generation information:**

None.

## 3.0 WASTE MINIMIZATION

**3.1 Has a waste minimization assessment been completed for this stream?**

☐ Yes ☒ No

If yes, provide date assessment conducted: N/A

If yes, provide document number or other identification:

N/A

If no, provide date assessment will be completed, or if waste stream is no longer generated, then indicate N/A:

No date established.

**3.2 Provide details of current and proposed methods for minimizing the generation of this stream (e.g., process changes to reduce or eliminate LDR waste, methods to reduce volume through segregation and avoidance of commingling, substitution of less-toxic materials):**

None, waste is currently generated from sample analysis using SW-846/equal protocol procedures.

**3.3 Waste minimization schedule**

**3.3.1 Reduction achieved during calendar year 2003 (volume or mass)**

0.000 kg

**3.3.2 Projected future waste volume reductions**

| Year | $m^3$ | and/or | kg |
|---|---|---|---|
| 2004 | 0.000 | | |
| 2005 | 0.000 | | |
| 2006 | 0.000 | | |
| 2007 | 0.000 | | |
| 2008 | 0.000 | | |
| Total | 0.000 | | |

**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:** MLLW-04A - O/C Hazardous Debris

**1.2 Description of waste (list WSRd numbers for this waste stream, as applicable)**

This treatability group is for waste that meets the definition of hazardous debris as defined in 40 CFR 268.2, and the waste contains physical and/or chemical constituents that meet the definition of organic/carbonaceous 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 may include: BLD, DBR, UUU, 334, 600, 601,603, 605, 606, 607, 60A, 60B, 620, 621, 622, 625, 626, and 627.

## 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): 449.794

**2.2 Estimated generation projection by calendar year: [equals annual sums of location-specfic data sheets for this treatability group].**

| Year | $m^3$ | and/or | kg |
|---|---|---|---|
| 2004 | 470.387 | | |
| 2005 | 678.708 | | |
| 2006 | 797.901 | | |
| 2007 | 948.263 | | |
| 2008 | 1,448.942 | | |
| Total | 4,344.201 | | |

## 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):**

Since this waste is a general category based on dangerous waste characteristics, the radiological characteristics are expected to vary greatly. However, there is high confidence that the waste is MLLW. The waste as packaged is considered Contact-handled (i.e., less than or equal to 200mR/hr on outside package surface); however, the dose rate of some waste inside the package may exceed 200mR/hr.

# LDR REPORT TREATABILITY GROUP DATA SHEET

## 3.2 Physical Form

**3.2.1 Physical form of the waste:**

☐ Solid ☐ Liquid ☐ Semi-solid ☒ Debris

☐ Other (Describe in comments.)

**3.2.2 Comments on physical form:**

The matrix characteristics has or may be verified prior to the waste being transferred/shipped to the receiving TSD unit. Waste verifications take place either at the generating site or at one of the centralized TSD units at Hanford.

## 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 | Ignitable Charac. | N/A | *** | Alternative Stds. for Haz. Debris (40 CFR 268.45) |
| D002 | Corrosive | Corrosive Charac. | N/A | *** | Alternative Stds. for Haz. Debris (40 CFR 268.45) |
| D003 | Reactive | Reactive Cyanides | N/A | *** | Alternative Stds. for Haz. Debris (40 CFR 268.45) |
| D004 | TC-Arsenic | N/A | *** | *** | Alternative Stds. for Haz. Debris (40 CFR 268.45) |
| D005 | TC-Barium | N/A | *** | *** | Alternative Stds. for Haz. Debris (40 CFR 268.45) |
| D006 | TC- Cadmium | Cadmium Charac. | *** | *** | Alternative Stds. for Haz. Debris (40 CFR 268.45) |
| D007 | TC-Chromium | N/A | *** | *** | Alternative Stds. for Haz. Debris (40 CFR 268.45) |
| D008 | Radioactive Lead Solids | Radioactive Lead Solids | <50 vol% per package basis | *** | Macroencapsulation |
| D008 | TC-Lead | Lead Charac. | *** | *** | Alternative Stds. for Haz. Debris (40 CFR 268.45) |
| D009 | TC-Mercury | Low Mercury | <260 mg/kg Hg | *** | Alternative Stds. for Haz. Debris (40 CFR 268.45) |
| D010 | TC-Selenium | N/A | *** | *** | Alternative Stds. for Haz. Debris (40 CFR 268.45) |
| D011 | TC-Silver | N/A | *** | *** | Alternative Stds. for Haz. Debris (40 CFR 268.45) |
| D012 | Endrin | N/A | *** | *** | Alternative Stds. for Haz. Debris (40 CFR 268.45) |
| D013 | Lindane | N/A | *** | *** | Alternative Stds. for Haz. Debris (40 CFR 268.45) |
| D014 | Methoxychlor | N/A | *** | *** | Alternative Stds. for Haz. Debris (40 CFR 268.45) |
| D015 | Toxaphene | N/A | *** | *** | Alternative Stds. for Haz. Debris (40 CFR 268.45) |

# 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 |
|---|---|---|---|---|---|
| D016 | 2,4-D | N/A | *** | *** | Alternative Stds. for Haz. Debris (40 CFR 268.45) |
| D017 | 2,4,5-TP (Silvex) | N/A | *** | *** | Alternative Stds. for Haz. Debris (40 CFR 268.45) |
| D018 | Benzene | N/A | *** | *** | Alternative Stds. for Haz. Debris (40 CFR 268.45) |
| D019 | Carbon Tetrachloride | N/A | *** | *** | Alternative Stds. for Haz. Debris (40 CFR 268.45) |
| D020 | Chlordane | N/A | *** | *** | Alternative Stds. for Haz. Debris (40 CFR 268.45) |
| D021 | Chlorobenzene | N/A | *** | *** | Alternative Stds. for Haz. Debris (40 CFR 268.45) |
| D022 | Chloroform | N/A | *** | *** | Alternative Stds. for Haz. Debris (40 CFR 268.45) |
| D023 | o-Cresol | N/A | *** | *** | Alternative Stds. for Haz. Debris (40 CFR 268.45) |
| D024 | m-Cresol | N/A | *** | *** | Alternative Stds. for Haz. Debris (40 CFR 268.45) |
| D025 | p-Cresol | N/A | *** | *** | Alternative Stds. for Haz. Debris (40 CFR 268.45) |
| D026 | Cresol | N/A | *** | *** | Alternative Stds. for Haz. Debris (40 CFR 268.45) |
| D027 | p-Dichlorobenzene | N/A | *** | *** | Alternative Stds. for Haz. Debris (40 CFR 268.45) |
| D028 | 1,2-Dichlorbenzene | N/A | *** | *** | Alternative Stds. for Haz. Debris (40 CFR 268.45) |
| D029 | 1,1-Dichloroethylene | N/A | *** | *** | Alternative Stds. for Haz. Debris (40 CFR 268.45) |
| D030 | 2,4-Dinitrotoluene | N/A | *** | *** | Alternative Stds. for Haz. Debris (40 CFR 268.45) |
| D031 | Heptachlor | N/A | *** | *** | Alternative Stds. for Haz. Debris (40 CFR 268.45) |

# 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 |
|---|---|---|---|---|---|
| D032 | Hexachlorobenzene | N/A | *** | *** | Alternative Stds. for Haz. Debris (40 CFR 268.45) |
| D033 | Hexachlorobutadiene | N/A | *** | *** | Alternative Stds. for Haz. Debris (40 CFR 268.45) |
| D034 | Hexachloroethane | N/A | *** | *** | Alternative Stds. for Haz. Debris (40 CFR 268.45) |
| D035 | Methyl Ethyl Ketone | N/A | *** | *** | Alternative Stds. for Haz. Debris (40 CFR 268.45) |
| D036 | Nitrobenzene | N/A | *** | *** | Alternative Stds. for Haz. Debris (40 CFR 268.45) |
| D037 | Pentachlorophenol | N/A | *** | *** | Alternative Stds. for Haz. Debris (40 CFR 268.45) |
| D038 | Pyridine | N/A | *** | *** | Alternative Stds. for Haz. Debris (40 CFR 268.45) |
| D039 | Tetrachloroethylene | N/A | *** | *** | Alternative Stds. for Haz. Debris (40 CFR 268.45) |
| D040 | Trichloroethylene | N/A | *** | *** | Alternative Stds. for Haz. Debris (40 CFR 268.45) |
| D041 | 2,4,5-Trichlorophenol | N/A | *** | *** | Alternative Stds. for Haz. Debris (40 CFR 268.45) |
| D042 | 2,4,6-Trichlorophenol | N/A | *** | *** | Alternative Stds. for Haz. Debris (40 CFR 268.45) |
| D043 | Vinyl Chloride | N/A | *** | *** | Alternative Stds. for Haz. Debris (40 CFR 268.45) |
| F001 | 1,1,1-Trichlorethane | Spent Solvent | *** | *** | Alternative Stds. for Haz. Debris (40 CFR 268.45) |
| F002 | Methylene Chloride | Spent Solvent | *** | *** | Alternative Stds. for Haz. Debris (40 CFR 268.45) |
| F003 | Acetone & Hexone | Spent Solvent | *** | *** | Alternative Stds. for Haz. Debris (40 CFR 268.45) |
| F004 | o-Cresol & p-Cresol | Spent Solvent | *** | *** | Alternative Stds. for Haz. Debris (40 CFR 268.45) |

# 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 |
|---|---|---|---|---|---|
| F005 | Methyl Ethyl Ketone | Spent Solvent | *** | *** | Alternative Stds. for Haz. Debris (40 CFR 268.45) |
| F039 | Various | N/A | *** | *** | Alternative Stds. for Haz. Debris (40 CFR 268.45) |
| P029 | Copper Cyanide | N/A | *** | *** | Alternative Stds. for Haz. Debris (40 CFR 268.45) |
| P030 | Cyanides | N/A | *** | *** | Alternative Stds. for Haz. Debris (40 CFR 268.45) |
| P098 | Potassium Cyanide | N/A | *** | *** | Alternative Stds. for Haz. Debris (40 CFR 268.45) |
| P102 | Propargyl Alcohol | N/A | *** | *** | Alternative Stds. for Haz. Debris (40 CFR 268.45) |
| P106 | Sodium Cyanide | N/A | *** | *** | Alternative Stds. for Haz. Debris (40 CFR 268.45) |
| P120 | Vanadium Pentoxide | N/A | *** | *** | Alternative Stds. for Haz. Debris (40 CFR 268.45) |
| U002 | Acetone | N/A | *** | *** | Alternative Stds. for Haz. Debris (40 CFR 268.45) |
| U006 | Acetyl Chloride | N/A | *** | *** | Alternative Stds. for Haz. Debris (40 CFR 268.45) |
| U031 | n-Butyl Alcohol | N/A | *** | *** | Alternative Stds. for Haz. Debris (40 CFR 268.45) |
| U043 | Vinyl Chloride | N/A | *** | *** | Alternative Stds. for Haz. Debris (40 CFR 268.45) |
| U057 | Cyclohexanone | N/A | *** | *** | Alternative Stds. for Haz. Debris (40 CFR 268.45) |
| U080 | Methylene Chloride | N/A | *** | *** | Alternative Stds. for Haz. Debris (40 CFR 268.45) |
| U123 | Formic Acid | N/A | *** | *** | Alternative Stds. for Haz. Debris (40 CFR 268.45) |
| U151 | Mercury | Low Mercury | <260 mg/kg Hg | *** | Alternative Stds. for Haz. Debris (40 CFR 268.45) |

# LDR REPORT TREATABILITY GROUP DATA SHEET

| EPA/ State Number | Waste Description | LDR Sub-Category* | Concentration (Typical or Range)** | Basis | LDR Treatment Concentration Standard or Technology Code |
|---|---|---|---|---|---|
| U159 | Methyl Ethyl Ketone | N/A | *** | *** | Alternative Stds. for Haz. Debris (40 CFR 268.45) |
| U161 | Methyl Isobutyl Ketone | N/A | *** | *** | Alternative Stds. for Haz. Debris (40 CFR 268.45) |
| U196 | Pyridine | N/A | *** | *** | Alternative Stds. for Haz. Debris (40 CFR 268.45) |
| U220 | Toluene | N/A | *** | *** | Alternative Stds. for Haz. Debris (40 CFR 268.45) |
| U226 | 1,1,1-Trichloroethane | N/A | *** | *** | Alternative Stds. for Haz. Debris (40 CFR 268.45) |
| U239 | Xylenes | N/A | *** | *** | Alternative Stds. for Haz. Debris (40 CFR 268.45) |
| WP01 | Persistent, EHW | N/A | *** | *** | None (1) |
| WP02 | Persistent, DW | N/A | *** | *** | N/A |
| WSC2 | Solid Corrosive | N/A | *** | *** | Remove Solid Acid Charac. |
| WT01 | Toxic, EHW | N/A | *** | *** | None (1) |
| WT02 | Toxic, DW | N/A | *** | *** | N/A |

* LDR Subcategory marked N/A if no existing subcategory adequately describes this waste, or if there are no defined subcategories for the waste number (40 CFR 268.40).

** If waste is not consistent in concentration, this may not apply. Described in Section 3.3.6.

*** The concentration varies and is based on process knowledge and/or analytical data.

(1) Mixed extremely hazardous wastes may be land-disposed in Washington State in DOE facilities in accordance with RCW 70.105.050(2).

(2) The combination of waste codes varies on a per-package basis in accordance with WAC 173-303-070(3) and (5).

UHC identification not required when using the alternative treatment standards for hazardous debris.

**3.3.3 List any waste numbers from Section 3.3.2 for which the waste stream already meets established LDR treatment standards.**

☐ List:

☐ No LDR treatment required (e.g. TRUM waste destined for WIPP, exclusion, etc.)

☒ None (i.e. all constituents/waste numbers of this waste stream still require treatment).

# 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 waste characterization information is reviewed on a per-package basis prior to the waste being shipped to an onsite or offsite TSD. Waste that has been residing in storage for a long time may require more extensive verification work to make it acceptable for treatment and/or disposal. If, during the verification activities, it is determined that some of the waste does not meet the MLLW-04A waste stream description, then it will be reassigned into the appropriate waste stream (e.g., MLLW-02, -03 or -04B through -10) and the correct WSRd will be assigned to it. With recent changes in the TSCA, TSCA regulated PCBs may be contained in this wastestream in varying concentrations. The PCB contaminated waste has a regulated disposal path consistent with the wastestream. However, container remain in storage until receiving facilities are allowed to accept these PCBs. It is possible that some containers do not comply with the disposal path. These containers will be reassigned to the proper treatabilty group.

## 4.0 WASTE STREAM TREATMENT

**4.1 Is this waste stream currently being treated?**

☒ Yes ☐ No

If yes, provide details: Hanford has been sending a portion of this waste treatability group to the Allied Technology Group (ATG) facility located in Richland, WA for treatment. The treatment being utilized by ATG is macroencapsulation. The treated waste is being returned back to Hanford and disposed of in the Mixed Waste Disposal trench located in 200-W Area.

# LDR REPORT TREATABILITY GROUP DATA SHEET

**4.2 Planned treatment: Check the appropriate box indicating future plans for treating this waste stream to meet applicable regulations, including LDR treatment standards.**

☐ No treatment required (skip to Section 5.0)

☒ Treating or plan to treat on site

☒ Treating or plan to treat off site

☐ Treatment options still being assessed

**4.3 Planned treatment method, facility, extent of treatment capacity available:**

The treatment method being used to treat this waste group is macroencapsulation per 40 CFR 268.45. The waste is mainly being sent offsite to a commercial treatment facility for treatment. There is additional commercial treatment capacity available in the nation which can be accessed via contracts. Some treatment may also be performed onsite.

**4.4 Treatment schedule information:**

Treatment of this waste has been ongoing for several years. Additional treatment will be performed in accordance with M-91 milestones and target dates after they have been finalized.

**4.5 Applicable Tri-Party Agreement treatment milestone numbers (including permitting):**

| Milestone Number | Due Date |
|---|---|
| N/A | N/A |

**4.6 Proposed new Tri-Party Agreement treatment milestones:**

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: To the extent practical, all mixed waste is segregated and packaged separately from LLW or TRU wastes. The volume of mixed waste is reduced by in-drum compaction when possible, and where it does not interfere with future treatment activities. To minimize the generation of mixed waste, generators actively seek nondangerous alternatives for the dangerous constituents in their processes. Minimization goals are set annually and tracked quarterly, and waste treatment is used to destroy the hazardous constituents, as allowable.

**4.8 List or describe treatability equivalency petitions, rulemaking petitions, and case-by-case exemptions needed for treatment or already in place.**

The O/C LDR 1,000 mile inapplicability certification has been in effect for several years that allows for the treatment of the O/C debris by other than incineration.

**4.9 Key Assumptions:**

Commercial thermal treatment capacity is not sufficient to change the status of the LDR 1,609 kilometer (1,000 mile) inapplicability certification. To dispose of non-F001-F005 listed waste, the 200 Area ETF delisting petition must be modified to manage the leachate generated from the LLBG mixed waste trenches.

# LDR REPORT TREATABILITY GROUP DATA SHEET

## 5.0 WASTE STREAM DISPOSAL

**After treatment, how will the waste stream be disposed of (include locations, milestone numbers, variances required, etc. as applicable):**

Subject waste will be disposed of in mixed waste trenches located on the Hanford Site.

# LDR REPORT WASTE LOCATION-SPECIFIC DATA SHEET

## 1.0 WASTE STREAM IDENTIFICATION AND SOURCE

1.1 **Unit/Plant name:** 200 ETF **Waste Stream:** Acid O/C Hazardous Debris

**Treatabilitiy Group Name:** MLLW-04A - O/C Hazardous Debris

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):**

Acid waste is generated from spill clean-up and debris generated from maintenance activities.

1.3.2 **History of how and where the waste was/is generated:**

The ETF uses acid throughout the treatment process for pH adjustment.

1.3.3 **Source of the regulated constituents:**

Acid used for pH adjustment in the ETF treatment process.

1.3.4 **Source of the information (e.g., analytical data, process knowledge, document number, etc.)**

Analytical data, source information, MSDS's, process knowledge.

1.3.5 **Additional notes:**

None.

