Solid Waste Integrated Forecast Technical (SWIFT) Report

**FY2001-FY2046
2001.0**

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SWIFT FY2001 Home Page

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Solid Waste Integrated Forecast Technical (*SWIFT*) Report 2001.0: FY2001 to FY2046

Welcome

Welcome to the *SWIFT* Report home page on radioactive solid waste forecasting!

This report provides up-to-date life cycle information about the radioactive solid waste expected to be managed by Hanford's Waste Management (WM) Project from onsite and offsite generators. It includes:

- an overview of Hanford-wide solid waste to be managed by the WM Project;
- program-level and waste class-specific estimates;
- background information on waste sources; and
- comparisons to previous forecasts and other national data sources.

This report does not include:

- waste to be managed by the Environmental Restoration (EM-40) contractor (i.e., waste that will be disposed of at the Environmental Restoration Disposal Facility (ERDF));
- waste that has been received by the WM Project to date (i.e., inventory waste);
- mixed low-level waste that will be processed and disposed by the River Protection Program; and
- liquid waste (current or future generation).

Although this report currently does not include liquid wastes, they may be added as information becomes available.

***SWIFT 2001.0* Report Sections**

» Highlights of LLW, MLLW, and TRU(M) Waste Forecast

» Waste Class Data

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Additional information is available in specialty reports/sections; highlighted text identifies the hypertext locations.

The focus of this report is low-level waste (LLW), mixed low-level waste (MLLW), and transuranic waste (both non-mixed and mixed) (TRU(M)). Some details on hazardous waste are also provided, however, this information is not considered comprehensive.

Currently, this report includes data requested on March 29, 2000 and includes updates through July 21, 2000. The data represent a life cycle forecast covering all reported activities from FY2001 through the end of each program's life cycle. Therefore, these data represent revisions from the previous FY2000.0 data version. The FY2001.0 request is the primary forecast for the year.

There is some useful information about the structure of this report in the SWIFT Report Web Site Overview.

Highlights of LLW, MLLW, and TRU(M) Waste Forecast

- A total of 175,110 m³ of LLW, MLLW, and TRU(M) waste is forecast for shipment to Hanford Waste Management (WM) over the life cycle of the site (2046).
- Based on ranges provided by the various programs the LLW, MLLW, and TRU(M) waste estimate could fluctuate between 95,820 m³ and 330,770 m³.
- As shown in the waste class distribution chart below, LLW I will be the most common waste class representing 51% (89,740 m³) of the waste. Large volumes of RH_MLLW (30,990 m³), CH_MLLW (26,690 m³), and CH_TRU(M) waste (15,900 m³) are also forecast. Smaller amounts of other waste classes are also forecast, as shown below.
- The Functional Group chart below shows that the River Protection Program and Offsite are the largest generators of LLW, MLLW, and TRU(M) waste, forecasting 53% (92,470 m³) and 17% (30,090 m³) of the total waste volume respectively. Other groups forecast large amounts of waste are also shown in the chart.
- The LLW, MLLW, and TRU(M) waste forecast increased 12% (18,260 m³) from the FY2000.0 forecast of 156,850 m³. This overall increase results from increases in the River Protection Program and Environmental Restoration countered by decreases in Transition Activities. Forecast changes by waste class can be seen in the table below.

Forecast Total Comparison to Previous Forecasts	FY2001.0 Forecast (m ³)	FY2000.0 Forecast (m ³)	FY1999.0 Forecast (m ³)
Waste Class			
LLW_I	89,740	94,680	98,780
LLW_III	7,870	5,890	39,950
CH_MLLW	29,690	15,700	24,110
RH_MLLW	30,990	30,640	28,740
CH_TRU(M)	15,900	8,380	7,300
RH_TRU(M)	920	1,560	1,680
GTCIII	6	6	--
Total	175,110	156,050	200,570

Waste Class Distribution

Functional Group Distribution

Note: Due to rounding, totals may not equal sum of individual values. Numbers over 10 m³ are rounded to the nearest 10 m³, numbers less than 10 m³ are rounded to integers, and numbers less than 1 are rounded to nearest 0.01 m³.