## 2.0 WASTE STREAM STORAGE, INVENTORY, AND GENERATION INFORMATION

(NOTE: For waste in satellite accumulation areas and 90-day accumulation areas, skip to Section 2.6.)

2.1 **Current storage method**

☐ Container (pad) ☒ Container (covered) ☐ Container (retrievably buried)

☐ Tank ☐ DST ☐ SST

☐ Other (explain):

2.1.1 **How was the waste managed prior to storage?**

The waste was in the process of being generated.

2.1.2 **Timeframe when waste was placed to storage?**

05/99 - 2/03 for current inventory. This type waste has been generated at this location since 1995.

2.2 **Storage inventory locations:**

| Building/Room Number | Number of Containers/Tanks |
|---|---|
| ETF | 7 durms |

# LDR REPORT WASTE LOCATION-SPECIFIC DATA SHEET

**2.3 Current stored inventory for this stream.**

Total volume (cubic meters): 5.000

Date of inventory values: 12/30/2003

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:

**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 |
|---|---|---|---|
| 2004 | 1.300 | | |
| 2005 | 1.300 | | |
| 2006 | 1.300 | | |
| 2007 | 1.300 | | |
| 2008 | 1.300 | | |
| Total | 6.500 | | |

**2.7 DOE Storage Compliance Assessment information:**

☒ Assessment has been completed.

| Document Number | Date |
|---|---|
| 01-A&E-004 | 10/17/2000 |

☐ Assessment has been scheduled. Scheduled date:

☐ Other. Explain:

## 2.8 Applicable Tri-Party Agreement milestones related to storage at this location:

| Milestone Number | Due Date |
|---|---|
| N/A | N/A |

# LDR REPORT WASTE LOCATION-SPECIFIC DATA SHEET

**2.9 Has there ever been any non-permitted, unauthorized release of this waste stream from this storage unit to the environment?**

☐ Yes ☒ No

If yes, summarize releases and quantities and provide date:

N/A

**2.10 Are there any plans to submit requests for variances or other exemptions related to storage?**

☐ Yes ☒ No

If yes, explain: N/A

**2.11 Characterization**

**2.11.1 Is further characterization needed about the waste prior to acceptance for storage?**

☐ Yes ☒ No ☐ Unknown at this time

| Milestone Number | Due Date |
|---|---|
| N/A | N/A |

If yes or unknown, comment on characterization for storage.

N/A

**2.11.2 Is further characterization needed about the waste prior to acceptance for treatment?**

☐ Yes ☒ No ☐ Unknown at this time

| Milestone Number | Due Date |
|---|---|
| N/A | N/A |

If yes or unknown, comment on characterization for treatment.

N/A

**2.11.3 Is further characterization needed about the waste prior to acceptance for disposal?**

☐ Yes ☒ No ☐ Unknown at this time

| Milestone Number | Due Date |
|---|---|
| N/A | N/A |

If yes or unknown, comment on characterization for disposal.

N/A

**2.12 Other key assumptions related to storage, inventory, and generation information:**

None.

# LDR REPORT WASTE LOCATION-SPECIFIC DATA SHEET

## 3.0 WASTE MINIMIZATION

**3.1 Has a waste minimization assessment been completed for this stream?**

☐ Yes ☒ No

If yes, provide date assessment conducted: N/A

If yes, provide document number or other identification:

N/A

If no, provide date assessment will be completed, or if waste stream is no longer generated, then indicate N/A:

No assessment planned at this time.

**3.2 Provide details of current and proposed methods for minimizing the generation of this stream (e.g., process changes to reduce or eliminate LDR waste, methods to reduce volume through segregation and avoidance of commingling, substitution of less-toxic materials):**

Facility operating procedures provide instructions on packaging and segregation of waste.

**3.3 Waste minimization schedule**

**3.3.1 Reduction achieved during calendar year 2003 (volume or mass)**

0.000 m3

**3.3.2 Projected future waste volume reductions**

| Year | $m^3$ | and/or | kg |
|---|---|---|---|
| 2004 | 0.000 | | |
| 2005 | 0.000 | | |
| 2006 | 0.000 | | |
| 2007 | 0.000 | | |
| 2008 | 0.000 | | |
| Total | 0.000 | | |

**3.3.3 Bases and assumptions used in above estimates:**

N/A

# LDR REPORT WASTE LOCATION-SPECIFIC DATA SHEET

## 1.0 WASTE STREAM IDENTIFICATION AND SOURCE

1.1 **Unit/Plant name:** 200 ETF **Waste Stream:** Caustic O/C Hazardous Debris

**Treatabilitiy Group Name:** MLLW-04A - O/C Hazardous Debris

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):**

Caustic waste is generated from spill clean-up and debris generated from maintenance activities.

1.3.2 **History of how and where the waste was/is generated:**

The ETF uses caustic throughout the treatment process for pH adjustment.

1.3.3 **Source of the regulated constituents:**

Caustic is used for pH adjustment in the ETF treatment process.

1.3.4 **Source of the information (e.g., analytical data, process knowledge, document number, etc.)**

Analytical data, source information, MSDS's, process knowledge.

1.3.5 **Additional notes:**

None.

## 2.0 WASTE STREAM STORAGE, INVENTORY, AND GENERATION INFORMATION

(NOTE: For waste in satellite accumulation areas and 90-day accumulation areas, skip to Section 2.6.)

2.1 **Current storage method**

- ☐ Container (pad)
- ☒ Container (covered)
- ☐ Container (retrievably buried)
- ☐ Tank
- ☐ DST
- ☐ SST
- ☐ Other (explain):

2.1.1 **How was the waste managed prior to storage?**

The waste was in the process of being generation.

2.1.2 **Timeframe when waste was placed to storage?**

02/00 - 12/01 for current inventory. This type waste has been generated at this location since 1995.

2.2 **Storage inventory locations:**

| Building/Room Number | Number of Containers/Tanks |
|---|---|
| ETF | 2 drum |

# LDR REPORT WASTE LOCATION-SPECIFIC DATA SHEET

**2.3 Current stored inventory for this stream.**

Total volume (cubic meters): 4.000

Date of inventory values: 12/30/2003

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:

**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 |
|---|---|---|---|
| 2004 | 0.210 | | |
| 2005 | 0.210 | | |
| 2006 | 0.210 | | |
| 2007 | 0.210 | | |
| 2008 | 0.210 | | |
| Total | 1.050 | | |

**2.7 DOE Storage Compliance Assessment information:**

☒ Assessment has been completed.

| Document Number | Date |
|---|---|
| 01-A&E-004 | 10/17/2000 |

☐ Assessment has been scheduled. Scheduled date:

☐ Other. Explain:

## 2.8 Applicable Tri-Party Agreement milestones related to storage at this location:

| Milestone Number | Due Date |
|---|---|
| N/A | N/A |

# LDR REPORT WASTE LOCATION-SPECIFIC DATA SHEET

**2.9 Has there ever been any non-permitted, unauthorized release of this waste stream from this storage unit to the environment?**

☐ Yes ☒ No

If yes, summarize releases and quantities and provide date:

N/A

**2.10 Are there any plans to submit requests for variances or other exemptions related to storage?**

☐ Yes ☒ No

If yes, explain: N/A

**2.11 Characterization**

**2.11.1 Is further characterization needed about the waste prior to acceptance for storage?**

☐ Yes ☒ No ☐ Unknown at this time

| Milestone Number | Due Date |
|---|---|
| N/A | N/A |

If yes or unknown, comment on characterization for storage.

N/A

**2.11.2 Is further characterization needed about the waste prior to acceptance for treatment?**

☐ Yes ☒ No ☐ Unknown at this time

| Milestone Number | Due Date |
|---|---|
| N/A | N/A |

If yes or unknown, comment on characterization for treatment.

N/A

**2.11.3 Is further characterization needed about the waste prior to acceptance for disposal?**

☐ Yes ☒ No ☐ Unknown at this time

| Milestone Number | Due Date |
|---|---|
| N/A | N/A |

If yes or unknown, comment on characterization for disposal.

N/A

**2.12 Other key assumptions related to storage, inventory, and generation information:**

None.

# LDR REPORT WASTE LOCATION-SPECIFIC DATA SHEET

## 3.0 WASTE MINIMIZATION

**3.1 Has a waste minimization assessment been completed for this stream?**

☐ Yes ☒ No

If yes, provide date assessment conducted: N/A

If yes, provide document number or other identification:

N/A

If no, provide date assessment will be completed, or if waste stream is no longer generated, then indicate N/A:

No assessment planned at this time.

**3.2 Provide details of current and proposed methods for minimizing the generation of this stream (e.g., process changes to reduce or eliminate LDR waste, methods to reduce volume through segregation and avoidance of commingling, substitution of less-toxic materials):**

Facility operating procedures provide instructions on packaging and segregation of waste.

**3.3 Waste minimization schedule**

**3.3.1 Reduction achieved during calendar year 2003 (volume or mass)**

0.000 m3

**3.3.2 Projected future waste volume reductions**

| Year | $m^3$ | and/or | kg |
|---|---|---|---|
| 2004 | 0.000 | | |
| 2005 | 0.000 | | |
| 2006 | 0.000 | | |
| 2007 | 0.000 | | |
| 2008 | 0.000 | | |
| Total | 0.000 | | |

**3.3.3 Bases and assumptions used in above estimates:**

N/A

# LDR REPORT WASTE LOCATION-SPECIFIC DATA SHEET

## 1.0 WASTE STREAM IDENTIFICATION AND SOURCE

**1.1 Unit/Plant name:** 200 ETF **Waste Stream:** RCRA O/C Hazardous Debris

**Treatabilitiy Group Name:** MLLW-04A - O/C Hazardous Debris

**1.2 Applicable profile number(s) for this waste stream:**

2LEF-930/931-0004

**1.3 Waste stream source information**

**1.3.1 General description of the waste (e.g., spill clean-up waste, discarded lab materials, maintenance waste):**

Process contacted debris generated from maintenance and clean-up activities.

**1.3.2 History of how and where the waste was/is generated:**

Generated during operation and maintenance activities at the ETF and associated facilities.

**1.3.3 Source of the regulated constituents:**

Hanford Site generated RCRA wastewaters that are treated through the ETF and used oils/greases from LERF/ETF equipment.

**1.3.4 Source of the information (e.g., analytical data, process knowledge, document number, etc.)**

Analytical data, process knowledge, MSDS's.

**1.3.5 Additional notes:**

None.

## 2.0 WASTE STREAM STORAGE, INVENTORY, AND GENERATION INFORMATION

(NOTE: For waste in satellite accumulation areas and 90-day accumulation areas, skip to Section 2.6.)

**2.1 Current storage method**

- ☐ Container (pad)
- ☒ Container (covered)
- ☐ Container (retrievably buried)
- ☐ Tank
- ☐ DST
- ☐ SST
- ☐ Other (explain):

**2.1.1 How was the waste managed prior to storage?**

Waste was in the process of generation.

**2.1.2 Timeframe when waste was placed to storage?**

1997 - present.

# LDR REPORT WASTE LOCATION-SPECIFIC DATA SHEET

**2.2 Storage inventory locations:**

| Building/Room Number | Number of Containers/Tanks |
|---|---|
| 2025E | 144 |
| 291/2025E | 6 boxes |

**2.3 Current stored inventory for this stream.**

Total volume (cubic meters): 53.000

Date of inventory values: 12/30/2003

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:

**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 |
|---|---|---|---|
| 2004 | 12.000 | | |
| 2005 | 18.000 | | |
| 2006 | 27.000 | | |
| 2007 | 18.000 | | |
| 2008 | 12.000 | | |
| Total | 87.000 | | |

**2.7 DOE Storage Compliance Assessment information:**

☒ Assessment has been completed.

| Document Number | Date |
|---|---|
| 01-A&E-004 | 10/17/2000 |

# LDR REPORT WASTE LOCATION-SPECIFIC DATA SHEET

☐ Assessment has been scheduled. Scheduled date:

☐ Other. Explain:

**2.8 Applicable Tri-Party Agreement milestones related to storage at this location:**

| Milestone Number | Due Date |
|---|---|
| N/A | 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 abont the waste prior to acceptance for treatment?**

☐ Yes ☒ No ☐ Unknown at this time

| Milestone Number | Due Date |
|---|---|
| N/A | N/A |

If yes or unknown, comment on characterization for treatment.

N/A

**2.11.3 Is further characterization needed about the waste prior to acceptance for disposal?**

☐ Yes ☒ No ☐ Unknown at this time

| Milestone Number | Due Date |
|---|---|
| N/A | N/A |

# LDR REPORT WASTE LOCATION-SPECIFIC DATA SHEET

If yes or unknown, comment on characterization for disposal.

N/A

**2.12 Other key assumptions related to storage, inventory, and generation information:**

None.

## 3.0 WASTE MINIMIZATION

**3.1 Has a waste minimization assessment been completed for this stream?**

☐ Yes ☒ No

If yes, provide date assessment conducted: N/A

If yes, provide document number or other identification:

N/A

If no, provide date assessment will be completed, or if waste stream is no longer generated, then indicate N/A:

No assessment planned at this time.

**3.2 Provide details of current and proposed methods for minimizing the generation of this stream (e.g., process changes to reduce or eliminate LDR waste, methods to reduce volume through segregation and avoidance of commingling, substitution of less-toxic materials):**

Facility operating procedures provide instructions on packaging and segregation of waste.

**3.3 Waste minimization schedule**

**3.3.1 Reduction achieved during calendar year 2003 (volume or mass)**

0.000 m3

**3.3.2 Projected future waste volume reductions**

| Year | $m^3$ | and/or | kg |
|---|---|---|---|
| 2004 | 0.000 | | |
| 2005 | 0.000 | | |
| 2006 | 0.000 | | |
| 2007 | 0.000 | | |
| 2008 | 0.000 | | |
| Total | 0.000 | | |

**3.3.3 Bases and assumptions used in above estimates:**

N/A

# LDR REPORT WASTE LOCATION-SPECIFIC DATA SHEET

## 1.0 WASTE STREAM IDENTIFICATION AND SOURCE

1.1 **Unit/Plant name:** 202-S **Waste Stream:** 202-S O/C Hazardous Debris

**Treatability Group Name:** MLLW-04A - O/C Hazardous Debris

1.2 **Applicable profile number(s) for this waste stream:**

Not available at this time.

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):**

Grease and oils used in maintenance activities on the canyon crane way.

1.3.2 **History of how and where the waste was/is generated:**

The grease and oils were taken into the canyon for crane maintenance activities performed at the REDOX facility and were abandoned in place.

1.3.3 **Source of the regulated constituents:**

Hazardous constituents resulting from equipment maintenance materials.

1.3.4 **Source of the information (e.g., analytical data, process knowledge, document number, etc.)**

Process knowledge.

1.3.5 **Additional notes:**

None.

## 2.0 WASTE STREAM STORAGE, INVENTORY, AND GENERATION INFORMATION

(NOTE: For waste in satellite accumulation areas and 90-day accumulation areas, skip to Section 2.6.)

2.1 **Current storage method**

☐ Container (pad) ☐ Container (covered) ☐ Container (retrievably buried)

☐ Tank ☐ DST ☐ SST

☒ Other (explain): Legacy waste stored loosely on the craneway.

2.1.1 **How was the waste managed prior to storage?**

The grease and oils were taken into the canyon and abandoned in place.

2.1.2 **Timeframe when waste was placed to storage?**

When the process was shut down about 1967

2.2 **Storage inventory locations:**

| Building/Room Number | Number of Containers/Tanks |
|---|---|
| 202-S Craneway | N/A |

# LDR REPORT WASTE LOCATION-SPECIFIC DATA SHEET

**2.3 Current stored inventory for this stream.**

Total volume (cubic meters): 10.000

Date of inventory values: 12/31/2003

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 |
|---|---|---|---|
| 2004 | 0.000 | | |
| 2005 | 0.000 | | |
| 2006 | 0.000 | | |
| 2007 | 0.000 | | |
| 2008 | 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:

☐ Other. Explain:

## 2.8 Applicable Tri-Party Agreement milestones related to storage at this location:

| Milestone Number | Due Date |
|---|---|
| N/A | N/A |

# LDR REPORT WASTE LOCATION-SPECIFIC DATA SHEET

**2.9 Has there ever been any non-permitted, unauthorized release of this waste stream from this storage unit to the environment?**

☐ Yes ☒ No

If yes, summarize releases and quantities and provide date:

N/A

**2.10 Are there any plans to submit requests for variances or other exemptions related to storage?**

☐ Yes ☒ No

If yes, explain: N/A

**2.11 Characterization**

**2.11.1 Is further characterization needed about the waste prior to acceptance for storage?**

☐ Yes ☐ No ☒ Unknown at this time

| Milestone Number | Due Date |
|---|---|
| N/A | N/A |

If yes or unknown, comment on characterization for storage.

It may be necessary to sample the waste prior to placing the waste in storage at CWC.

**2.11.2 Is further characterization needed about the waste prior to acceptance for treatment?**

☐ Yes ☒ No ☐ Unknown at this time

| Milestone Number | Due Date |
|---|---|
| N/A | N/A |

If yes or unknown, comment on characterization for treatment.

N/A

**2.11.3 Is further characterization needed about the waste prior to acceptance for disposal?**

☐ Yes ☒ No ☐ Unknown at this time

| Milestone Number | Due Date |
|---|---|
| N/A | N/A |

If yes or unknown, comment on characterization for disposal.

N/A

**2.12 Other key assumptions related to storage, inventory, and generation information:**

REDOX is under Long Term Surveillance and Maintenance under Chapter 8 of the TPA.