Waste Class Data

Information specific to each waste class, LLW, MLLW, and TRU(M) waste, is shown in the following graphs. The River Protection Program is the largest generator of LLW and MLLW, accounting for 36% and 91% of the volume of each waste class respectively. Environmental Restoration is the largest generator of TRU(M) waste, representing 68% of the volume. Debris is by far the most common waste form, representing 84% of the LLW, 64% of the MLLW, and 88% of the TRU(M) waste. MLLW primarily contains a combination of metal and organic characteristics or organic characteristics alone. These characteristics account for 62% and 29% of the MLLW respectively. TRU(M) waste is expected to contain a variety of characteristics including a combination of metals and organics (42%), organics (25%), and metals (20%). LLW is expected to be shipped in medium boxes (32%), MB-V boxes (26%), small boxes (19%), 208 liter drums (17%), and other containers. MLLW will be shipped primarily in long equipment containers (LECs) (46%), medium boxes (16%), 208 liter drums (16%), and small boxes (13%). TRU(M) waste containers are forecast mainly as standard waste boxes (SWBs) (60%), 208 liter drums (28%), and LECs (11%). Slightly over half (51%) of the MLLW is forecast for direct disposal as land disposal restrictions (LDR) compliant (MLLW-01). Organic carbonaceous debris waste requiring thermal treatment [MLLW-04 (OC)] and non-organic carbonaceous debris requiring non-thermal treatment [MLLW-04 (Non-OC)] also represent significant portions of the MLLW.

LLW Data

Functional Group Distribution

Forecast Total
LLW Total = 97,600 m³

Physical Waste Form

Forecast Total
LLW Total = 97,600 m³

Container Distribution

Forecast Total
LLW Total = 97,600 m³

MLLW Data

Functional Group Distribution

Forecast Total
MLLV Total = 60,680 m3

Physical Waste Form Distribution

Forecast Total
MLLV Total = 60,680 m3

Hazardous Characteristic Distribution

Forecast Total
MLLV Total = 60,670 m3

Container

Forecast Total
MLLV Total = 60,680 m3

LDR Waste Stream Identification Distribution

Forecast Total
MLLV Total = 60,680 m3

TRU(M) Waste Data

Functional Group Distribution

Physical Waste Form Distribution

Hazardous Characteristic Distribution

Container Distribution

Note: Due to rounding, totals may not equal sum of individual values. Numbers over 10 m³ are rounded to the nearest 10 m³, numbers less than 10 m³ are rounded to integers, and numbers less than 1 are rounded to nearest 0.01 m³.

Annual Waste Class Volumes

(Note: If the full width of the report does not display, either print Landscape (11 x 8.5) or reduce the image to 90 percent.)

Summary Waste Volumes (m³) Waste Class	Actual Receipts		FY2001.0 Forecast Volumes										Total
	1999	2000 thru 8-20-2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010-2045	
LLW_I	4,990	5,880	5,150	3,270	3,130	3,720	3,710	3,710	3,000	3,110	3,350	57,580	89,740
LLW_III	270	760	710	860	770	550	410	330	360	330	270	3,270	7,870
CH_MLLW	330	600	590	580	720	830	760	650	1,120	1,120	1,340	21,970	29,690
RH_MLLW	7	--	40	220	500	550	430	250	660	410	410	27,520	30,990
CH_TRU(M)	20	50	240	510	430	380	240	280	340	350	240	12,890	15,900
RH_TRU(M)	--	30	70	30	60	70	10	9	7	10	8	650	920
GTC_III	--	--	--	--	--	--	--	--	--	--	--	6	6
Total	5,296	7,290	6,800	5,470	5,600	5,190	5,570	5,240	5,500	5,340	5,820	123,880	175,110

Note: Due to rounding, totals may not equal sum of individual values. Numbers over 10 m³ are rounded to the nearest 10 m³, numbers less than 10 m³ are rounded to integers, and numbers less than 1 are rounded to nearest 0.01 m³.

The majority of LLW, MLLW, and TRU(M) waste is forecast for the period 2000 through

2028, during which time many generators expect to complete their waste-generating activities. A large amount (10,280 m³) of TRU(M) waste, however, has been added to the forecast by Environmental Restoration. By far the largest contributor to the overall forecast is the River Protection Program. Baseline volumes significantly decrease in 2029 with the assumed completion of the tank waste treatment projects.

Annual Baseline Volumes by Waste Class

Annual LLW Baseline Volumes

Annual MLLW Baseline Volumes

Annual TRU(M) Waste Baseline Volumes

**Annual TRU(M) Baseline By Waste Class
Forecast Total**

Summary Table (LLW, MLLW, and TRU(M) waste volumes in m³)

Forecast Summary Volumes	LLW_I	LLW_III ⁽¹⁾	CH_MLLW	RH_MLLW	CH_TRU(M)	RH_TRU(M)	FY 2001.0 Forecast (m³)	% of Total
Functional Groups								
River Protection Program	34,240	1,220	23,970	30,980	1,480	570	92,470	53%
Offsite	27,320	2,700	40	--	5	40	30,090	17%
Transition Activities	10,600	1,750	590	6	2,770	90	15,810	9%
Environmental Restoration	180	--	50	--	11,340	100	11,670	7%
Infrastructure	7,140	--	10	--	--	--	7,150	4%
Analytical Services	2,450	2,110	2,380	--	--	--	6,940	4%
Liquid Waste	4,700	--	2,210	--	--	--	6,900	4%
Solid Waste	2,360	--	230	--	--	--	2,590	1%
Spent Nuclear Fuel	500	--	40	--	280	120	940	< 1%
Pacific Northwest National Laboratory	240	90	170	--	30	10	540	< 1%
Total	83,740	7,870	29,690	30,990	15,900	920	175,110	100%
Percent	51%	4%	17%	18%	9%	< 1%	100%	

(1) 6 m³ of RH_LLW_GTCIII are included in the volumes reported for RH_LLW_III (1.28 m³ reported by the Waste Encapsulation & Storage Facility each year from 2017 to 2021).

Note: Due to rounding, totals may not equal sum of individual values. Numbers over 10 m³ are rounded to the nearest 10 m³, numbers less than 10 m³ are rounded to integers, and numbers less than 1 are rounded to nearest 0.01 m³.

Forecast Accuracy

- The overall trend in the forecast accuracy has improved significantly in recent years. In the first three years of the forecast (1990-1992), an average of only about 45% of forecasted waste was actually received but in the last seven years the average has been approximately 106%.
- The FY 1993 and FY 1994 receipt data include backlog wastes from Tank Farms resulting in more waste being received than was forecasted since these wastes weren't included in the forecasts for these years.
- Waste from offsite generators has been excluded from the comparison because the forecasts are technical in nature and don't reflect the changing political environment typically affecting receipts from offsite.
- A comparison of the FY 2000 receipts to the forecasted volumes will be added to the graph when year-end receipt information is available.

Comparison to Previous Baseline(s)

As shown in the following table, the LLW, MLLW, and TRU(M) waste forecast increased 12% (18,260 m³) from the FY2000.0 forecast of 156,850 m³. This overall increase results from increases in the River Protection Program and Environmental Restoration countered by decreases in Transition Activities.

The FY2000.0 LLW, MLLW, and TRU(M) forecast of 156,850 m³ decreased 22% (43,720 m³) from the FY99.0 forecast of 200,570 m³. This decrease results from decreases in the River Protection Program and the Landlord program countered by increases in Facility Transitions.

Forecast Total Comparison to Previous Forecasts Waste Class	FY2001.0 Forecast (m³)	FY2000.0 Forecast (m³)	FY1999.0 Forecast (m³)
LLW_I	89,740	94,680	98,780
LLW_III	7,870	5,890	39,950
CH_MLLW	29,690	15,700	24,110
RH_MLLW	30,990	30,640	28,740
CH_TRU(M)	15,900	8,380	7,300
RH_TRU(M)	920	1,560	1,680
GTCIII	6	6	--
Total	175,110	156,850	200,570

Note: Due to rounding, totals may not equal sum of individual values. Numbers over 10 m³ are rounded to the nearest 10 m³, numbers less than 10 m³ are rounded to integers, and numbers less than 1 are rounded to nearest 0.01 m³.

The largest percent changes for any waste classes occurred with CH_TRU(M) waste and CH_MLLW, which increased 90% (7,530 m³) and 89% (13,990 m³) respectively. The increase in CH_TRU(M) waste was due almost entirely to Environmental Restoration which added large amounts of waste from the retrieval of the 618-10 and 618-11 burial grounds.

The majority of the increase in the CH_MLLW forecast resulted from increases in the forecasts from SST/DST Tank Farm Operations and BNFL Tank Waste Pretreatment and Vitrification.