# LDR REPORT WASTE LOCATION-SPECIFIC DATA SHEET

## 3.0 WASTE MINIMIZATION

**3.1 Has a waste minimization assessment been completed for this stream?**

☐ Yes ☒ No

If yes, provide date assessment conducted: N/A

If yes, provide document number or other identification:

N/A

If no, provide date assessment will be completed, or if waste stream is no longer generated, then indicate N/A:

N/A

**3.2 Provide details of current and proposed methods for minimizing the generation of this stream (e.g., process changes to reduce or eliminate LDR waste, methods to reduce volume through segregation and avoidance of commingling, substitution of less-toxic materials):**

N/A

**3.3 Waste minimization schedule**

**3.3.1 Reduction achieved during calendar year 2003 (volume or mass)**

0.000 m3

**3.3.2 Projected future waste volume reductions**

| Year | $m^3$ | and/or | kg |
|---|---|---|---|
| 2004 | 0.000 | | |
| 2005 | 0.000 | | |
| 2006 | 0.000 | | |
| 2007 | 0.000 | | |
| 2008 | 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 WASTE LOCATION-SPECIFIC DATA SHEET

## 1.0 WASTE STREAM IDENTIFICATION AND SOURCE

1.1 **Unit/Plant name:** 222-S Laboratory Complex **Waste Stream:** 222-S O/C Hazardous Debris

**Treatability Group Name:** MLLW-04A - O/C Hazardous Debris

1.2 **Applicable profile number(s) for this waste stream:**

222S-627-0001-CR; 222S-626-0001-CR; 222S-625-0001-CR; CR - Current Revision

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):**

Debris waste generated from laboratory operations (e.g. analytical procedures, hot cell, maintenance, etc.) Examples of debris items are paper, plastic, and rubber.

1.3.2 **History of how and where the waste was/is generated:**

This waste is generated by the 222-S Laboratory operations (e.g. analytical procedures, hot cell, and 219-S WHF).

1.3.3 **Source of the regulated constituents:**

The 222-S Laboratory receives mostly Tank Farms samples resulting in all waste listed as F001-F005. Samples may come from any Hanford Site generating location (e.g. ETF, ERDF, K-Basin, etc.). Laboratory standards and reagents and unused samples may result in contaminated debris.

1.3.4 **Source of the information (e.g., analytical data, process knowledge, document number, etc.)**

Waste Contents Inventory Sheets, MSDS, Waste Stream Fact Sheets.

1.3.5 **Additional notes:**

None.

## 2.0 WASTE STREAM STORAGE, INVENTORY, AND GENERATION INFORMATION

(NOTE: For waste in satellite accumulation areas and 90-day accumulation areas, skip to Section 2.6.)

2.1 **Current storage method**

☐ Container (pad) ☒ Container (covered) ☐ Container (retrievably buried)

☐ Tank ☐ DST ☐ SST

☐ Other (explain):

2.1.1 **How was the waste managed prior to storage?**

Waste was managed per the Hanford Facility Dangerous Waste Permit Application, 222-S Laboratory Complex (DOE/RL-91-27 Revision 1)

2.1.2 **Timeframe when waste was placed to storage?**

12/1998 to present.

# LDR REPORT WASTE LOCATION-SPECIFIC DATA SHEET

**2.2 Storage inventory locations:**

| Building/Room Number | Number of Containers/Tanks |
|---|---|
| HS-0082A | 2 |
| HS-0082B | 0 |
| HS-0083A | 3 |
| HS-0083B | 4 |

**2.3 Current stored inventory for this stream.**

Total volume (cubic meters): 1.874

Date of inventory values: 12/31/2003

Comments on waste inventory:

This data was generated form SWITS specific to 222S Laboratory.

**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): Two containers for offsite treatment

☐ None

**2.6 Estimated generation projection by calendar year (includes waste in satellite and 90-day accumulation areas):**

| Year | $m^3$ | and/or | kg |
|---|---|---|---|
| 2004 | 58.230 | | |
| 2005 | 58.230 | | |
| 2006 | 58.230 | | |
| 2007 | 58.230 | | |
| 2008 | 58.230 | | |
| Total | 291.150 | | |

**2.7 DOE Storage Compliance Assessment information:**

☒ Assessment has been completed.

# LDR REPORT WASTE LOCATION-SPECIFIC DATA SHEET

| Document Number | Date |
|---|---|
| A&E-SEC-01-018 | 12/03/2001 |

☐ Assessment has been scheduled. Scheduled date:

☐ Other. Explain:

**2.8 Applicable Tri-Party Agreement milestones related to storage at this location:**

| Milestone Number | Due Date |
|---|---|
| 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

# LDR REPORT WASTE LOCATION-SPECIFIC DATA SHEET

| Milestone Number | Due Date |
|---|---|
| N/A | N/A |

If yes or unknown, comment on characterization for disposal.

N/A

**2.12 Other key assumptions related to storage, inventory, and generation information:**

None.

## 3.0 WASTE MINIMIZATION

**3.1 Has a waste minimization assessment been completed for this stream?**

☒ Yes ☐ No

If yes, provide date assessment conducted: 9/2000

If yes, provide document number or other identification:

Operating and analytical procedures at 222-S Laboratory.

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):**

222-S personnel optimize use of lab ware during waste generation to minimize waste generation through proper planning during AJHA and pre-jobs. 222-S personnel seek innovative technology which allows them to minimize more waste.

**3.3 Waste minimization schedule**

**3.3.1 Reduction achieved during calendar year 2003 (volume or mass)**

0.000 m3

**3.3.2 Projected future waste volume reductions**

| Year | $m^3$ | and/or | kg |
|---|---|---|---|
| 2004 | 0.000 | | |
| 2005 | 0.000 | | |
| 2006 | 0.000 | | |
| 2007 | 0.000 | | |
| 2008 | 0.000 | | |
| Total | 0.000 | | |

**3.3.3 Bases and assumptions used in above estimates:**

222-S has no waste minimization goals for this waste stream. However, the analytical process generating this stream is continuously evaluated for waste minimization opportunities.

# LDR REPORT WASTE LOCATION-SPECIFIC DATA SHEET

## 1.0 WASTE STREAM IDENTIFICATION AND SOURCE

1.1 **Unit/Plant name:** 242-A Evaporator **Waste Stream:** 242-A O/C Hazardous Debris

**Treatabilitiy Group Name:** MLLW-04A - O/C Hazardous Debris

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):**

Process contacted debris generated from maintenance and clean-up activities.

1.3.2 **History of how and where the waste was/is generated:**

Generated during the operation and maintenance activities at the 242-A Evaporator.

1.3.3 **Source of the regulated constituents:**

From processing DST Waste..

1.3.4 **Source of the information (e.g., analytical data, process knowledge, document number, etc.)**

Analytical, source information, MSDS's, process knowledge.

1.3.5 **Additional notes:**

None.

## 2.0 WASTE STREAM STORAGE, INVENTORY, AND GENERATION INFORMATION

(NOTE: For waste in satellite accumulation areas and 90-day accumulation areas, skip to Section 2.6.)

2.1 **Current storage method**

☐ Container (pad) ☒ Container (covered) ☐ Container (retrievably buried)

☐ Tank ☐ DST ☐ SST

☐ Other (explain):

2.1.1 **How was the waste managed prior to storage?**

Waste was in the process of being generated.

2.1.2 **Timeframe when waste was placed to storage?**

10/08/03 - 12/31/03

2.2 **Storage inventory locations:**

| Building/Room Number | Number of Containers/Tanks |
|---|---|
| 242-A RMA shed | 1 drum |

# LDR REPORT WASTE LOCATION-SPECIFIC DATA SHEET

**2.3 Current stored inventory for this stream.**

Total volume (cubic meters): 0.280

Date of inventory values: 12/31/2003

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:

**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 |
|---|---|---|---|
| 2004 | 6.500 | | |
| 2005 | 1.040 | | |
| 2006 | 1.040 | | |
| 2007 | 1.040 | | |
| 2008 | 1.040 | | |
| Total | 10.660 | | |

**2.7 DOE Storage Compliance Assessment information:**

☒ Assessment has been completed.

| Document Number | Date |
|---|---|
| A&E-00-ASS-073 | 01/17/2001 |

☐ Assessment has been scheduled. Scheduled date:

☐ Other. Explain:

## 2.8 Applicable Tri-Party Agreement milestones related to storage at this location:

| Milestone Number | Due Date |
|---|---|
| N/A | N/A |

# LDR REPORT WASTE LOCATION-SPECIFIC DATA SHEET

**2.9 Has there ever been any non-permitted, unauthorized release of this waste stream from this storage unit to the environment?**

☐ Yes ☒ No

If yes, summarize releases and quantities and provide date:

N/A

**2.10 Are there any plans to submit requests for variances or other exemptions related to storage?**

☐ Yes ☒ No

If yes, explain: N/A

**2.11 Characterization**

**2.11.1 Is further characterization needed about the waste prior to acceptance for storage?**

☐ Yes ☒ No ☐ Unknown at this time

| Milestone Number | Due Date |
|---|---|
| N/A | N/A |

If yes or unknown, comment on characterization for storage.

N/A

**2.11.2 Is further characterization needed about the waste prior to acceptance for treatment?**

☐ Yes ☒ No ☐ Unknown at this time

| Milestone Number | Due Date |
|---|---|
| N/A | N/A |

If yes or unknown, comment on characterization for treatment.

N/A

**2.11.3 Is further characterization needed abont the waste prior to acceptance for disposal?**

☐ Yes ☒ No ☐ Unknown at this time

| Milestone Number | Due Date |
|---|---|
| N/A | N/A |

If yes or unknown, comment on characterization for disposal.

N/A

**2.12 Other key assumptions related to storage, inventory, and generation information:**

None.

# LDR REPORT WASTE LOCATION-SPECIFIC DATA SHEET

## 3.0 WASTE MINIMIZATION

**3.1 Has a waste minimization assessment been completed for this stream?**

☐ Yes ☒ No

If yes, provide date assessment conducted: N/A

If yes, provide document number or other identification:

N/A

If no, provide date assessment will be completed, or if waste stream is no longer generated, then indicate N/A:

No assessment planned at this time.

**3.2 Provide details of current and proposed methods for minimizing the generation of this stream (e.g., process changes to reduce or eliminate LDR waste, methods to reduce volume through segregation and avoidance of commingling, substitution of less-toxic materials):**

Facility operating procedures provide instructions on packaging and segregation of waste.

**3.3 Waste minimization schedule**

**3.3.1 Reduction achieved during calendar year 2003 (volume or mass)**

0.000 m3

**3.3.2 Projected future waste volume reductions**

| Year | $m^3$ | and/or | kg |
|---|---|---|---|
| 2004 | 0.000 | | |
| 2005 | 0.000 | | |
| 2006 | 0.000 | | |
| 2007 | 0.000 | | |
| 2008 | 0.000 | | |
| Total | 0.000 | | |

**3.3.3 Bases and assumptions used in above estimates:**

N/A

# LDR REPORT WASTE LOCATION-SPECIFIC DATA SHEET

## 1.0 WASTE STREAM IDENTIFICATION AND SOURCE

1.1 **Unit/Plant name:** 324 **Waste Stream:** O/C Hazardous Debris

**Treatabilitiy Group Name:** MLLW-04A - O/C Hazardous Debris

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 items from maintenance or clean-up activities.

1.3.2 **History of how and where the waste was/is generated:**

Waste generated from decontamination activities using organic solvent.

1.3.3 **Source of the regulated constituents:**

In the chemical product.

1.3.4 **Source of the information (e.g., analytical data, process knowledge, document number, etc.)**

Process knowledge.

1.3.5 **Additional notes:**

None.

## 2.0 WASTE STREAM STORAGE, INVENTORY, AND GENERATION INFORMATION

(NOTE: For waste in satellite accumulation areas and 90-day accumulation areas, skip to Section 2.6.)

2.1 **Current storage method**

☐ Container (pad) ☐ Container (covered) ☐ Container (retrievably buried)

☐ Tank ☐ DST ☐ SST

☐ Other (explain):

2.1.1 **How was the waste managed prior to storage?**

N/A

2.1.2 **Timeframe when waste was placed to storage?**

N/A

2.2 **Storage inventory locations:**

| Building/Room Number | Number of Containers/Tanks |
|---|---|
| N/A | N/A |

# LDR REPORT WASTE LOCATION-SPECIFIC DATA SHEET

**2.3 Current stored inventory for this stream.**

Total volume (cubic meters): 0.000

Date of inventory values: 12/31/2003

Comments on waste inventory:

Waste is accumulated in SAA.

**2.4 Is storage capacity at this location potentially an issne for this waste stream?**

☐ Yes ☒ No

If yes, what is the total estimated storage capacity? N/A

When is this capacity expected to be reached? N/A

Bases and assumptions used:

**2.5 Planned storage areas for this waste:**

☐ Current Location ☒ CWC ☐ DST

☐ Other Area(s) (list):

☐ None

**2.6 Estimated generation projection by calendar year (includes waste in satellite and 90-day accumulation areas):**

| Year | $m^3$ | and/or | kg |
|---|---|---|---|
| 2004 | 0.400 | | |
| 2005 | 0.800 | | |
| 2006 | 0.600 | | |
| 2007 | 2.000 | | |
| 2008 | 1.400 | | |
| Total | 5.200 | | |

**2.7 DOE Storage Compliance Assessment information:**

☐ Assessment has been completed.

| Document Number | Date |
|---|---|
| | |

☐ Assessment has been scheduled. Scheduled date:

☒ 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 |

# LDR REPORT WASTE LOCATION-SPECIFIC DATA SHEET

**2.9 Has there ever been any non-permitted, unauthorized release of this waste stream from this storage unit to the environment?**

☐ Yes ☒ No

If yes, summarize releases and quantities and provide date:

N/A

**2.10 Are there any plans to submit requests for variances or other exemptions related to storage?**

☐ Yes ☒ No

If yes, explain: N/A

**2.11 Characterization**

**2.11.1 Is further characterization needed about the waste prior to acceptance for storage?**

☐ Yes ☒ No ☐ Unknown at this time

| Milestone Number | Due Date |
|---|---|
| N/A | N/A |

If yes or unknown, comment on characterization for storage.

N/A

**2.11.2 Is further characterization needed about the waste prior to acceptance for treatment?**

☐ Yes ☒ No ☐ Unknown at this time

| Milestone Number | Due Date |
|---|---|
| N/A | N/A |

If yes or unknown, comment on characterization for treatment.

N/A

**2.11.3 Is further characterization needed about the waste prior to acceptance for disposal?**

☐ Yes ☒ No ☐ Unknown at this time

| Milestone Number | Due Date |
|---|---|
| N/A | N/A |

If yes or unknown, comment on characterization for disposal.

N/A

**2.12 Other key assumptions related to storage, inventory, and generation information:**

None.

# LDR REPORT WASTE LOCATION-SPECIFIC DATA SHEET

## 3.0 WASTE MINIMIZATION

**3.1 Has a waste minimization assessment been completed for this stream?**

☐ Yes ☒ No

If yes, provide date assessment conducted: N/A

If yes, provide document number or other identification:

N/A

If no, provide date assessment will be completed, or if waste stream is no longer generated, then indicate N/A:

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 achieved by chemical reduction, waste segregation, and less hazardous chemical substitution.

**3.3 Waste minimization schedule**

**3.3.1 Reduction achieved during calendar year 2003 (volume or mass)**

0.000 m3

**3.3.2 Projected future waste volume reductions**

| Year | $m^3$ | and/or | kg |
|---|---|---|---|
| 2004 | 0.000 | | |
| 2005 | 0.000 | | |
| 2006 | 0.000 | | |
| 2007 | 0.000 | | |
| 2008 | 0.000 | | |
| Total | 0.000 | | |

**3.3.3 Bases and assumptions used in above estimates:**

Facility deactivation and surveillance /maintenance planning.

# LDR REPORT WASTE LOCATION-SPECIFIC DATA SHEET

## 1.0 WASTE STREAM IDENTIFICATION AND SOURCE

1.1 **Unit/Plant name:** CWC **Waste Stream:** O/C Hazardous Debris

**Treatabilitiy Group Name:** MLLW-04A - O/C Hazardous Debris

1.2 **Applicable profile number(s) for this waste stream:**

N/A

1.3 **Waste stream source information**

1.3.1 **General description of the waste (e.g., spill clean-up waste, discarded lab materials, maintenance waste):**

The waste consists of hazardous debris containing primarily organic debris material (e.g., paper, plastic, rubber, wood, cloth, tumbleweeds, etc.) that is contaminated with hazardous constituents. Some inorganic debris material (e.g., building rubble, metals, asbestos, etc.) would be present in the waste; however, the debris would be considered as organic/carbonaceous waste (as defined per WAC 173-303-040) on a per-container basis. Debris that is contaminated with PCBs at concentrations greater than 50 ppm is not included in this waste.

1.3.2 **History of how and where the waste was/is generated:**

The waste was generated at many onsite locations and also by offsite generators.

1.3.3 **Source of the regulated constituents:**

See 1.3.1 and 1.3.2. Waste is debris contaminated with hazardous materials such as F, P, and U listed constituents, RCRA metals, corrosives, etc.

1.3.4 **Source of the information (e.g., analytical data, process knowledge, document number, etc.)**

Analytical data and process knowledge.

1.3.5 **Additional notes:**

None.

## 2.0 WASTE STREAM STORAGE, INVENTORY, AND GENERATION INFORMATION

(NOTE: For waste in satellite accumulation areas and 90-day accumulation areas, skip to Section 2.6.)

2.1 **Current storage method**

- ☐ Container (pad)
- ☒ Container (covered)
- ☐ Container (retrievably buried)
- ☐ Tank
- ☐ DST
- ☐ SST
- ☐ Other (explain):

2.1.1 **How was the waste managed prior to storage?**

Accumulated and packaged by waste generators prior to storage at CWC.

2.1.2 **Timeframe when waste was placed to storage?**

Waste storage in CWC began in 1988 and continues.

# LDR REPORT WASTE LOCATION-SPECIFIC DATA SHEET

**2.2 Storage inventory locations:**

| Building/Room Number | Number of Containers/Tanks |
|---|---|
| CWC | 701 |

**2.3 Current stored inventory for this stream.**

Total volume (cubic meters): 350.800

Date of inventory values: 12/30/2003

Comments on waste inventory:

Based on inventory residing at the CWC as reported in SWITS for WSRds: 600, 601, 603, 605, 606, 607, 621, 625, 626, 627, BLD, DBR, and H3D.

**2.4 Is storage capacity at this location potentially an issue for this waste stream?**

☐ Yes ☒ No

If yes, what is the total estimated storage capacity? N/A

When is this capacity expected to be reached? N/A

Bases and assumptions used:

No issues with CWC storage based on 20 year waste generation forecast.