Other waste classes would also have shown large increases were it not for the 234-5 Z Plutonium Finishing Plant (PFP). This generator dramatically reduced its forecast in all waste classes due to experience gained from a similar project at Rocky Flats.

The table below lists all generators whose forecasts have changed significantly (greater than 1,000 m³ for LLW or greater than 100 m³ for MLLW and TRU(M) waste) from an overall forecast perspective from the FY2000.0 forecast to the FY2001.0 forecast.

Summary of Forecast Changes by Generator and Waste Class

The following table shows highlights of forecast changes by Waste Class, Program, and Generator. Included in the table are generators whose forecasts have changed by more than 1,000 m³ for LLW or more than 100 m³ for MLLW and TRU(M) waste.

Further details are available in the report Comparison, FY2001.0 to FY2000.0 Forecast.

Major increases (decreases) in Forecast Waste, by Waste Class, Functional Group, and Generator						
Functional Group	Generator	Waste Class	FY 2001.0 Volume	FY 2000.0 Volume	Increase (decrease)	% Increase (decrease)
Low-Level Waste Forecast Differences > 1,000 m³						
Infrastructure	DynCorp	LLW_I	7,143	186	6,957	3747%
Offsite	Parks Township	LLW_I	1,560	2,810	(1,250)	(-44%)
River Protection Program (RPP)	BNFL Tank Waste Pretreatment and Vitrification	LLW_I	5,500	-	5,500	(inf)
River Protection Program (RPP)	BNFL Tank Waste Pretreatment and Vitrification	LLW_III	1,224	-	1,224	(inf)
River Protection Program (RPP)	SST/DST Tank Farm Operations	LLW_I	28,040	9,985	18,055	181%
Solid Waste	2336-W Waste Receiving and Processing Facility	LLW_I	217	1,408	(1,191)	(-85%)
Transition Activities	234-5 Z Plutonium Finishing Plant	LLW_I	6,714	36,291	(29,577)	(-81%)
Transition Activities	300 Area Accelerated Closure Project	LLW_I	912	2,518	(1,605)	(-64%)
LLW Subtotal			51,310	53,197	(1,888)	(-4%)
LLW Forecast Total			87,603	100,568	(2,965)	(-3%)
Mixed Low-Level Waste Forecast Differences > 100 m³						
Analytical Services	6266 Waste Sampling & Characterization Facility	CH_MLLW	189	483	(294)	(-61%)
Liquid Waste	200 Area Liquid Waste Processing Facilities	CH_MLLW	2,160	2,530	(370)	(-15%)
Pacific Northwest National Laboratory	Pacific Northwest National Laboratory	CH_MLLW	165	334	(169)	(-51%)
River Protection Program (RPP)	BNFL Tank Waste Pretreatment and Vitrification	CH_MLLW	7,266	1,380	5,886	427%
River Protection Program (RPP)	BNFL Tank Waste Pretreatment and Vitrification	RH_MLLW	919	1,750	(831)	(-47%)
River Protection Program (RPP)	DST Retrieval Phase II (10 tanks)	CH_MLLW	1,352	1,652	(300)	(-18%)
River Protection Program (RPP)	DST Retrieval Phase II (10 tanks)	RH_MLLW	1,680	1,976	(296)	(-15%)
River Protection Program (RPP)	SST/DST Tank Farm Operations	CH_MLLW	13,016	3,929	9,087	231%
River Protection Program (RPP)	SST/DST Tank Farm Operations	RH_MLLW	137	1,011	(874)	(-86%)
River Protection Program (RPP)	Vadose Zone Well Drilling	CH_MLLW	470	262	209	80%
River Protection Program (RPP)	W-211 DST Retrieval Systems (10 tanks)	CH_MLLW	233	691	(459)	(-66%)
River Protection Program (RPP)	W-211 DST Retrieval Systems (10 tanks)	RH_MLLW	2,367	2,741	(384)	(-14%)
River Protection Program (RPP)	Waste Feed Delivery System (8 tanks)	CH_MLLW	379	-	379	(inf)
River Protection Program (RPP)	Waste Feed Delivery System (8 tanks)	RH_MLLW	2,766	-	2,766	(inf)
Solid Waste	221-T/2706-T T Plant Operations	CH_MLLW	225	72	153	213%
Transition Activities	200 Area Accelerated Deactivation	CH_MLLW	2	122	(120)	(-98%)
Transition Activities	234-5 Z Plutonium Finishing Plant	CH_MLLW	183	63	119	189%
Transition Activities	324 Building	CH_MLLW	166	27	139	509%
MLLW Subtotal			33,664	19,023	14,641	77%
MLLW Forecast Total			68,682	46,350	14,332	31%

Transuranic and Mixed Transuranic Waste Forecast Differences > 100 m³						
Environmental Restoration	Surplus Facilities	CH_TRU(M)	11,338	1,409	9,929	705%
Environmental Restoration	Surplus Facilities	RH_TRU(M)	102	-	102	(inf)
River Protection Program (RPP)	W-211 DST Retrieval Systems (10 tanks)	RH_TRU(M)	-	183	(183)	(-100%)
River Protection Program (RPP)	Waste Feed Delivery System (8 tanks)	CH_TRU(M)	987	-	987	(inf)
Spent Nuclear Fuel	100-K K-Basin Operations	CH_TRU(M)	278	-	278	(inf)
Transition Activities	200 Area Accelerated Deactivation	CH_TRU(M)	3	330	(327)	(-99%)
Transition Activities	234-5 Z Plutonium Finishing Plant	CH_TRU(M)	2,199	5,110	(2,910)	(-57%)
Transition Activities	300 Area Accelerated Closure Project	CH_TRU(M)	501	744	(243)	(-33%)
Spent Nuclear Fuel	K-Basin Fuel Sampling Project	CH_TRU(M)	-	154	(154)	(-100%)
Spent Nuclear Fuel	K-Basin Fuel Sampling Project	RH_TRU(M)	-	612	(612)	(-100%)
TRU(M) Subtotal			15,408	8,541	6,866	80%
TRU(M) Forecast Total			16,825	9,937	6,889	69%

Comparison to National Data Calls

The Waste Management Project's forecast data is reported to several national data calls throughout a given fiscal year. Although these data calls draw from the same baseline (i.e., the Solid Waste Forecast Database), the reported data can sometimes appear to be different, due to the specific data requirements of the particular national data call. The following table displays the "differences" in data reported to several recent site and national data calls. In many cases, the differences in the estimates can be attributed to updated information. Differences in the estimates due to the assumptions used to prepare each estimate are described below.

Comparison to National Data Calls	SVF FY2001.0	SVF FY2000.0	SVF FY99.0	MYWP 3/2000	PBS 2/2000	VM PEIS Supplement 9/98	EM Integration 2/98	Final VM PEIS 5/97	BIR, Rev 3 4/96	BEMR 1/96
Waste Class										
LLW	97,610	100,570	138,740	97,610	100,570	159,930	130,320	89,000	NA	359,730
MLLW	60,676	46,340	52,860	60,676	46,340	69,100	63,740	36,000	NA	104,790
TRU(M) Waste	16,825	9,940	8,980	16,825	9,940	NA	8,030	52,000	13,110	26,230

The 9/2000 Multi-Year Work Plan (MYWP) is consistent with the FY2001.0 Solid Waste forecast. The 2/2000 Project Baseline Summary (PBS) used the FY2000.0 forecast as its source for solid waste forecast estimates. The PBS is expected to be updated in December 2000 and will use the FY2001.0 forecast data.

The Waste Management (WM) Programmatic Environmental Impact Statement (EIS) Supplement of 9/98 includes inventory wastes, some post-processing volumes, and different assumptions about offsite waste receipts at Hanford.

The Environmental Management (EM) Integration report of 2/98 is consistent with the FY98.0 forecast with the exception that it assumes a life cycle end date of 2046 whereas the FY98.0 forecast assumed an end date of 2070.

The Final WM PEIS of 5/97 only includes inventory wastes and 20 years of future generation. A significant portion of the currently forecasted wastes are expected to be generated beyond the period covered by this document.

The Baseline Inventory Report (BIR), Rev.3 of 4/96 reports only TRU(M) waste to the Waste Isolation Pilot Plant; therefore, LLW and MLLW waste levels are excluded from this national data call. In addition, offsite waste is also excluded. Finally, this report includes an interim update (dated 3/96) to the River Protection Program's RH_TRU waste.