**2.5 Planned storage areas for this waste:**

☒ Current Location ☒ CWC ☐ DST

☐ Other Area(s) (list):

☐ None

**2.6 Estimated generation projection by calendar year (includes waste in satellite and 90-day accumulation areas):**

| Year | $m^3$ | and/or | kg |
|---|---|---|---|
| 2004 | 0.000 | | |
| 2005 | 0.000 | | |
| 2006 | 0.000 | | |
| 2007 | 0.000 | | |
| 2008 | 0.000 | | |
| Total | 0.000 | | |

**2.7 DOE Storage Compliance Assessment information:**

☒ Assessment has been completed.

| Document Number | Date |
|---|---|
| A&E-SEC-02-001 | 01/21/2002 |

# LDR REPORT WASTE LOCATION-SPECIFIC DATA SHEET

☐ Assessment has been scheduled. Scheduled date:

☐ Other. Explain:

**2.8 Applicable Tri-Party Agreement milestones related to storage at this location:**

| Milestone Number | Due Date |
|---|---|
| M-020-12 | 10/31/1991 |

**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:

None planned - waste not generated at CWC.

**3.2 Provide details of current and proposed methods for minimizing the generation of this stream (e.g., process changes to reduce or eliminate LDR waste, methods to reduce volume through segregation and avoidance of commingling, substitution of less-toxic materials):**

These activities occur before the wastes are shipped to CWC. There are few opportunities to reduce waste volumes placed into storage.

**3.3 Waste minimization schedule**

**3.3.1 Reduction achieved during calendar year 2003 (volume or mass)**

0.000 m3

**3.3.2 Projected future waste volume reductions**

| Year | $m^3$ | and/or | kg |
|---|---|---|---|
| 2004 | 0.000 | | |
| 2005 | 0.000 | | |
| 2006 | 0.000 | | |
| 2007 | 0.000 | | |
| 2008 | 0.000 | | |
| Total | 0.000 | | |

**3.3.3 Bases and assumptions used in above estimates:**

There is no projected generation by CWC.

# LDR REPORT WASTE LOCATION-SPECIFIC DATA SHEET

## 1.0 WASTE STREAM IDENTIFICATION AND SOURCE

**1.1 Unit/Plant name:** LLBG **Waste Stream:** MLLW Retrieval Debris

**Treatabilitiy Group Name:** MLLW-04A - O/C Hazardous Debris

**1.2 Applicable profile number(s) for this waste stream:**

SWPO-627-0001-00

**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):**

The waste consists of hazardous debris containing primarily organic debris material (e.g., paper, plastic, rubber, wood, cloth, tumbleweeds, etc.) that is contaminated with hazardous constituents. Some inorganic debris material (e.g., building rubble, metals, asbestos, etc.) would be present in the waste; however, the debris would be considered as organic/carbonaceous waste (as defined per WAC 173-303-040) on a per-container basis. Debris that is contaminated with PCBs at concentrations greater than 50 ppm is not included in this waste. In addition, plywood, tarps, PPE, and soil contaminated by breached containers being retrieved from the covered TRUM retrieval project. It is assumed that breached containers hold material that would be regulated as hazardous waste under today's regulations.

**1.3.2 History of how and where the waste was/is generated:**

The waste was generated at many onsite locations and also by offsite generators. In addition, incidental waste from TRU retrieval has not been generated yet, this waste is forecasted to be generated starting in mid FY04.

**1.3.3 Source of the regulated constituents:**

See 1.3.1, 1.3.2 and 1.3.5. Hazardous materials could potentially be commingled with suspect-TRUM waste. Hazardous constituents were not regulated at the time of disposal but are expected to be present.

**1.3.4 Source of the information (e.g., analytical data, process knowledge, document number, etc.)**

Process knowledge, analytical data.

**1.3.5 Additional notes:**

Per Settlement Agreement (draft TPA Milestone M-91-03-01) between DOE-RL and the Washington State Department of Ecology the entire waste stream is suspected of being mixed waste.

## 2.0 WASTE STREAM STORAGE, INVENTORY, AND GENERATION INFORMATION

(NOTE: For waste in satellite accumulation areas and 90-day accumulation areas, skip to Section 2.6.)

**2.1 Current storage method**

☐ Container (pad) ☐ Container (covered) ☐ Container (retrievably buried)

☐ Tank ☐ DST ☐ SST

☐ Other (explain):

# LDR REPORT WASTE LOCATION-SPECIFIC DATA SHEET

**2.1.1 How was the waste managed prior to storage?**

N/A

**2.1.2 Timeframe when waste was placed to storage?**

N/A

**2.2 Storage inventory locations:**

| Building/Room Number | Number of Containers/Tanks |
|---|---|
| N/A | N/A |

**2.3 Current stored inventory for this stream.**

Total volume (cubic meters): 0.000

Date of inventory values: 12/30/2003

Comments on waste inventory:

Waste has not been generated yet. Waste generation is based on SWIFT forecast.

**2.4 Is storage capacity at this location potentially an issue for this waste stream?**

☐ Yes ☒ No

If yes, what is the total estimated storage capacity? N/A

When is this capacity expected to be reached? N/A

Bases and assumptions used:

**2.5 Planned storage areas for this waste:**

☐ Current Location ☒ CWC ☐ DST

☐ Other Area(s) (list):

☐ None

**2.6 Estimated generation projection by calendar year (includes waste in satellite and 90-day accumulation areas):**

| Year | $m^3$ | and/or | kg |
|---|---|---|---|
| 2004 | 321.000 | | |
| 2005 | 521.000 | | |
| 2006 | 626.000 | | |
| 2007 | 777.000 | | |
| 2008 | 1,277.000 | | |
| Total | 3,522.000 | | |

# LDR REPORT WASTE LOCATION-SPECIFIC DATA SHEET

**2.7 DOE Storage Compliance Assessment information:**

☒ Assessment has been completed.

| Document Number | Date |
|---|---|
| A&E-SEC-02-003 | 03/28/2002 |

☐ Assessment has been scheduled. Scheduled date:

☐ Other. Explain:

## 2.8 Applicable Tri-Party Agreement milestones related to storage at this location:

| Milestone Number | Due Date |
|---|---|
| N/A | N/A |

**2.9 Has there ever been any non-permitted, unauthorized release of this waste stream from this storage unit to the environment?**

☐ Yes ☒ No

If yes, summarize releases and quantities and provide date:

N/A

**2.10 Are there any plans to submit requests for variances or other exemptions related to storage?**

☐ Yes ☒ No

If yes, explain: N/A

**2.11 Characterization**

**2.11.1 Is further characterization needed about the waste prior to acceptance for storage?**

☐ Yes ☐ No ☒ Unknown at this time

| Milestone Number | Due Date |
|---|---|
| N/A | N/A |

If yes or unknown, comment on characterization for storage.

As part of waste generation and transferring the MLLW to storage, further characterization could be necessary.

**2.11.2 Is further characterization needed about the waste prior to acceptance for treatment?**

☐ Yes ☐ No ☒ Unknown at this time

| Milestone Number | Due Date |
|---|---|
| N/A | N/A |

If yes or unknown, comment on characterization for treatment.

# LDR REPORT WASTE LOCATION-SPECIFIC DATA SHEET

If information is not sufficient to ensure waste meets the treatment facilities acceptance criteria, further characterization may be necessary

**2.11.3 Is further characterization needed about the waste prior to acceptance for disposal?**

☒ Yes ☐ No ☐ Unknown at this time

| Milestone Number | Due Date |
|---|---|
| N/A | N/A |

If yes or unknown, comment on characterization for disposal.

To meet concentration based treatments standards applicable for the residues, sampling will be required after treatment if the residues are MLLW.

**2.12 Other key assumptions related to storage, inventory, and generation information:**

## 3.0 WASTE MINIMIZATION

**3.1 Has a waste minimization assessment been completed for this stream?**

☐ Yes ☒ No

If yes, provide date assessment conducted: N/A

If yes, provide document number or other identification:

N/A

If no, provide date assessment will be completed, or if waste stream is no longer generated, then indicate N/A:

None planned. Waste has either already been generated or will be minimized as described in 3.2

**3.2 Provide details of current and proposed methods for minimizing the generation of this stream (e.g., process changes to reduce or eliminate LDR waste, methods to reduce volume through segregation and avoidance of commingling, substitution of less-toxic materials):**

Ability to reduce the volume of waste is limited, since waste has either already been generated or will be encountered during suspect-TRUM retrieval activities and identified when radiological contamination is found. Thorough document review and visual observation of waste contaminants contributing to waste stream could lead to portions of waste stream being not regulated as hazardous waste (low-level only).

**3.3 Waste minimization schedule**

**3.3.1 Reduction achieved during calendar year 2003 (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 |
|---|---|---|---|
| 2004 | 0.000 | | |
| 2005 | 0.000 | | |
| 2006 | 0.000 | | |
| 2007 | 0.000 | | |
| 2008 | 0.000 | | |
| Total | 0.000 | | |

**3.3.3 Bases and assumptions used in above estimates:**

None.

# LDR REPORT WASTE LOCATION-SPECIFIC DATA SHEET

## 1.0 WASTE STREAM IDENTIFICATION AND SOURCE

1.1 **Unit/Plant name:** PFP **Waste Stream:** Operations and D&D Waste O/C Hazardous Debris

**Treatability Group Name:** MLLW-04A - O/C Hazardous Debris

1.2 **Applicable profile number(s) for this waste stream:**

PFPX-627-0001, PFPX-627-0002, PFPX-627-0003, PFPX-627-0004.

1.3 **Waste stream source information**

1.3.1 **General description of the waste (e.g., spill clean-up waste, discarded lab materials, maintenance waste):**

Operations and D&D waste.

1.3.2 **History of how and where the waste was/is generated:**

Waste generated from routine facility operations and D&D activities.

1.3.3 **Source of the regulated constituents:**

Materials/debris contaminated with hazardous constituents from operations, construction and D&D activities.

1.3.4 **Source of the information (e.g., analytical data, process knowledge, document number, etc.)**

Analytical data, process knowledge

1.3.5 **Additional notes:**

None.

## 2.0 WASTE STREAM STORAGE, INVENTORY, AND GENERATION INFORMATION

(NOTE: For waste in satellite accumulation areas and 90-day accumulation areas, skip to Section 2.6.)

2.1 **Current storage method**

☐ Container (pad) ☐ Container (covered) ☐ Container (retrievably buried)

☐ Tank ☐ DST ☐ SST

☐ Other (explain):

2.1.1 **How was the waste managed prior to storage?**

N/A

2.1.2 **Timeframe when waste was placed to storage?**

N/A

2.2 **Storage inventory locations:**

| Building/Room Number | Number of Containers/Tanks |
|---|---|
| N/A | N/A |

# LDR REPORT WASTE LOCATION-SPECIFIC DATA SHEET

**2.3 Current stored inventory for this stream.**

Total volume (cubic meters): 0.000

Date of inventory values: 12/31/2003

Comments on waste inventory:

Waste is placed directly into satellite accumulation area upon generation.

**2.4 Is storage capacity at this location potentially an issue for this waste stream?**

☐ Yes ☒ No

If yes, what is the total estimated storage capacity? N/A

When is this capacity expected to be reached? N/A

Bases and assumptions used:

None.

**2.5 Planned storage areas for this waste:**

☐ Current Location ☒ CWC ☐ DST

☐ Other Area(s) (list):

☐ None

**2.6 Estimated generation projection by calendar year (includes waste in satellite and 90-day accumulation areas):**

| Year | $m^3$ | and/or | kg |
|---|---|---|---|
| 2004 | 1.300 | | |
| 2005 | 2.600 | | |
| 2006 | 1.300 | | |
| 2007 | 0.900 | | |
| 2008 | 0.080 | | |
| Total | 6.180 | | |

**2.7 DOE Storage Compliance Assessment information:**

☒ Assessment has been completed.

| Document Number | Date |
|---|---|
| PFP Env. Compliance Assess.; Ltr. #01-A&E-129 | 09/13/2001 |

☐ Assessment has been scheduled. Scheduled date:

☐ Other. Explain:

# LDR REPORT WASTE LOCATION-SPECIFIC DATA SHEET

**2.8 Applicable Tri-Party Agreement milestones related to storage at this location:**

| Milestone Number | Due Date |
|---|---|
| N/A | N/A |

**2.9 Has there ever been any non-permitted, unauthorized release of this waste stream from this storage unit to the environment?**

☐ Yes ☒ No

If yes, summarize releases and quantities and provide date:

N/A

**2.10 Are there any plans to submit requests for variances or other exemptions related to storage?**

☐ Yes ☒ No

If yes, explain: N/A

**2.11 Characterization**

**2.11.1 Is further characterization needed about the waste prior to acceptance for storage?**

☒ Yes ☐ No ☐ Unknown at this time

| Milestone Number | Due Date |
|---|---|
| N/A | N/A |

If yes or unknown, comment on characterization for storage.

Will be characterized before transfer to CWC. No commitment is necessary for the characterization needs on this MLLW.

**2.11.2 Is further characterization needed about the waste prior to acceptance for treatment?**

☐ Yes ☒ No ☐ Unknown at this time

| Milestone Number | Due Date |
|---|---|
| N/A | N/A |

If yes or unknown, comment on characterization for treatment.

N/A

**2.11.3 Is further characterization needed about the waste prior to acceptance for disposal?**

☐ Yes ☒ No ☐ Unknown at this time

| Milestone Number | Due Date |
|---|---|
| N/A | N/A |

If yes or unknown, comment on characterization for disposal.

N/A

# LDR REPORT WASTE LOCATION-SPECIFIC DATA SHEET

**2.12 Other key assumptions related to storage, inventory, and generation information:**

None.

## 3.0 WASTE MINIMIZATION

**3.1 Has a waste minimization assessment been completed for this stream?**

☒ Yes ☐ No

If yes, provide date assessment conducted: CY 2001

If yes, provide document number or other identification:

PFP 2001 Waste Minimization Evaluation for LDR Report Waste Streams, Letter# M2100-02-016

If no, provide date assessment will be completed, or if waste stream is no longer generated, then indicate N/A:

**3.2 Provide details of current and proposed methods for minimizing the generation of this stream (e.g., process changes to reduce or eliminate LDR waste, methods to reduce volume through segregation and avoidance of commingling, substitution of less-toxic materials):**

PFP has a waste minimization program. A hierarchical approach to environmental management is applied to all types of pollution and waste generating activities. Pollution prevention and waste minimization, through source reduction, is the preferred option, followed by environmentally safe recycling. Treatment to reduce the quantity, toxicity, and/or mobility will be considered only when prevention or recycling is not possible or practical. Environmentally safe disposal is the last option. Segregation is applicable in all of these activities.

**3.3 Waste minimization schedule**

**3.3.1 Reduction achieved during calendar year 2003 (volume or mass)**

0.000 m3

**3.3.2 Projected future waste volume reductions**

| Year | $m^3$ | and/or | kg |
|---|---|---|---|
| 2004 | 0.000 | | |
| 2005 | 0.000 | | |
| 2006 | 0.000 | | |
| 2007 | 0.000 | | |
| 2008 | 0.000 | | |
| Total | 0.000 | | |

**3.3.3 Bases and assumptions used in above estimates:**

# LDR REPORT WASTE LOCATION-SPECIFIC DATA SHEET

## 1.0 WASTE STREAM IDENTIFICATION AND SOURCE

1.1 **Unit/Plant name:** T Plant Complex **Waste Stream:** O/C Hazardous Debris

**Treatabilitiy Group Name:** MLLW-04A - O/C Hazardous Debris

1.2 **Applicable profile number(s) for this waste stream:**

WSRD: 601, 60A, 606, 626, 627.

1.3 **Waste stream source information**

1.3.1 **General description of the waste (e.g., spill clean-up waste, discarded lab materials, maintenance waste):**

Organic debris generated as a result of 221-T Canyon cleanout (e.g., plastic, rubber, wood, paper, cloth, etc.), maintenance, and operational activities. In addition, this waste is generated from various onsite and offsite generators in which their waste is sent to the T Plant Complex for waste verification/storage/treatment.

1.3.2 **History of how and where the waste was/is generated:**

Waste generated as part of cleanup activities, maintenance, operations, and from various onsite locations and offsite generators. See discussion in Section 1.3.1.

1.3.3 **Source of the regulated constituents:**

See 1.3.1 and 1.3.2.

1.3.4 **Source of the information (e.g., analytical data, process knowledge, document number, etc.)**

Analytical data and process knowledge.

1.3.5 **Additional notes:**

None.

## 2.0 WASTE STREAM STORAGE, INVENTORY, AND GENERATION INFORMATION

(NOTE: For waste in satellite accumulation areas and 90-day accumulation areas, skip to Section 2.6.)

2.1 **Current storage method**

☒ Container (pad) ☒ Container (covered) ☐ Container (retrievably buried)

☐ Tank ☐ DST ☐ SST

☐ Other (explain):

2.1.1 **How was the waste managed prior to storage?**

Generated from various onsite locations and offsite generators. Generated as part of routine maintenance, operation and cell cleanout/canyon deck cleanoff.

2.1.2 **Timeframe when waste was placed to storage?**

1994 to present.

# LDR REPORT WASTE LOCATION-SPECIFIC DATA SHEET

**2.2 Storage inventory locations:**

| Building/Room Number | Number of Containers/Tanks |
|---|---|
| T Plant Complex | 25 |

**2.3 Current stored inventory for this stream.**

Total volume (cubic meters): 23.840

Date of inventory values: 12/31/2003

Comments on waste inventory:

Inventory will fluctuate as T Plant Complex generates or performs treatment/verification on onsite/offsite generators.

**2.4 Is storage capacity at this location potentially an issue for this waste stream?**

☐ Yes ☒ No

If yes, what is the total estimated storage capacity? N/A

When is this capacity expected to be reached? N/A

Bases and assumptions used:

N/A

**2.5 Planned storage areas for this waste:**

☒ Current Location ☒ CWC ☐ DST

☐ Other Area(s) (list): N/A

☐ None

**2.6 Estimated generation projection by calendar year (includes waste in satellite and 90-day accumulation areas):**

| Year | $m^3$ | and/or | kg |
|---|---|---|---|
| 2004 | 3.200 | | |
| 2005 | 3.200 | | |
| 2006 | 3.200 | | |
| 2007 | 3.200 | | |
| 2008 | 3.200 | | |
| Total | 16.000 | | |

**2.7 DOE Storage Compliance Assessment information:**

☒ Assessment has been completed.

| Document Number | Date |
|---|---|
| 01-A&E-012 | 11/28/2000 |

# LDR REPORT WASTE LOCATION-SPECIFIC DATA SHEET

☒ Assessment has been scheduled. Scheduled date: 3rd quarter CY2005.