The Baseline Environmental Management Report (BEMR) differs from all data calls because it includes both before- and after-processing disposal volumes while other national data calls require before-processing volumes.

Identified But Not Forecasted Activities

Several Hanford Site activities have been identified that are not included in the forecasts of any of the reporting waste generators. This is often the case for future facilities or missions for which a responsible program has not been determined. The following lists several activities, or wastes that will be generated, but for which forecast data are not included in the current report.

Secondary Waste Generation from Phase 2 Tank Waste Privatization:

The forecasts for the BNFL Tank Waste Pretreatment and Vitrification does not include estimates for Phase 2 waste treatment. Phase 2 is expected to process considerably more waste than Phase 1 and would likely result in at least as much waste as the 14,980 m³ forecasted for Phase 1.

Stored Equipment:

Previous forecasts included large volumes (4,000 m³ in FY97.0 and 7,080 m³ in earlier forecasts) of HELD MLLW from the Stored Equipment generator. This generator has not completed a forecast since 1992, however, and no program currently has responsibility for the material. The general assumption for Stored Equipment is that the material is currently not declared waste. If the path forward for this material is determined to be the Waste Management Program, however, the material would be designated as MLLW.

D&D of future facilities and the Tank Farms:

D&D volume estimates have not been provided for any facilities that are not on the Surplus Facilities List. In addition, forecasts have not been completed for several facilities currently in a surveillance and maintenance mode. Therefore, D&D waste from facilities such as the canyon facilities, the PUREX tunnels, and the tank farms are not included in this baseline despite the fact that large amounts of waste might be generated from the eventual closure of these facilities.

As programmatic responsibilities and DOE Complex-wide issues are resolved, forecasts for these waste generating activities will be better defined and included in future baselines.

Forecast Background

Since 1989, a waste volume forecast has been collected annually from onsite and offsite generators planning to ship waste to the Hanford WM Project's Central Waste Complex (CWC). The waste is generated from ongoing operations and maintenance, deactivation, decontamination and decommissioning (D&D), and environmental restoration (ER) activities. The generators provide details about:

- the amount of waste to be generated or shipped each year,
- the containers that will be used to ship the waste, and
- the specific characteristics of the waste.

The focus of this report is on low-level waste (LLW), mixed low-level waste (MLLW) and transuranic waste - both non-mixed and mixed - (TRU(M)). However some details about hazardous (HAZ) waste are also included.

This document is intended to be used as a reference for short- and long-term planning of Waste Management (WM) Hanford treatment, storage, and disposal (TSD) activities over the next several decades. Facility planners can use this document to:

- determine the timing of key waste management activities
- evaluate alternative treatment strategies, and
- plan storage and disposal capacities.

Other Forecast Data

- **Hazardous Waste**

- The total volume of HAZ waste included in the FY2001.0 forecast is 1,760 m³. Although HAZ waste is requested in the forecast, estimates are often not provided because the waste is shipped directly offsite for disposition. Therefore, it is expected that this is only a subset of the total HAZ waste that will be generated at the Hanford site.

For questions or comments, please contact Roberta Barcot
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Analytical Services

Analytical Services Report Sections

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» <u>Comparison to Previous Baseline(s)</u>	

Highlights of LLW, MLLW, and TRU(M) Waste Forecast

- The life cycle total of LLW and MLLW expected from Analytical Services is 6,940 m³, or 4% of the forecast total.
- The forecast life cycle for the Analytical Services functional group ends in 2046.
- The waste classes forecast by Analytical Services are CH_MLLW (34%), LLW_I (35%), and LLW_III (30%).
- As shown in the generator distribution chart below, the 222-S Analytical Laboratory is the major source of waste, forecasting 93% (6,450 m³) of the waste volume. The 6266 Waste Sampling and Characterization Facility accounts for 7% (490 m³) of the waste.
- The FY2001.0 forecast shows a 10% decrease from the FY2000.0 forecast of 7,700 m³, due to the removal of overpack containers from the 6266 Waste Sampling & Characterization Facility's forecast and waste reduction goals at the 222-S Analytical Laboratory.

Waste Class Distribution **Generator Distributions** **Waste Class Data**

The expected physical waste forms, hazardous characteristics, container types, and LDR waste stream identification distribution of Analytical Services' forecasted wastes are described in the following charts.

Debris is the primary waste form for both LLW and MLLW. The majority of the LLW is expected to be shipped in MB-V boxes and 208 liter drums.

The primary hazardous characteristic for MLLW is organic. MLLW is expected to be shipped mostly in 208 liter drums and medium boxes. The primary LDR waste stream identification distribution for MLLW is organic carbonaceous debris waste that requires thermal treatment.

LLW Data**Physical Waste Form Distribution** **Container Distribution** **MLLW Data**

Physical Waste Form Distribution

Hazardous Characteristic Distribution

Container Distribution

LDR Waste Stream Identification Distribution

Note: Due to rounding, totals may not equal sum of individual values. Numbers over 10 m³ are rounded to the nearest 10 m³, numbers less than 10 m³ are rounded to integers, and numbers less than 1 are rounded to nearest 0.01 m³.

Annual Waste Class Volumes

Analytical Services waste is expected to be generated at a fairly constant rate until the expected closure of the 222-S Analytical Laboratory in 2035. Waste will continue to be generated at a constant, although much lower, rate until the end of the life cycle in 2046. The small peak from 2012 to 2014 results from modernization upgrades to this laboratory.

Annual Minimum, Baseline and Maximum Volumes

Annual Baseline by Waste Class

Annual LLW Baseline Volumes

Annual MLLW Baseline Volumes

Summary Table (Volumes in m³)

(in descending order by total volume)

Analytical Services Summary Volumes	LLW_I	LLW_III	CH_MLLW	RL_MLLW	CH_TRU(M)	RL_TRU(M)	FY 2001.0 Forecast (m³)	% of Total
Generators								
222-S Analytical Laboratory	2,150	2,110	2,190	--	--	--	6,450	93%
6266 Waste Sampling & Characterization Facility	300	--	190	--	--	--	490	7%
Total	2,450	2,110	2,380	--	--	--	6,940	100%
Percent	35%	30%	34%				100%	

Note: Due to rounding, totals may not equal sum of individual values. Numbers over 10 m³ are rounded to the nearest 10 m³, numbers less than 10 m³ are rounded to integers, and numbers less than 1 are rounded to nearest 0.01 m³.

Comparison to Previous Baseline(s)

The FY2001.0 forecast shows a 10% decrease from the FY2000.0 forecast of 7,700 m³, due to the removal of overpack containers from the 6266 Waste Sampling & Characterization Facility's forecast and waste reduction goals at the 222-S Analytical Laboratory.

The FY2000.0 forecast shows a 58% increase from the FY99.0 forecast, mainly due to an increase in the forecast of 222-S Analytical Laboratory.

Comparison to Previous Baseline(s) by Waste Class

Analytical Services Comparison to Previous Forecasts	FY2001.0 Forecast (m³)	FY2000.0 Forecast (m³)	FY1999.0 Forecast (m³)
Waste Class			
LLW_I	2,450	2,720	3,220
LLW_II	2,110	2,240	110
CH_MLLW	2,380	2,750	1,550
Total	6,940	7,700	4,870

Note: Due to rounding, totals may not equal sum of individual values. Numbers over 10 m³ are rounded to the nearest 10 m³, numbers less than 10 m³ are rounded to integers, and numbers less than 1 are rounded to nearest 0.01 m³.

Background

The Analytical Services functional group provides analytical field support and process development services to other Site functional groups using onsite and offsite analytical laboratories. Analytical Services also provides field sampling, field screening, mobile laboratories, and data deliverables.

Solid waste will be generated from laboratory analyses of Double-Shell and Single-Shell Tank waste samples, Hanford site sample returns and laboratory standards, and organic chemicals or supplies used in support of analytical testing.

Forecast Assumptions and Comments

The life cycle end dates for the 222-S Analytical Laboratory and the 6266 Waste Sampling and Characterization Facility have been assumed to be 2035 and 2046 respectively. Modernization upgrades have been assumed for the 222-S Laboratory from August 2013 to September 2015, resulting in slightly higher waste volumes generated from 2012 to 2014. The increase in waste volumes from 2012 to 2014 presumably results from cleanout activities prior to the start of the modernization upgrades. Volume estimates for all generators were prepared using operational history and expected generation rates.

Other Forecast Data

- **Hazardous Waste**

- A life cycle total of 900 m³ of hazardous waste has been reported by generators in this functional group.