☐ Other. Explain: 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: Not aware of any variances.

**2.11 Characterization**

**2.11.1 Is further characterization needed about the waste prior to acceptance for storage?**

☐ Yes ☒ No ☐ Unknown at this time

| Milestone Number | Due Date |
|---|---|
| N/A | N/A |

If yes or unknown, comment on characterization for storage.

N/A

**2.11.2 Is further characterization needed about the waste prior to acceptance for treatment?**

☐ Yes ☒ No ☐ Unknown at this time

| Milestone Number | Due Date |
|---|---|
| N/A | N/A |

If yes or unknown, comment on characterization for treatment.

N/A

**2.11.3 Is further characterization needed about the waste prior to acceptance for disposal?**

☐ Yes ☒ No ☐ Unknown at this time

| Milestone Number | Due Date |
|---|---|
| N/A | N/A |

# LDR REPORT WASTE LOCATION-SPECIFIC DATA SHEET

If yes or unknown, comment on characterization for disposal.

N/A

**2.12 Other key assumptions related to storage, inventory, and generation information:**

None.

## 3.0 WASTE MINIMIZATION

**3.1 Has a waste minimization assessment been completed for this stream?**

☐ Yes ☒ No

If yes, provide date assessment conducted:

If yes, provide document number or other identification:

N/A

If no, provide date assessment will be completed, or if waste stream is no longer generated, then indicate N/A:

See Section 3.3.3 for discussion on waste minimization.

**3.2 Provide details of current and proposed methods for minimizing the generation of this stream (e.g., process changes to reduce or eliminate LDR waste, methods to reduce volume through segregation and avoidance of commingling, substitution of less-toxic materials):**

Waste minimization is and will continue to be incorporated to the extent practical during canyon deck cleanoff, cell cleanout as well as from other activities. Attempts will be made to segregate low-level from mixed and from TRU.

**3.3 Waste minimization schedule**

**3.3.1 Reduction achieved during calendar year 2003 (volume or mass)**

0.000 m3

**3.3.2 Projected future waste volume reductions**

| Year | $m^3$ | and/or | kg |
|---|---|---|---|
| 2004 | 0.000 | | |
| 2005 | 0.000 | | |
| 2006 | 0.000 | | |
| 2007 | 0.000 | | |
| 2008 | 0.000 | | |
| Total | 0.000 | | |

**3.3.3 Bases and assumptions used in above estimates:**

The T Plant Complex has submitted a P2/Wmin fiscal year 2004 goal to reduce, where possible, mixed waste generation. For FY 2004 to 2008, new goals will be evaluated and identified on a year-by-year basis. The T Plant Complex does not track waste reduction by treatability groups. Routine and non-routine generated waste is reported quarterly to the Waste Minimization/Pollution Prevention Group.

# LDR REPORT WASTE LOCATION-SPECIFIC DATA SHEET

## 1.0 WASTE STREAM IDENTIFICATION AND SOURCE

1.1 **Unit/Plant name:** Tank Farm Facilities **Waste Stream:** O/C Hazardous Debris

**Treatabilitiy Group Name:** MLLW-04A - O/C Hazardous Debris

1.2 **Applicable profile number(s) for this waste stream:**

607, 627-03.

1.3 **Waste stream source information**

1.3.1 **General description of the waste (e.g., spill clean-up waste, discarded lab materials, maintenance waste):**

Organic debris containing regulated material products (paints and paint related products) and/or organic debris which has contacted tank waste. This waste consists of plastic (sheeting, containment tents, glove bags), rubber, cloth (rags and PPE), filters, paper, wood, concrete and other organic hazardous debris. The waste matrix may include small amount of inorganic debris such as metals. The containers may also include shielding material such as rubber or lead when necessary.

1.3.2 **History of how and where the waste was/is generated:**

Waste is generated at DST and SST tank farms and associated facilities. It can be generated by some of the following activities: sampling (core sampling, grab sampling), maintenance, surveillance, clean up and upgrades/construction, tank stabilization and tank waste transfers.

1.3.3 **Source of the regulated constituents:**

Debris from tank farms is considered mixed waste when it contains (as described by RCRA "contained-in policy" provisions) tank waste. Debris may also be hazardous due to regulated chemical products.

1.3.4 **Source of the information (e.g., analytical data, process knowledge, document number, etc.)**

MSDS, process knowledge and analytical data. The document "Tank Farms Solid Waste Characterization Guide with Sampling and Analysis Attachment", HNF-SD-WM-PLN-119, Rev.1, describes the basis for historical and process knowledge used for designation.

1.3.5 **Additional notes:**

None.

## 2.0 WASTE STREAM STORAGE, INVENTORY, AND GENERATION INFORMATION

(NOTE: For waste in satellite accumulation areas and 90-day accumulation areas, skip to Section 2.6.)

2.1 **Current storage method**

☐ Container (pad) ☐ Container (covered) ☐ Container (retrievably buried)

☐ Tank ☐ DST ☐ SST

☐ Other (explain):

2.1.1 **How was the waste managed prior to storage?**

N/A

# LDR REPORT WASTE LOCATION-SPECIFIC DATA SHEET

**2.1.2 Timeframe when waste was placed to storage?**

N/A

**2.2 Storage inventory locations:**

| Building/Room Number | Number of Containers/Tanks |
|---|---|
| N/A | N/A |

**2.3 Current stored inventory for this stream.**

Total volume (cubic meters): 0.000

Date of inventory values: 12/31/2003

Comments on waste inventory:

Managed in SAA or 90 day accumulation areas.

**2.4 Is storage capacity at this location potentially an issue for this waste stream?**

Yes No

If yes, what is the total estimated storage capacity?

When is this capacity expected to be reached?

Bases and assumptions used:

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 |
|---|---|---|---|
| 2004 | 60.847 | | |
| 2005 | 66.928 | | |
| 2006 | 73.621 | | |
| 2007 | 80.983 | | |
| 2008 | 89.082 | | |
| Total | 371.461 | | |

**2.7 DOE Storage Compliance Assessment information:**

☐ Assessment has been completed.

| Document Number | Date |
|---|---|
| | |

# LDR REPORT WASTE LOCATION-SPECIFIC DATA SHEET

☐ Assessment has been scheduled. Scheduled date: N/A

☒ 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.

N/A

**2.11.2 Is further characterization needed about the waste prior to acceptance for treatment?**

☐ Yes ☒ No ☐ Unknown at this time

| Milestone Number | Due Date |
|---|---|
| N/A | N/A |

If yes or unknown, comment on characterization for treatment.

N/A

**2.11.3 Is further characterization needed about the waste prior to acceptance for disposal?**

☐ Yes ☒ No ☐ Unknown at this time

| Milestone Number | Due Date |
|---|---|
| N/A | N/A |

# LDR REPORT WASTE LOCATION-SPECIFIC DATA SHEET

If yes or unknown, comment on characterization for disposal.

N/A

**2.12 Other key assumptions related to storage, inventory, and generation information:**

None.

## 3.0 WASTE MINIMIZATION

**3.1 Has a waste minimization assessment been completed for this stream?**

☐ Yes ☒ No

If yes, provide date assessment conducted: N/A

If yes, provide document number or other identification:

N/A

If no, provide date assessment will be completed, or if waste stream is no longer generated, then indicate N/A:

Unknown at this time.

**3.2 Provide details of current and proposed methods for minimizing the generation of this stream (e.g., process changes to reduce or eliminate LDR waste, methods to reduce volume through segregation and avoidance of commingling, substitution of less-toxic materials):**

1) Segregation of LLW from mixed waste; 2) Minimize the use of regulated products; 3) Encourage the use non-regulated products; 4) Minimize the volume of regulated chemicals used in Rad. Zone; and 5) Release items by sampling and analysis.

**3.3 Waste minimization schedule**

**3.3.1 Reduction achieved during calendar year 2003 (volume or mass)**

0.280 m3

**3.3.2 Projected future waste volume reductions**

| Year | $m^3$ | and/or | kg |
|---|---|---|---|
| 2004 | 71.500 | | |
| 2005 | 59.750 | | |
| 2006 | 64.500 | | |
| 2007 | 62.750 | | |
| 2008 | 53.000 | | |
| Total | 311.500 | | |

**3.3.3 Bases and assumptions used in above estimates:**

The site goal is 10% of forecasted volumes. At this time, construction and upgrade activities are being performed for preparation of feed delivery to the waste treatment plant. No waste reduction is expected.

# LDR REPORT WASTE LOCATION-SPECIFIC DATA SHEET

## 1.0 WASTE STREAM IDENTIFICATION AND SOURCE

**1.1 Unit/Plant name:** Well Maintenance Debris **Waste Stream:** O/C Hazardous Debris Well Debris

**Treatabilitiy Group Name:** MLLW-04A - O/C Hazardous Debris

**1.2 Applicable profile number(s) for this waste stream:**

To be developed.

**1.3 Waste stream source information**

**1.3.1 General description of the waste (e.g., spill clean-up waste, discarded lab materials, maintenance waste):**

Miscellaneous Solid Waste (MSW) from groundwater well maintenance, sampling, analyses, drilling, and decommissioning activities includes glass, plastic, rubber, concrete, paper, and metal including pipe and pumps. This waste stream accounts for MSW generated from groundwater well activities across the site.

**1.3.2 History of how and where the waste was/is generated:**

Waste is generated during routine maintenance, sampling, drilling, and decommissioning of the groundwater wells across the Hanford Site.

**1.3.3 Source of the regulated constituents:**

Hazardous constituents were discharged to the soil during past Hanford Site operations.

**1.3.4 Source of the information (e.g., analytical data, process knowledge, document number, etc.)**

Analytical data and process knowledge.

**1.3.5 Additional notes:**

This waste stream accounts for groundwater well waste generated across the Hanford Site.

## 2.0 WASTE STREAM STORAGE, INVENTORY, AND GENERATION INFORMATION

(NOTE: For waste in satellite accumulation areas and 90-day accumulation areas, skip to Section 2.6.)

**2.1 Current storage method**

☐ Container (pad) ☐ Container (covered) ☐ Container (retrievably buried)

☐ Tank ☐ DST ☐ SST

☐ Other (explain): N/A

**2.1.1 How was the waste managed prior to storage?**

N/A

**2.1.2 Timeframe when waste was placed to storage?**

N/A

# LDR REPORT WASTE LOCATION-SPECIFIC DATA SHEET

**2.2 Storage inventory locations:**

| Building/Room Number | Number of Containers/Tanks |
|---|---|
| N/A | N/A |

**2.3 Current stored inventory for this stream.**

Total volume (cubic meters): 0.000

Date of inventory values: 12/31/2003

Comments on waste inventory:

Waste is managed in a SAA and 90-day accumulation area before transfer to CWC.

**2.4 Is storage capacity at this location potentially an issue for this waste stream?**

Yes No

If yes, what is the total estimated storage capacity?

When is this capacity expected to be reached?

Bases and assumptions used:

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 |
|---|---|---|---|
| 2004 | 5.000 | | |
| 2005 | 5.000 | | |
| 2006 | 5.000 | | |
| 2007 | 5.000 | | |
| 2008 | 5.000 | | |
| Total | 25.000 | | |

**2.7 DOE Storage Compliance Assessment information:**

☐ Assessment has been completed.

| Document Number | Date |
|---|---|
| | |

☐ Assessment has been scheduled. Scheduled date:

☒ Other. Explain: N/A

# 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.

Characterization is performed before placing the waste in storage.

**2.11.2 Is further characterization needed about the waste prior to acceptance for treatment?**

☐ Yes ☒ No ☐ Unknown at this time

| Milestone Number | Due Date |
|---|---|
| N/A | N/A |

If yes or unknown, comment on characterization for treatment.

N/A

**2.11.3 Is further characterization needed about the waste prior to acceptance for disposal?**

☐ Yes ☒ No ☐ Unknown at this time

| Milestone Number | Due Date |
|---|---|
| N/A | N/A |

If yes or unknown, comment on characterization for disposal.

N/A

# LDR REPORT WASTE LOCATION-SPECIFIC DATA SHEET

**2.12 Other key assumptions related to storage, inventory, and generation information:**

None.

## 3.0 WASTE MINIMIZATION

**3.1 Has a waste minimization assessment been completed for this stream?**

☐ Yes ☒ No

If yes, provide date assessment conducted: N/A

If yes, provide document number or other identification:

N/A

If no, provide date assessment will be completed, or if waste stream is no longer generated, then indicate N/A:

N/A

**3.2 Provide details of current and proposed methods for minimizing the generation of this stream (e.g., process changes to reduce or eliminate LDR waste, methods to reduce volume through segregation and avoidance of commingling, substitution of less-toxic materials):**

If purgewater generated during sampling is eliminated (see Location Specific Data Sheet for the Purgewater Storage and Treatment Facility), then the volume of MSW generated would be reduced. "Contained-in" determinations are being pursued with Ecology to eliminate listed waste codes where appropriate, which could result in reducing the volume of mixed waste.

**3.3 Waste minimization schedule**

**3.3.1 Reduction achieved during calendar year 2003 (volume or mass)**

0.000 m3

**3.3.2 Projected future waste volume reductions**

| Year | $m^3$ | and/or | kg |
|---|---|---|---|
| 2004 | 0.000 | | |
| 2005 | 0.000 | | |
| 2006 | 0.000 | | |
| 2007 | 0.000 | | |
| 2008 | 0.000 | | |
| Total | 0.000 | | |

**3.3.3 Bases and assumptions used in above estimates:**

None.

# LDR REPORT WASTE LOCATION-SPECIFIC DATA SHEET

## 1.0 WASTE STREAM IDENTIFICATION AND SOURCE

1.1 **Unit/Plant name:** WRAP **Waste Stream:** O/C Hazardous Debris

**Treatabilitiy Group Name:** MLLW-04A - O/C Hazardous Debris

1.2 **Applicable profile number(s) for this waste stream:**

WSRds 625 and 627.

1.3 **Waste stream source information**

1.3.1 **General description of the waste (e.g., spill clean-up waste, discarded lab materials, maintenance waste):**

The waste consists of hazardous debris containing primarily organic debris material (e.g., paper plastic, rubber, wood, cloth, tumbleweeds, etc.). Some inorganic debris material (e.g., building rubble, metals, asbestos, etc.) would be present in the waste; however, the debris would be considered as organic/carbonaceous waste (as defined per WAC 173-303-040) on a per-container basis. Debris that is contaminated with PCBs at concentrations greater than 50 ppm is not included in this waste.

1.3.2 **History of how and where the waste was/is generated:**

The waste was generated at many onsite locations and also by offsite generators.

1.3.3 **Source of the regulated constituents:**

Hazardous constituents most likely entered the waste as chemicals used during analytical processes and operating activities. See 1.3.1 and 1.3.2.

1.3.4 **Source of the information (e.g., analytical data, process knowledge, document number, etc.)**

Analytical data, process knowledge.

1.3.5 **Additional notes:**

Waste at WRAP comes from various generators and generating processes around the Hanford Site due to WRAP's verification and repackaging mission.

## 2.0 WASTE STREAM STORAGE, INVENTORY, AND GENERATION INFORMATION

(NOTE: For waste in satellite accumulation areas and 90-day accumulation areas, skip to Section 2.6.)

2.1 **Current storage method**

☐ Container (pad) ☒ Container (covered) ☐ Container (retrievably buried)

☐ Tank ☐ DST ☐ SST

☐ Other (explain):

2.1.1 **How was the waste managed prior to storage?**

Waste was generated and packaged at various locations around the Hanford Site or by offsite generators.

2.1.2 **Timeframe when waste was placed to storage?**

Most MLLW at WRAP is recently generated waste that is being verified as part of the waste acceptance process.

# LDR REPORT WASTE LOCATION-SPECIFIC DATA SHEET

**2.2 Storage inventory locations:**

| Building/Room Number | Number of Containers/Tanks |
|---|---|
| 2336W | 5 |

**2.3 Current stored inventory for this stream.**

Total volume (cubic meters): 1.000

Date of inventory values: 12/31/2003

Comments on waste inventory:

Inventory fluctuates daily to support WRAP's mission of waste verification. Inventory based on SWITS and the WRAP Data Management System (DMS) printouts dated 12/31/03.

**2.4 Is storage capacity at this location potentially an issue for this waste stream?**

☐ Yes ☒ No

If yes, what is the total estimated storage capacity? N/A

When is this capacity expected to be reached? N/A

Bases and assumptions used:

Due to proximity to and interchange with CWC, there is no storage capacity issue at WRAP.

**2.5 Planned storage areas for this waste:**

☒ Current Location ☒ CWC ☐ DST

☐ Other Area(s) (list):

☐ None

**2.6 Estimated generation projection by calendar year (includes waste in satellite and 90-day accumulation areas):**

| Year | $m^3$ | and/or | kg |
|---|---|---|---|
| 2004 | 0.000 | | |
| 2005 | 0.000 | | |
| 2006 | 0.000 | | |
| 2007 | 0.000 | | |
| 2008 | 0.000 | | |
| Total | 0.000 | | |

**2.7 DOE Storage Compliance Assessment information:**

☒ Assessment has been completed.

| Document Number | Date |
|---|---|
| DE-AC06-96RL13200 | 09/26/2001 |

# LDR REPORT WASTE LOCATION-SPECIFIC DATA SHEET

☐ Assessment has been scheduled. Scheduled date:

☐ Other. Explain:

**2.8 Applicable Tri-Party Agreement milestones related to storage at this location:**

| Milestone Number | Due Date |
|---|---|
| N/A | N/A |

**2.9 Has there ever been any non-permitted, unauthorized release of this waste stream from this storage unit to the environment?**

☐ Yes ☒ No

If yes, summarize releases and quantities and provide date:

N/A

**2.10 Are there any plans to submit requests for variances or other exemptions related to storage?**

☐ Yes ☒ No

If yes, explain: N/A

**2.11 Characterization**

**2.11.1 Is further characterization needed about the waste prior to acceptance for storage?**

☐ Yes ☒ No ☐ Unknown at this time

| Milestone Number | Due Date |
|---|---|
| N/A | N/A |

If yes or unknown, comment on characterization for storage.

N/A

**2.11.2 Is further characterization needed about the waste prior to acceptance for treatment?**

☐ Yes ☒ No ☐ Unknown at this time

| Milestone Number | Due Date |
|---|---|
| N/A | N/A |

If yes or unknown, comment on characterization for treatment.

N/A

**2.11.3 Is further characterization needed about the waste prior to acceptance for disposal?**

☐ Yes ☒ No ☐ Unknown at this time

| Milestone Number | Due Date |
|---|---|
| N/A | N/A |

# LDR REPORT WASTE LOCATION-SPECIFIC DATA SHEET

If yes or unknown, comment on characterization for disposal.

N/A

**2.12 Other key assumptions related to storage, inventory, and generation information:**

None.

## 3.0 WASTE MINIMIZATION

**3.1 Has a waste minimization assessment been completed for this stream?**

☐ Yes ☒ No

If yes, provide date assessment conducted: N/A

If yes, provide document number or other identification:

N/A

If no, provide date assessment will be completed, or if waste stream is no longer generated, then indicate N/A:

None planned.

**3.2 Provide details of current and proposed methods for minimizing the generation of this stream (e.g., process changes to reduce or eliminate LDR waste, methods to reduce volume through segregation and avoidance of commingling, substitution of less-toxic materials):**

This is waste generated by other facilities. However, to the extent practical, all mixed waste is segregated and packaged separately from LLW or TRUM wastes. The volume of mixed waste is reduced by in-drum compaction when possible, and where it does not interfere with future treatment activities. To minimize the generation of mixed waste, generators actively seek nondangerous alternatives for the dangerous constituents in their processes. Minimization goals are set annually and tracked quarterly, and waste treatment is used to destroy the hazardous constituents, as allowable.

**3.3 Waste minimization schedule**

**3.3.1 Reduction achieved during calendar year 2003 (volume or mass)**

0.000 m3

**3.3.2 Projected future waste volume reductions**

| Year | $m^3$ | and/or | kg |
|---|---|---|---|
| 2004 | 0.000 | | |
| 2005 | 0.000 | | |
| 2006 | 0.000 | | |
| 2007 | 0.000 | | |
| 2008 | 0.000 | | |
| Total | 0.000 | | |

**3.3.3 Bases and assumptions used in above estimates:**

Since subject waste has already been generated and will be treated for direct disposal, no additional waste minimization activities are planned. WRAP does not generate this waste stream, rather is previously generated by various generating facilities.

# LDR REPORT WASTE LOCATION-SPECIFIC DATA SHEET

## 1.0 WASTE STREAM IDENTIFICATION AND SOURCE

1.1 **Unit/Plant name:** WSCF **Waste Stream:** O/C Hazardous Debris

**Treatabilitiy Group Name:** MLLW-04A - O/C Hazardous Debris

1.2 **Applicable profile number(s) for this waste stream:**

WSCF-921-0001-01

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):**

TEVA resins and F001-F005 listed solid debris is generated from discarded lab materials and analytical processes in the lab. Note, TEVA resins are a product name from Eichrom Technologies.

1.3.2 **History of how and where the waste was/is generated:**

The F001-F005 listed solid debris is generated as a result of handling samples that are F-listed. This waste stream consists of debris (e.g., PPE, paper towels, and plastic pipettes) that have been contacted with F-listed constituents.

1.3.3 **Source of the regulated constituents:**

The hazardous constituents are derived from sample contribution and or the addition of reagents and standards during the analytical process. The reagents and standards may be considered regulated constituents and contribute to the hazardous nature of the waste stream.

1.3.4 **Source of the information (e.g., analytical data, process knowledge, document number, etc.)**

Information to characterize these waste streams is obtained from process knowledge and analytical data.

1.3.5 **Additional notes:**

This waste is managed in a SAA and 90 day accumulation area. WSCF has no TSD unit.

## 2.0 WASTE STREAM STORAGE, INVENTORY, AND GENERATION INFORMATION

(NOTE: For waste in satellite accumulation areas and 90-day accumulation areas, skip to Section 2.6.)

2.1 **Current storage method**

☐ Container (pad) ☐ Container (covered) ☐ Container (retrievably buried)

☐ Tank ☐ DST ☐ SST

☐ Other (explain):

2.1.1 **How was the waste managed prior to storage?**

N/A

2.1.2 **Timeframe when waste was placed to storage?**

N/A

# LDR REPORT WASTE LOCATION-SPECIFIC DATA SHEET

**2.2 Storage inventory locations:**

| Building/Room Number | Number of Containers/Tanks |
|---|---|
| N/A | N/A |

**2.3 Current stored inventory for this stream.**

Total volume (cubic meters): 0.000

Date of inventory values: 12/31/2003

Comments on waste inventory:

WSCF has no TSD unit, all waste is managed in an SAA or on 90-day accumulation area.

**2.4 Is storage capacity at this location potentially an issue for this waste stream?**

Yes No

If yes, what is the total estimated storage capacity?

When is this capacity expected to be reached?

Bases and assumptions used:

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 |
|---|---|---|---|
| 2004 | 0.400 | | |
| 2005 | 0.400 | | |
| 2006 | 0.400 | | |
| 2007 | 0.400 | | |
| 2008 | 0.400 | | |
| Total | 2.000 | | |

**2.7 DOE Storage Compliance Assessment information:**

☐ Assessment has been completed.

| Document Number | Date |
|---|---|
| | |

☐ Assessment has been scheduled. Scheduled date:

☒ Other. Explain: N/A

# 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:**

N/A

## 3.0 WASTE MINIMIZATION

**3.1 Has a waste minimization assessment been completed for this stream?**

☒ Yes ☐ No

If yes, provide date assessment conducted: September 23, 1999

If yes, provide document number or other identification:

WSCF-1999-1

If no, provide date assessment will be completed, or if waste stream is no longer generated, then indicate N/A:

**3.2 Provide details of current and proposed methods for minimizing the generation of this stream (e.g., process changes to reduce or eliminate LDR waste, methods to reduce volume through segregation and avoidance of commingling, substitution of less-toxic materials):**

Waste is segregated by the worker at the bench. Training has raised awareness of how to properly segregate the wastes generated from analysis procedures.

**3.3 Waste minimization schedule**

**3.3.1 Reduction achieved during calendar year 2003 (volume or mass)**

0.000 kg

**3.3.2 Projected future waste volume reductions**

| Year | $m^3$ | and/or | kg |
|---|---|---|---|
| 2004 | 0.000 | | |
| 2005 | 0.000 | | |
| 2006 | 0.000 | | |
| 2007 | 0.000 | | |
| 2008 | 0.000 | | |
| Total | 0.000 | | |

**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:** MLLW-04B - Non-O/C Hazardous Debris

**1.2 Description of waste (list WSRd numbers for this waste stream, as applicable)**

This treatability group is for waste that meets the definition of hazardous debris as defined in 40 CFR 268.2, and the waste does not contain physical and/or chemical organic/carbonaceous 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 may include: ASB, 640, 641, 645, 646, and 647.

## 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): 85.220

**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 |
|---|---|---|---|
| 2004 | 96.545 | | |
| 2005 | 124.326 | | |
| 2006 | 142.939 | | |
| 2007 | 166.213 | | |
| 2008 | 230.214 | | |
| Total | 760.237 | | |

## 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):**

Since this waste is a general category based on dangerous waste characteristics, the radiological characteristics are expected to vary greatly. However, there is high confidence that the waste is MLLW. The waste as packaged is considered Contact-Handled (i.e., less than or equal to 200mR/hr on outside package surface); however, the dose rate of some waste inside the package may exceed 200mR/hr.

# LDR REPORT TREATABILITY GROUP DATA SHEET

## 3.2 Physical Form

**3.2.1 Physical form of the waste:**

☐ Solid ☐ Liquid ☐ Semi-solid ☒ Debris

☐ Other (Describe in comments.)

**3.2.2 Comments on physical form:**

The matrix characteristics have been, or maybe, verified prior to the waste being transferred/shipped to the receiving TSD unit. Waste verifications take place either at the generating site or at one of the centralized Hanford Site TSD units.

## 3.3 Regulated constituents and wastewater/non-wastewater category

**3.3.1 Wastewater/non-wastewater under RCRA**

☐ Wastewater ☒ Non-wastewater ☐ Unknown

**3.3.2 Regulated constituents table including treatment requirements and UHCs, if applicable.**

# 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 | Ignitable Charac. | *** | *** | Alternative treatment stds for Haz. Debris (40 CFR 268.45) |
| D002 | Corrosive | Corrosive Charac. | *** | *** | Alternative treatment stds for Haz. Debris (40 CFR 268.45) |
| D003 | Reactive | Reactive Cyanides | *** | *** | Alternative treatment stds for Haz. Debris (40 CFR 268.45) |
| D004 | TC-Arsenic | N/A | *** | *** | Alternative treatment stds for Haz. Debris (40 CFR 268.45) |
| D005 | TC-Barium | N/A | *** | *** | Alternative treatment stds for Haz. Debris (40 CFR 268.45) |
| D006 | TC-Cadmium | N/A | *** | *** | Alternative treatment stds for Haz. Debris (40 CFR 268.45) |
| D007 | TC-Chromium | N/A | *** | *** | Alternative treatment stds for Haz. Debris (40 CFR 268.45) |
| D008 | TC-Lead | Lead Charac. | *** | *** | Alternative treatment stds for Haz. Debris (40 CFR 268.45) |
| D009 | TC-Mercury | Low Mercury | <260 mg/kg | *** | Alternative treatment stds for Haz. Debris (40 CFR 268.45) |
| D010 | TC-Selenium | N/A | *** | *** | Alternative treatment stds for Haz. Debris (40 CFR 268.45) |
| D011 | TC-Silver | N/A | *** | *** | Alternative treatment stds for Haz. Debris (40 CFR 268.45) |
| D012 | Endrin | N/A | *** | *** | Alternative treatment stds for Haz. Debris (40 CFR 268.45) |
| D013 | Lindane | N/A | *** | *** | Alternative treatment stds for Haz. Debris (40 CFR 268.45) |
| D014 | Methoxychlor | N/A | *** | *** | Alternative treatment stds for Haz. Debris (40 CFR 268.45) |
| D015 | Toxaphene | N/A | *** | *** | Alternative treatment stds for Haz. Debris (40 CFR 268.45) |
| D016 | 2,4-D | N/A | *** | *** | Alternative treatment stds for Haz. Debris (40 CFR 268.45) |

# LDR REPORT TREATABILITY GROUP DATA SHEET

| EPA/ State Number | Waste Description | LDR Sub-Category* | Concentration (Typical or Range)** | Basis | LDR Treatment Concentration Standard or Technology Code |
|---|---|---|---|---|---|
| D017 | 2,4,5-TP (Silvex) | N/A | *** | *** | Alternative treatment stds for Haz. Debris (40 CFR 268.45) |
| D018 | Benzene | N/A | *** | *** | Alternative treatment stds for Haz. Debris (40 CFR 268.45) |
| D019 | Carbon Tetrachloride | N/A | *** | *** | Alternative treatment stds for Haz. Debris (40 CFR 268.45) |
| D020 | Chlordane | N/A | *** | *** | Alternative treatment stds for Haz. Debris (40 CFR 268.45) |
| D021 | Chlorobenzene | N/A | *** | *** | Alternative treatment stds for Haz. Debris (40 CFR 268.45) |
| D022 | Chloroform | N/A | *** | *** | Alternative treatment stds for Haz. Debris (40 CFR 268.45) |
| D023 | o-Cresol | N/A | *** | *** | Alternative treatment stds for Haz. Debris (40 CFR 268.45) |
| D024 | m-Cresol | N/A | *** | *** | Alternative treatment stds for Haz. Debris (40 CFR 268.45) |
| D025 | p-Cresol | N/A | *** | *** | Alternative treatment stds for Haz. Debris (40 CFR 268.45) |
| D026 | Cresol | N/A | *** | *** | Alternative treatment stds for Haz. Debris (40 CFR 268.45) |
| D027 | p-Dichlorobenzene | N/A | *** | *** | Alternative treatment stds for Haz. Debris (40 CFR 268.45) |
| D028 | 1,2-Dichloroethane | N/A | *** | *** | Alternative treatment stds for Haz. Debris (40 CFR 268.45) |
| D029 | 1,1-Dichloroethylene | N/A | *** | *** | Alternative treatment stds for Haz. Debris (40 CFR 268.45) |
| D030 | 2,4-Dinitrotoluene | N/A | *** | *** | Alternative treatment stds for Haz. Debris (40 CFR 268.45) |
| D031 | Heptachlor | N/A | *** | *** | Alternative treatment stds for Haz. Debris (40 CFR 268.45) |
| D032 | Hexachlorobenzene | N/A | *** | *** | Alternative treatment stds for Haz. Debris (40 CFR 268.45) |

# LDR REPORT TREATABILITY GROUP DATA SHEET

| EPA/ State Number | Waste Description | LDR Sub-Category* | Concentration (Typical or Range)** | Basis | LDR Treatment Concentration Standard or Technology Code |
|---|---|---|---|---|---|
| D033 | Hexachlorobutadiene | N/A | *** | *** | Alternative treatment stds for Haz. Debris (40 CFR 268.45) |
| D034 | Hexachloroethane | N/A | *** | *** | Alternative treatment stds for Haz. Debris (40 CFR 268.45) |
| D035 | Methyl Ethyl Ketone | N/A | *** | *** | Alternative treatment stds for Haz. Debris (40 CFR 268.45) |
| D036 | Nitrobenzene | N/A | *** | *** | Alternative treatment stds for Haz. Debris (40 CFR 268.45) |
| D037 | Pentachlorophenol | N/A | *** | *** | Alternative treatment stds for Haz. Debris (40 CFR 268.45) |
| D038 | Pyridine | N/A | *** | *** | Alternative treatment stds for Haz. Debris (40 CFR 268.45) |
| D039 | Tetrachloroethylene | N/A | *** | *** | Alternative treatment stds for Haz. Debris (40 CFR 268.45) |
| D040 | Trichloroethylene | N/A | *** | *** | Alternative treatment stds for Haz. Debris (40 CFR 268.45) |
| D041 | 2,4,5-Trichlorophenol | N/A | *** | *** | Alternative treatment stds for Haz. Debris (40 CFR 268.45) |
| D042 | 2,4,6-Trichlorophenol | N/A | *** | *** | Alternative treatment stds for Haz. Debris (40 CFR 268.45) |
| D043 | Vinyl Chloride | N/A | *** | *** | Alternative treatment stds for Haz. Debris (40 CFR 268.45) |
| F001 | 1,1,1-Trichloroethane | Spent Solvent | *** | *** | Alternative treatment stds for Haz. Debris (40 CFR 268.45) |
| F002 | Methylene Chloride | Spent Solvent | *** | *** | Alternative treatment stds for Haz. Debris (40 CFR 268.45) |
| F003 | Acetone & Hexone | Spent Solvent | *** | *** | Alternative treatment stds for Haz. Debris (40 CFR 268.45) |
| F004 | o-Cresol & p-Cresol | Spent Solvent | *** | *** | Alternative treatment stds for Haz. Debris (40 CFR 268.45) |
| F005 | Methyl Ethyl ketone | Spent Solvent | *** | *** | Alternative treatment stds for Haz. Debris (40 CFR 268.45) |

# 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 |
|---|---|---|---|---|---|
| P029 | Copper Cyanide | N/A | *** | *** | Alternative treatment stds for Haz. Debris (40 CFR 268.45) |
| P030 | Cyanides | N/A | *** | *** | Alternative treatment stds for Haz. Debris (40 CFR 268.45) |
| p098 | Potassium Cyanide | N/A | *** | *** | Alternative treatment stds for Haz. Debris (40 CFR 268.45) |
| P102 | Propargyl Alcohol | N/A | *** | *** | Alternative treatment stds for Haz. Debris (40 CFR 268.45) |
| P106 | Sodium Cyanide | N/A | *** | *** | Alternative treatment stds for Haz. Debris (40 CFR 268.45) |
| P120 | Vanadium Pentoxide | N/A | *** | *** | Alternative treatment stds for Haz. Debris (40 CFR 268.45) |
| U002 | Acetone | N/A | *** | *** | Alternative treatment stds for Haz. Debris (40 CFR 268.45) |
| U006 | Acetyl Chloride | N/A | *** | *** | Alternative treatment stds for Haz. Debris (40 CFR 268.45) |
| U031 | n-Butyl Alcohol | N/A | *** | *** | Alternative treatment stds for Haz. Debris (40 CFR 268.45) |
| U043 | Vinyl Chloride | N/A | *** | *** | Alternative treatment stds for Haz. Debris (40 CFR 268.45) |
| U057 | Cyclohexanone | N/A | *** | *** | Alternative treatment stds for Haz. Debris (40 CFR 268.45) |
| U080 | Methylene Chloride | N/A | *** | *** | Alternative treatment stds for Haz. Debris (40 CFR 268.45) |
| U123 | Formic Acid | N/A | *** | *** | Alternative treatment stds for Haz. Debris (40 CFR 268.45) |
| U151 | Mercury | Low Mercury | <260 mg/kg Hg | *** | Alternative treatment stds for Haz. Debris (40 CFR 268.45) |
| U159 | Methyl Ethyl Ketone | N/A | *** | *** | Alternative treatment stds for Haz. Debris (40 CFR 268.45) |
| U161 | Methyl Isobutyl Ketone | N/A | *** | *** | Alternative treatment stds for Haz. Debris (40 CFR 268.45) |

# LDR REPORT TREATABILITY GROUP DATA SHEET

| EPA/ State Number | Waste Description | LDR Sub-Category* | Concentration (Typical or Range)** | Basis | LDR Treatment Concentration Standard or Technology Code |
|---|---|---|---|---|---|
| U196 | Pyridine | N/A | *** | *** | Alternative treatment stds for Haz. Debris (40 CFR 268.45) |
| U220 | Toluene | N/A | *** | *** | Alternative treatment stds for Haz. Debris (40 CFR 268.45) |
| U226 | 1,1,1-Trichlorethane | N/A | *** | *** | Alternative treatment stds for Haz. Debris (40 CFR 268.45) |
| U239 | Xylenes | N/A | *** | *** | Alternative treatment stds for Haz. Debris (40 CFR 268.45) |
| WP01 | Persistant, EHW | N/A | *** | *** | None (1) |
| WP02 | Persistant, DW | N/A | *** | *** | N/A |
| WSC2 | Solid Corrosive | N/A | *** | *** | Remove solid-acid charac. |
| WT01 | Toxic, EHW | N/A | *** | *** | None (1) |
| WT02 | Toxic, DW | N/A | *** | *** | N/A |

* LDR Subcategory marked N/A if no existing subcategory adequately describes this waste, or if there are no defined subcategories for the waste number (40 CFR 268.40).

** If waste is not consistent in concentration, this may not apply. Described in Section 3.3.6.

***The concentration varies and is based on process knowledge and/or analytical data.

(1) Mixed extremely hazardous wastes may be land-disposed in Washington State in DOE facilities in accordance with RCW 70.105.050(2).

(2) The combination of waste codes varies on a per-package basis in accordance with WAC 173-303-070(3) and (5).

UHCs identification not required when using the alternative treatment standards for hazardous debris.

**3.3.3 List any waste numbers from Section 3.3.2 for which the waste stream already meets established LDR treatment standards.**

☐ List:

☐ No LDR treatment required (e.g. TRUM waste destined for WIPP, exclusion, etc.)

☒ None (i.e. all constituents/waste numbers of this waste stream still require treatment).

# 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 waste characterization information is reviewed on a per-package basis prior to the waste being transferred/shipped to an onsite or offsite TSD. Waste that has been residing in storage for a long time may require more extensive verification work to make it acceptable for treatment and/or disposal. If during the verification activities, it is determined that some of the waste does not meet the MLLW-04B waste stream description, then it will be reassigned into the appropriate waste stream (e.g., MLLW-02, -03, etc.), and the correct WSRd will be assigned to it. With changes in TSCA, there may be TSCA regulated PCBs with consistent disposal options in this wastestream.

## 4.0 WASTE STREAM TREATMENT

**4.1 Is this waste stream currently being treated?**

☒ Yes ☐ No

If yes, provide details: Hanford has been actively sending a portion of this waste treatability group to the Allied Technology Group (ATG) facility located in Richland, WA for treatment. The treatment utilized by ATG is macroencapsulation. The treated waste is being returned back to Hanford and disposed of into the LLBG mixed waste trenches located in 200-W Area.

**4.2 Planned treatment: Check the appropriate box indicating future plans for treating this waste stream to meet applicable regulations, including LDR treatment standards.**

☐ No treatment required (skip to Section 5.0)

☒ Treating or plan to treat on site

☒ Treating or plan to treat off site

☐ Treatment options still being assessed

**4.3 Planned treatment method, facility, extent of treatment capacity available:**

# LDR REPORT TREATABILITY GROUP DATA SHEET

The treatment method being used to treat this waste group is macroencapsulation per 40 CFR 268.45. The waste is mainly being sent offsite to a commercial facility for treatment. There is additional commercial treatment capacity available in the nation which can be accessed via contracts. On site treatment may also be performed.

**4.4 Treatment schedule information:**

Treatment of this waste has been ongoing for several years. Additional treatment will be performed in accordance with M-91 milestones and target dates after they have been finalized.

**4.5 Applicable Tri-Party Agreement treatment milestone numbers (including permitting):**

| Milestone Number | Due Date |
|---|---|
| N/A | N/A |

**4.6 Proposed new Tri-Party Agreement treatment milestones:**

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: To the extent practical, all mixed waste is segregated and packaged separately from LLW or TRU wastes. The volume of mixed waste is reduced by in-drum compaction when possible, and where it does not interfere with future treatment activities. To minimize the generation of mixed waste, generators actively seek nondangerous alternatives for the dangerous constituents in their processes. Minimization goals are set annually and tracked quarterly, and waste treatment is used to destroy the hazardous constituents, as allowable.

**4.8 List or describe treatability equivalency petitions, rulemaking petitions, and case-by-case exemptions needed for treatment or already in place.**

None.

**4.9 Key Assumptions:**

None.

## 5.0 WASTE STREAM DISPOSAL

**After treatment, how will the waste stream be disposed of (include locations, milestone numbers, variances required, etc. as applicable):**

Subject waste is being disposed of in mixed waste trenches located on the Hanford Site and might be disposed commercially in the future.

# LDR REPORT WASTE LOCATION-SPECIFIC DATA SHEET

## 1.0 WASTE STREAM IDENTIFICATION AND SOURCE

**1.1 Unit/Plant name:** 2724WB **Waste Stream:** Lead Solder

**Treatabilitiy Group Name:** MLLW-04B - Non-O/C Hazardous Debris

**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):**

Facility cleanup.

**1.3.2 History of how and where the waste was/is generated:**

Cleanup of mobile office (MO-967) adjacent to B-Plant that had been contaminated by fruit flies.

**1.3.3 Source of the regulated constituents:**

Miscellaneous materials containing lead solder/lead debris

**1.3.4 Source of the information (e.g., analytical data, process knowledge, document number, etc.)**

Process knowledge

**1.3.5 Additional notes:**

Initially part of burial box sent to WRAP that failed NDE examination. Segregated and repackaged in SAA.

## 2.0 WASTE STREAM STORAGE, INVENTORY, AND GENERATION INFORMATION

(NOTE: For waste in satellite accumulation areas and 90-day accumulation areas, skip to Section 2.6.)

**2.1 Current storage method**

☐ Container (pad) ☐ Container (covered) ☐ Container (retrievably buried)

☐ Tank ☐ DST ☐ SST

☐ Other (explain):

**2.1.1 How was the waste managed prior to storage?**

N/A

**2.1.2 Timeframe when waste was placed to storage?**

N/A

**2.2 Storage inventory locations:**

| Building/Room Number | Number of Containers/Tanks |
|---|---|
| N/A | N/A |

# LDR REPORT WASTE LOCATION-SPECIFIC DATA SHEET

**2.3 Current stored inventory for this stream.**

Total volume (cubic meters): 0.000

Date of inventory values: 12/31/2003

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?

When is this capacity expected to be reached?

Bases and assumptions used:

**2.5 Planned storage areas for this waste:**

☐ Current Location ☐ CWC ☐ DST

☐ Other Area(s) (list):

☐ None

**2.6 Estimated generation projection by calendar year (includes waste in satellite and 90-day accumulation areas):**

| Year | $m^3$ | and/or | kg |
|---|---|---|---|
| 2004 | 0.030 | | |
| 2005 | 0.000 | | |
| 2006 | 0.000 | | |
| 2007 | 0.000 | | |
| 2008 | 0.000 | | |
| Total | 0.030 | | |

**2.7 DOE Storage Compliance Assessment information:**

☐ Assessment has been completed.

| Document Number | Date |
|---|---|
| | |

☐ Assessment has been scheduled. Scheduled date:

☒ Other. Explain: N/A -- accumulation area

## 2.8 Applicable Tri-Party Agreement milestones related to storage at this location:

| Milestone Number | Due Date |
|---|---|
| N/A | N/A |

# LDR REPORT WASTE LOCATION-SPECIFIC DATA SHEET

**2.9 Has there ever been any non-permitted, unauthorized release of this waste stream from this storage unit to the environment?**

☐ Yes ☒ No

If yes, summarize releases and quantities and provide date:

N/A

**2.10 Are there any plans to submit requests for variances or other exemptions related to storage?**

☐ Yes ☒ No

If yes, explain: N/A

**2.11 Characterization**

**2.11.1 Is further characterization needed about the waste prior to acceptance for storage?**

☐ Yes ☒ No ☐ Unknown at this time

| Milestone Number | Due Date |
|---|---|
| N/A | N/A |

If yes or unknown, comment on characterization for storage.

N/A

**2.11.2 Is further characterization needed about the waste prior to acceptance for treatment?**

☐ Yes ☒ No ☐ Unknown at this time

| Milestone Number | Due Date |
|---|---|
| N/A | N/A |

If yes or unknown, comment on characterization for treatment.

N/A

**2.11.3 Is further characterization needed about the waste prior to acceptance for disposal?**

☐ Yes ☒ No ☐ Unknown at this time

| Milestone Number | Due Date |
|---|---|
| N/A | N/A |

If yes or unknown, comment on characterization for disposal.

N/A

**2.12 Other key assumptions related to storage, inventory, and generation information:**

None

# LDR REPORT WASTE LOCATION-SPECIFIC DATA SHEET

## 3.0 WASTE MINIMIZATION

**3.1 Has a waste minimization assessment been completed for this stream?**

☐ Yes ☒ No

If yes, provide date assessment conducted: N/A

If yes, provide document number or other identification:

N/A

If no, provide date assessment will be completed, or if waste stream is no longer generated, then indicate N/A:

N/A

**3.2 Provide details of current and proposed methods for minimizing the generation of this stream (e.g., process changes to reduce or eliminate LDR waste, methods to reduce volume through segregation and avoidance of commingling, substitution of less-toxic materials):**

N/A

**3.3 Waste minimization schedule**

**3.3.1 Reduction achieved during calendar year 2003 (volume or mass)**

0.000 m3

**3.3.2 Projected future waste volume reductions**

| Year | $m^3$ | and/or | kg |
|---|---|---|---|
| 2004 | | | 0.000 |
| 2005 | | | 0.000 |
| 2006 | | | 0.000 |
| 2007 | | | 0.000 |
| 2008 | | | 0.000 |
| Total | | | 0.000 |

**3.3.3 Bases and assumptions used in above estimates:**

Waste stream no longer generated. SAA will be moved to storage in 2004.

# LDR REPORT WASTE LOCATION-SPECIFIC DATA SHEET

## 1.0 WASTE STREAM IDENTIFICATION AND SOURCE

**1.1 Unit/Plant name:** CWC **Waste Stream:** Non-O/C Inorganic Hazardous Debris

**Treatability Group Name:** MLLW-04B - Non-O/C Hazardous Debris

**1.2 Applicable profile number(s) for this waste stream:**

N/A

**1.3 Waste stream source information**

**1.3.1 General description of the waste (e.g., spill clean-up waste, discarded lab materials, maintenance waste):**

The waste consists of hazardous debris containing primarily inorganic debris material (e.g., building rubble, metals, asbestos, etc.) that is contaminated with hazardous constituents.

**1.3.2 History of how and where the waste was/is generated:**

The waste was generated at many onsite locations and also by offsite generators.

**1.3.3 Source of the regulated constituents:**

See 1.3.1 and 1.3.2. Waste is debris contaminated with hazardous materials such as F, P, and U listed constituents, RCRA metals, corrosives, etc.

**1.3.4 Source of the information (e.g., analytical data, process knowledge, document number, etc.)**

Analytical data and process knowledge.

**1.3.5 Additional notes:**

None.

## 2.0 WASTE STREAM STORAGE, INVENTORY, AND GENERATION INFORMATION

(NOTE: For waste in satellite accumulation areas and 90-day accumulation areas, skip to Section 2.6.)

**2.1 Current storage method**

- ☐ Container (pad)
- ☒ Container (covered)
- ☐ Container (retrievably buried)
- ☐ Tank
- ☐ DST
- ☐ SST
- ☐ Other (explain):

**2.1.1 How was the waste managed prior to storage?**

Accumulated and packaged by waste generators prior to storage at CWC.

**2.1.2 Timeframe when waste was placed to storage?**

Waste storage in CWC began in 1988 and continues.

# LDR REPORT WASTE LOCATION-SPECIFIC DATA SHEET

**2.2 Storage inventory locations:**

| Building/Room Number | Number of Containers/Tanks |
|---|---|
| CWC | 84 |

**2.3 Current stored inventory for this stream.**

Total volume (cubic meters): 85.220

Date of inventory values: 12/30/2003

Comments on waste inventory:

Based on inventory residing at the CWC as reported in SWITS for WSRds: 641, 645, 646, 647, and ASB.

**2.4 Is storage capacity at this location potentially an issue for this waste stream?**

☐ Yes ☒ No

If yes, what is the total estimated storage capacity? N/A

When is this capacity expected to be reached? N/A

Bases and assumptions used:

No issues with CWC storage based on 20 year waste generation forecast.

**2.5 Planned storage areas for this waste:**

☒ Current Location ☒ CWC ☐ DST

☐ Other Area(s) (list):

☐ None

**2.6 Estimated generation projection by calendar year (includes waste in satellite and 90-day accumulation areas):**

| Year | $m^3$ | and/or | kg |
|---|---|---|---|
| 2004 | 0.000 | | |
| 2005 | 0.000 | | |
| 2006 | 0.000 | | |
| 2007 | 0.000 | | |
| 2008 | 0.000 | | |
| Total | 0.000 | | |

**2.7 DOE Storage Compliance Assessment information:**

☒ Assessment has been completed.

| Document Number | Date |
|---|---|
| A&E-SEC-02-001 | 01/21/2002 |

☐ Assessment has been scheduled. Scheduled date:

☐ Other. Explain:

# LDR REPORT WASTE LOCATION-SPECIFIC DATA SHEET

**2.8 Applicable Tri-Party Agreement milestones related to storage at this location:**

| Milestone Number | Due Date |
|---|---|
| M-020-12 | 10/31/1991 |

**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 |

If yes or unknown, comment on characterization for disposal.

N/A

# LDR REPORT WASTE LOCATION-SPECIFIC DATA SHEET

**2.12 Other key assumptions related to storage, inventory, and generation information:**

None.

## 3.0 WASTE MINIMIZATION

**3.1 Has a waste minimization assessment been completed for this stream?**

☐ Yes ☒ No

If yes, provide date assessment conducted: N/A

If yes, provide document number or other identification:

N/A

If no, provide date assessment will be completed, or if waste stream is no longer generated, then indicate N/A:

None planned - waste not generated at CWC.

**3.2 Provide details of current and proposed methods for minimizing the generation of this stream (e.g., process changes to reduce or eliminate LDR waste, methods to reduce volume through segregation and avoidance of commingling, substitution of less-toxic materials):**

These activities occur before the wastes are transferred/shipped to CWC. There are few opportunities to reduce waste volumes placed into storage.

**3.3 Waste minimization schedule**

**3.3.1 Reduction achieved during calendar year 2003 (volume or mass)**

0.000 m3

**3.3.2 Projected future waste volume reductions**

| Year | $m^3$ | and/or | kg |
|---|---|---|---|
| 2004 | 0.000 | | |
| 2005 | 0.000 | | |
| 2006 | 0.000 | | |
| 2007 | 0.000 | | |
| 2008 | 0.000 | | |
| Total | 0.000 | | |

**3.3.3 Bases and assumptions used in above estimates:**

There is no projected generation by CWC.

# LDR REPORT WASTE LOCATION-SPECIFIC DATA SHEET

## 1.0 WASTE STREAM IDENTIFICATION AND SOURCE

**1.1 Unit/Plant name:** LLBG **Waste Stream:** MLLW Retrieval Non O/C Hazardous Debris

**Treatabilitiy Group Name:** MLLW-04B - Non-O/C Hazardous Debris

**1.2 Applicable profile number(s) for this waste stream:**

**1.3 Waste stream source information**

**1.3.1 General description of the waste (e.g., spill clean-up waste, discarded lab materials, maintenance waste):**

The waste consists of hazardous debris containing primarily inorganic debris material (e.g., building rubble, metals, asbestos, etc.) that is contaminated with hazardous constituents.

**1.3.2 History of how and where the waste was/is generated:**

The waste was generated at many onsite locations and also by offsite generators

**1.3.3 Source of the regulated constituents:**

See 1.3.1 and 1.3.2.

**1.3.4 Source of the information (e.g., analytical data, process knowledge, document number, etc.)**

Analytical data and process knowledge.

**1.3.5 Additional notes:**

Per Settlement Agreement (draft TPA Milestone M-91-03-01) between DOE-RL and the Washington State Department of Ecology this entire waste stream is suspected of being mixed waste.

## 2.0 WASTE STREAM STORAGE, INVENTORY, AND GENERATION INFORMATION

(NOTE: For waste in satellite accumulation areas and 90-day accumulation areas, skip to Section 2.6.)

**2.1 Current storage method**

☐ Container (pad) ☐ Container (covered) ☐ Container (retrievably buried)

☐ Tank ☐ DST ☐ SST

☐ Other (explain):

**2.1.1 How was the waste managed prior to storage?**

N/A

**2.1.2 Timeframe when waste was placed to storage?**

N/A

# LDR REPORT WASTE LOCATION-SPECIFIC DATA SHEET

**2.2 Storage inventory locations:**

| Building/Room Number | Number of Containers/Tanks |
|---|---|
| N/A | N/A |

**2.3 Current stored inventory for this stream.**

Total volume (cubic meters): 0.000

Date of inventory values: 12/30/2003

Comments on waste inventory:

No stored inventory

**2.4 Is storage capacity at this location potentially an issue for this waste stream?**

☐ Yes ☒ No

If yes, what is the total estimated storage capacity? N/A

When is this capacity expected to be reached? N/A

Bases and assumptions used:

No issues with CWC storage based on life cycle waste generation forecasts

**2.5 Planned storage areas for this waste:**

☐ Current Location ☒ CWC ☐ DST

☐ Other Area(s) (list):

☐ None

**2.6 Estimated generation projection by calendar year (includes waste in satellite and 90-day accumulation areas):**

| Year | $m^3$ | and/or | kg |
|---|---|---|---|
| 2004 | 36.000 | | |
| 2005 | 58.000 | | |
| 2006 | 70.000 | | |
| 2007 | 86.000 | | |
| 2008 | 142.000 | | |
| Total | 392.000 | | |

**2.7 DOE Storage Compliance Assessment information:**

☒ Assessment has been completed.

| Document Number | Date |
|---|---|
| A&E-SEC-02-003 | 03/28/2002 |

☐ Assessment has been scheduled. Scheduled date:

☐ Other. Explain:

# LDR REPORT WASTE LOCATION-SPECIFIC DATA SHEET

## 2.8 Applicable Tri-Party Agreement milestones related to storage at this location:

| Milestone Number | Due Date |
|---|---|
| P-091-40 | 12/31/2010 |

**2.9 Has there ever been any non-permitted, unauthorized release of this waste stream from this storage unit to the environment?**

☐ Yes ☒ No

If yes, summarize releases and quantities and provide date:

**2.10 Are there any plans to submit requests for variances or other exemptions related to storage?**

☐ Yes ☒ No

If yes, explain:

**2.11 Characterization**

**2.11.1 Is further characterization needed about the waste prior to acceptance for storage?**

☐ Yes ☐ No ☒ Unknown at this time

| Milestone Number | Due Date |
|---|---|
| N/A | N/A |

If yes or unknown, comment on characterization for storage.

If information is not sufficient to ensure waste meets CWC acceptance criteria, further characterization may be necessary

**2.11.2 Is further characterization needed about the waste prior to acceptance for treatment?**

☐ Yes ☐ No ☒ Unknown at this time

| Milestone Number | Due Date |
|---|---|
| N/A | N/A |

If yes or unknown, comment on characterization for treatment.

If information is not sufficient to ensure waste meets the treament facilities acceptance criteria, further characterization may be necessary.

**2.11.3 Is further characterization needed about the waste prior to acceptance for disposal?**

☒ Yes ☐ No ☐ Unknown at this time

| Milestone Number | Due Date |
|---|---|
| N/A | N/A |

If yes or unknown, comment on characterization for disposal.

# LDR REPORT WASTE LOCATION-SPECIFIC DATA SHEET

To meet concentration based treatment standards applicable for the residues, sampling will be required after treatment if the residues are MLLW. No commitment is necessary for the characterization needs on this MLLW.

**2.12 Other key assumptions related to storage, inventory, and generation information:**

## 3.0 WASTE MINIMIZATION

**3.1 Has a waste minimization assessment been completed for this stream?**

☐ Yes ☒ No

If yes, provide date assessment conducted:

If yes, provide document number or other identification:

If no, provide date assessment will be completed, or if waste stream is no longer generated, then indicate N/A:

None planned. Waste has already been generated.

**3.2 Provide details of current and proposed methods for minimizing the generation of this stream (e.g., process changes to reduce or eliminate LDR waste, methods to reduce volume through segregation and avoidance of commingling, substitution of less-toxic materials):**

Waste has already been generated. There is no opportunity to reduce the existing volume.

**3.3 Waste minimization schedule**

**3.3.1 Reduction achieved during calendar year 2003 (volume or mass)**

0.000 m3

**3.3.2 Projected future waste volume reductions**

| Year | $m^3$ | and/or | kg |
|---|---|---|---|
| 2004 | 0.000 | | |
| 2005 | 0.000 | | |
| 2006 | 0.000 | | |
| 2007 | 0.000 | | |
| 2008 | 0.000 | | |
| Total | 0.000 | | |

**3.3.3 Bases and assumptions used in above estimates:**

There is no generation projected.

# LDR REPORT WASTE LOCATION-SPECIFIC DATA SHEET

## 1.0 WASTE STREAM IDENTIFICATION AND SOURCE

1.1 **Unit/Plant name:** T Plant Complex **Waste Stream:** Non-O/C Inorganic Hazardous Debris

**Treatabilitiy Group Name:** MLLW-04B - Non-O/C Hazardous Debris

1.2 **Applicable profile number(s) for this waste stream:**

647.

1.3 **Waste stream source information**

1.3.1 **General description of the waste (e.g., spill clean-up waste, discarded lab materials, maintenance waste):**

This waste consists of dangerous debris containing inorganic debris (e.g., metal, asbestos, etc.).

1.3.2 **History of how and where the waste was/is generated:**

Waste is typically generated by Tank Farms and from operations activities at the T Plant Complex (e.g., repackaging waste).

1.3.3 **Source of the regulated constituents:**

See 1.3.1 and 1.3.2. Waste is contaminated with F listed waste.

1.3.4 **Source of the information (e.g., analytical data, process knowledge, document number, etc.)**

Proccess and/or analytical data.

1.3.5 **Additional notes:**

N/A

## 2.0 WASTE STREAM STORAGE, INVENTORY, AND GENERATION INFORMATION

(NOTE: For waste in satellite accumulation areas and 90-day accumulation areas, skip to Section 2.6.)

2.1 **Current storage method**

| | | |
|---|---|---|
| ☒ Container (pad) | ☒ Container (covered) | ☐ Container (retrievably buried) |
| ☐ Tank | ☐ DST | ☐ SST |
| ☐ Other (explain): | If this waste is received during CY 2004, waste can be stored in outdoor storage pads or within buildings or other structures. | |

2.1.1 **How was the waste managed prior to storage?**

Accumulated and packaged by onsite and/or offsite generators as well as the T Plant Complex

2.1.2 **Timeframe when waste was placed to storage?**

N/A

# LDR REPORT WASTE LOCATION-SPECIFIC DATA SHEET

**2.2 Storage inventory locations:**

| Building/Room Number | Number of Containers/Tanks |
|---|---|
| T Plant Complex | 0 |

**2.3 Current stored inventory for this stream.**

Total volume (cubic meters): 0.000

Date of inventory values: 12/31/2003

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:

**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 |
|---|---|---|---|
| 2004 | 0.200 | | |
| 2005 | 0.200 | | |
| 2006 | 0.200 | | |
| 2007 | 0.200 | | |
| 2008 | 0.200 | | |
| Total | 1.000 | | |

**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:**

None.

## 3.0 WASTE MINIMIZATION

**3.1 Has a waste minimization assessment been completed for this stream?**

☐ Yes ☒ No

If yes, provide date assessment conducted: N/A

If yes, provide document number or other identification:

N/A

If no, provide date assessment will be completed, or if waste stream is no longer generated, then indicate N/A:

N/A

**3.2 Provide details of current and proposed methods for minimizing the generation of this stream (e.g., process changes to reduce or eliminate LDR waste, methods to reduce volume through segregation and avoidance of commingling, substitution of less-toxic materials):**

This waste could be generated during canyon deck and/or cell clean out, maintenance, or from operations (e.g., repackaging, treatment, etc., on other generators waste). Waste minimization techniqaues are incorporated to the extent practical at the T Plant Complex including segregation of low-level from mixed.

**3.3 Waste minimization schedule**

**3.3.1 Reduction achieved during calendar year 2003 (volume or mass)**

0.000 m3

**3.3.2 Projected future waste volume reductions**

| Year | $m^3$ | and/or | kg |
|---|---|---|---|
| 2004 | 0.000 | | |
| 2005 | 0.000 | | |
| 2006 | 0.000 | | |
| 2007 | 0.000 | | |
| 2008 | 0.000 | | |
| Total | 0.000 | | |

**3.3.3 Bases and assumptions used in above estimates:**

The T Plant Complex has submitted a P2/Wmin fiscal year 2004 goal to reduce, where possible, mixed waste generation. For FY 2004 to 2008, new goals will be evaluated and identified on a year-by-year basis. The T Plant Complex does not track waste reduction by treatabiity groups. Routine and non-routine generated waste is reported quarterly to the Waste Minimization/Pollution Prevention Group.

# LDR REPORT WASTE LOCATION-SPECIFIC DATA SHEET

## 1.0 WASTE STREAM IDENTIFICATION AND SOURCE

1.1 **Unit/Plant name:** Tank Farm Facilities **Waste Stream:** Non-O/C Inorganic Hazardous Debris

**Treatabilitiy Group Name:** MLLW-04B - Non-O/C Hazardous Debris

1.2 **Applicable profile number(s) for this waste stream:**

647-01.

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):**

Inorganic debris containing regulated material products (paint and paint related products) and/or equipment and tools. The waste may also include a small amount of organic hazardous debris such as paper, plastic, and rubber.

1.3.2 **History of how and where the waste was/is generated:**

Waste is generated at the tank farms and associated facilities. It can be generated by sampling, maintenance, surveillance, clean up and upgrades/constructions, tank stabilization, tank waste transfer, and equipment removal.

1.3.3 **Source of the regulated constituents:**

Debris contaminated with tank waste is considered mixed waste when it contains (as described by RCRA "contained-in policy" provisions) tank waste. Debris may also be contaminated with regulated chemical products.

1.3.4 **Source of the information (e.g., analytical data, process knowledge, document number, etc.)**

MSDS, process knowledge and analytical data. The document" Tank Farm Solid Waste Characterization Guide with Sampling and Analysis Plan Attachment", HNF-SD-WM-PLN-119, REV. 01, describes the basis for historical, process knowledge and sampling and analysis paln.

1.3.5 **Additional notes:**

None.

## 2.0 WASTE STREAM STORAGE, INVENTORY, AND GENERATION INFORMATION

(NOTE: For waste in satellite accumulation areas and 90-day accumulation areas, skip to Section 2.6.)

2.1 **Current storage method**

☐ Container (pad) ☐ Container (covered) ☐ Container (retrievably buried)

☐ Tank ☐ DST ☐ SST

☐ Other (explain): N/A

2.1.1 **How was the waste managed prior to storage?**

N/A

# LDR REPORT WASTE LOCATION-SPECIFIC DATA SHEET

**2.1.2 Timeframe when waste was placed to storage?**

N/A

**2.2 Storage inventory locations:**

| Building/Room Number | Number of Containers/Tanks |
|---|---|
| N/A | N/A |

**2.3 Current stored inventory for this stream.**

Total volume (cubic meters): 0.000

Date of inventory values: 12/31/2003

Comments on waste inventory:

Managed in SAA and 90 day accumulation areas.

**2.4 Is storage capacity at this location potentially an issue for this waste stream?**

Yes No

If yes, what is the total estimated storage capacity?

When is this capacity expected to be reached?

Bases and assumptions used:

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 |
|---|---|---|---|
| 2004 | 60.115 | | |
| 2005 | 66.126 | | |
| 2006 | 72.739 | | |
| 2007 | 80.013 | | |
| 2008 | 88.014 | | |
| Total | 367.007 | | |

**2.7 DOE Storage Compliance Assessment information:**

☐ Assessment has been completed.

| Document Number | Date |
|---|---|
| | |

# LDR REPORT WASTE LOCATION-SPECIFIC DATA SHEET

☐ Assessment has been scheduled. Scheduled date: N/A

☒ 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.

N/A

**2.11.2 Is further characterization needed about the waste prior to acceptance for treatment?**

☐ Yes ☒ No ☐ Unknown at this time

| Milestone Number | Due Date |
|---|---|
| N/A | N/A |

If yes or unknown, comment on characterization for treatment.

N/A

**2.11.3 Is further characterization needed about the waste prior to acceptance for disposal?**

☐ Yes ☒ No ☐ Unknown at this time

| Milestone Number | Due Date |
|---|---|
| N/A | N/A |

# LDR REPORT WASTE LOCATION-SPECIFIC DATA SHEET

If yes or unknown, comment on characterization for disposal.

N/A

**2.12 Other key assumptions related to storage, inventory, and generation information:**

None.

## 3.0 WASTE MINIMIZATION

**3.1 Has a waste minimization assessment been completed for this stream?**

☐ Yes ☒ No

If yes, provide date assessment conducted: N/A

If yes, provide document number or other identification:

N/A

If no, provide date assessment will be completed, or if waste stream is no longer generated, then indicate N/A:

Unknown at this time.

**3.2 Provide details of current and proposed methods for minimizing the generation of this stream (e.g., process changes to reduce or eliminate LDR waste, methods to reduce volume through segregation and avoidance of commingling, substitution of less-toxic materials):**

1) Segregation of LLW from MW; 2) Minimize the use of regulated products; 3) Encourage the use of non-regulated products; and 4) Minimize the use of regulated products in radiological zone.

**3.3 Waste minimization schedule**

**3.3.1 Reduction achieved during calendar year 2003 (volume or mass)**

0.000 m3

**3.3.2 Projected future waste volume reductions**

| Year | $m^3$ | and/or | kg |
|---|---|---|---|
| 2004 | 185.900 | | |
| 2005 | 155.350 | | |
| 2006 | 167.700 | | |
| 2007 | 163.150 | | |
| 2008 | 137.800 | | |
| Total | 809.900 | | |

**3.3.3 Bases and assumptions used in above estimates:**

Tank farms is in construction and upgrade mode to be ready for feed delivery to the waste treatment plant. No waste reduction is expected at this time.

# LDR REPORT WASTE LOCATION-SPECIFIC DATA SHEET

## 1.0 WASTE STREAM IDENTIFICATION AND SOURCE

**1.1 Unit/Plant name:** WRAP **Waste Stream:** Non-O/C Inorganic Hazardous Debris

**Treatabilitiy Group Name:** MLLW-04B - Non-O/C Hazardous Debris

**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):**

This waste includes hazardous inorganic debris and other incidental non-debris material commingled.

**1.3.2 History of how and where the waste was/is generated:**

This waste originated from non WRAP processes.

**1.3.3 Source of the regulated constituents:**

Hazardous constituents most likely entered the waste as chemicals used during analytical processes.

**1.3.4 Source of the information (e.g., analytical data, process knowledge, document number, etc.)**

Analytical data, process knowledge.

**1.3.5 Additional notes:**

Waste from WRAP comes from various generators and generating processes around the Hanford Site due to WRAP's verification and repacking mission.

## 2.0 WASTE STREAM STORAGE, INVENTORY, AND GENERATION INFORMATION

(NOTE: For waste in satellite accumulation areas and 90-day accumulation areas, skip to Section 2.6.)

**2.1 Current storage method**

- ☐ Container (pad)
- ☒ Container (covered)
- ☐ Container (retrievably buried)
- ☐ Tank
- ☐ DST
- ☐ SST
- ☐ Other (explain):

**2.1.1 How was the waste managed prior to storage?**

This waste was generated at Hanford facilities.

**2.1.2 Timeframe when waste was placed to storage?**

Most MLLW at WRAP is recently generated waste that is being verified as part of the LLW waste acceptance process.

# LDR REPORT WASTE LOCATION-SPECIFIC DATA SHEET

**2.2 Storage inventory locations:**

| Building/Room Number | Number of Containers/Tanks |
|---|---|
| N/A | N/A |

**2.3 Current stored inventory for this stream.**

Total volume (cubic meters): 0.000

Date of inventory values: 12/31/2003

Comments on waste inventory:

Inventory fluctuates daily to support WRAP's mission of waste verification. Inventory based on Drum Management System (DMS) printout dated 12/31/03.

**2.4 Is storage capacity at this location potentially an issue for this waste stream?**

☐ Yes ☒ No

If yes, what is the total estimated storage capacity? N/A

When is this capacity expected to be reached? N/A

Bases and assumptions used:

Due to proximity to and interchange with CWC, there is no storage capacity issue at WRAP.

**2.5 Planned storage areas for this waste:**

☐ Current Location ☒ CWC ☐ DST

☐ Other Area(s) (list):

☐ None

**2.6 Estimated generation projection by calendar year (includes waste in satellite and 90-day accumulation areas):**

| Year | $m^3$ | and/or | kg |
|---|---|---|---|
| 2004 | 0.200 | | |
| 2005 | 0.000 | | |
| 2006 | 0.000 | | |
| 2007 | 0.000 | | |
| 2008 | 0.000 | | |
| Total | 0.200 | | |

**2.7 DOE Storage Compliance Assessment information:**

☒ Assessment has been completed.

| Document Number | Date |
|---|---|
| DE-AC06-96RL13200 | 09/26/2001 |

# LDR REPORT WASTE LOCATION-SPECIFIC DATA SHEET

☐ Assessment has been scheduled. Scheduled date:

☐ Other. Explain:

**2.8 Applicable Tri-Party Agreement milestones related to storage at this location:**

| Milestone Number | Due Date |
|---|---|
| N/A | N/A |

**2.9 Has there ever been any non-permitted, unauthorized release of this waste stream from this storage unit to the environment?**

☐ Yes ☒ No

If yes, summarize releases and quantities and provide date:

N/A

**2.10 Are there any plans to submit requests for variances or other exemptions related to storage?**

☐ Yes ☒ No

If yes, explain: N/A

**2.11 Characterization**

**2.11.1 Is further characterization needed about the waste prior to acceptance for storage?**

☐ Yes ☒ No ☐ Unknown at this time

| Milestone Number | Due Date |
|---|---|
| N/A | N/A |

If yes or unknown, comment on characterization for storage.

N/A

**2.11.2 Is further characterization needed about the waste prior to acceptance for treatment?**

☐ Yes ☒ No ☐ Unknown at this time

| Milestone Number | Due Date |
|---|---|
| N/A | N/A |

If yes or unknown, comment on characterization for treatment.

N/A

**2.11.3 Is further characterization needed about the waste prior to acceptance for disposal?**

☐ Yes ☒ No ☐ Unknown at this time

| Milestone Number | Due Date |
|---|---|
| N/A | N/A |

# LDR REPORT WASTE LOCATION-SPECIFIC DATA SHEET

If yes or unknown, comment on characterization for disposal.

N/A

**2.12 Other key assumptions related to storage, inventory, and generation information:**

None.

## 3.0 WASTE MINIMIZATION

**3.1 Has a waste minimization assessment been completed for this stream?**

☐ Yes ☒ No

If yes, provide date assessment conducted: N/A

If yes, provide document number or other identification:

N/A

If no, provide date assessment will be completed, or if waste stream is no longer generated, then indicate N/A:

**3.2 Provide details of current and proposed methods for minimizing the generation of this stream (e.g., process changes to reduce or eliminate LDR waste, methods to reduce volume through segregation and avoidance of commingling, substitution of less-toxic materials):**

To the extent practical, all mixed waste is segregated and packaged separately from LLW or TRU wastes. The volume of mixed waste is reduced by in-drum compaction when possible, and where it does not interfere with future treatment activities. To minimize the generation of mixed waste, generators actively seek nondangerous alternatives for the dangerous constituents in their processes. Minimization goals are set annually and tracked quarterly, and waste treatment is used to destroy the hazardous constituents, as allowable.

**3.3 Waste minimization schedule**

**3.3.1 Reduction achieved during calendar year 2003 (volume or mass)**

0.000 m3

**3.3.2 Projected future waste volume reductions**

| Year | $m^3$ | and/or | kg |
|---|---|---|---|
| 2004 | 0.000 | | |
| 2005 | 0.000 | | |
| 2006 | 0.000 | | |
| 2007 | 0.000 | | |
| 2008 | 0.000 | | |
| Total | 0.000 | | |

**3.3.3 Bases and assumptions used in above estimates:**

Since subject waste has already been generated and treated for direct disposal, no additional waste minimization activities are planned. WRAP does not generate this waste stream, rather this waste stream is generated by various generating facilities.

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