For questions or comments, please contact Roberta Barcot
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Analytical Services — 222-S Analytical Laboratory

222-S Analytical Laboratory Report Sections

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Highlights of LLW, MLLW, and TRU(M) Waste Forecast

- This generator contributes 6,450 m³, or 93% of Analytical Services' waste forecast.
- The forecast life cycle for the 222-S Analytical Laboratory ends in 2035.
- The waste classes forecast are divided roughly evenly between LLW_I, LLW_III and CH_MLLW as shown in the chart below.
- The FY2001.0 forecast shows a 4% decrease from the FY2000.0 forecast of 6,740 m³ due to facility waste reduction goals.

Waste Class Distribution

Waste Class Data

The expected physical waste forms, hazardous characteristics, container types, and LDR waste stream

identification distribution of the 222-S Analytical Laboratory's forecasted wastes are described in the following charts.

LLW Data

Physical Waste Form Distribution

Container Distribution

MLLW Data

Physical Waste Form Distribution

Hazardous Characteristic Distribution

Container Distribution

LDR Waste Stream Identification Distribution

Note: Due to rounding, totals may not equal sum of individual values. Numbers over 10 m³ are rounded to the nearest 10 m³, numbers less than 10 m³ are rounded to integers, and numbers less than 1 are rounded to nearest 0.01 m³.

Annual Volumes

Annual Minimum, Baseline, and Maximum Volumes

Annual LLW Baseline Volumes

Annual MLLW Baseline Volumes

Comparison to Previous Baseline(s)

The FY2001.0 forecast shows a 4% decrease from the FY2000.0 forecast due to facility waste reduction goals.

The FY2000.0 forecast shows a 91% increase from the FY99.0 forecast because the FY99.0 forecast assumed a large decrease in waste generation due to an expected decrease in tank characterization work. The decrease in waste generation did not occur; therefore, the forecast

volumes increased in FY2000.0.

Comparison to Previous Baseline(s) by Waste Class

222-S Analytical Laboratory Comparison to Previous Forecasts	FY2001.0 Forecast (m³)	FY2000.0 Forecast (m³)	FY1999.0 Forecast (m³)
Waste Class			
LLW_J	2,150	2,240	2,380
LLW_M	2,110	2,240	110
CH_MLLW	2,190	2,260	1,050
Total	6,450	6,740	3,530

Note: Due to rounding, totals may not equal sum of individual values. Numbers over 10 m³ are rounded to the nearest 10 m³, numbers less than 10 m³ are rounded to integers, and numbers less than 1 are rounded to nearest 0.01 m³.

Background

The mission of 222-S Analytical Laboratory is to support all Hanford clean-up activities. The majority of the laboratory workload, approximately 60 to 70%, however, is in support of tank farms.

Solid waste will be generated from laboratory analyses of Double-Shell and Single-Shell Tank waste samples and construction activities. Main forms of waste include metal, organic, and plastic/rubber debris.

Forecast Assumptions and Comments

From August 2013 through September 2015 the 222-S Laboratory will undergo a major modernization upgrade project to keep it operational through the year 2035. The increase in waste volumes from 2012 to 2014 presumably results from cleanout activities prior to the start of the modernization upgrades. After shutdown of the tank farms the laboratory will still support other cleanup processes.

Low-level compactible waste will undergo compaction before it is sent to burial grounds.

Other Forecast Data

- **Hazardous Waste**

- A life cycle total of 890 m³ of hazardous waste has been reported by 222-S Analytical Laboratory.

For questions or comments, please contact Roberta Barcot
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Analytical Services — 6266 Waste Sampling & Characterization Facility

6266 Waste Sampling & Characterization Facility Report Sections

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» Forecast Assumptions and Comments

» Other 6266 Waste Sampling & Characterization Facility Forecast Data

»» Detailed Forecast Data

Highlights of LLW, MLLW, and TRU(M) Waste Forecast

- This generator contributes 490 m³, or 7% of Analytical Services' waste forecast.
- The forecast life cycle for the 6266 Waste Sampling and Characterization Facility ends in 2046.
- As shown in the chart below, LLW_I (61%) and CH_MLLW (39%) are the only waste classes forecast.
- The FY2001.0 forecast shows a 50% decrease from the FY2000.0 forecast of 970 m³ due to the removal of the overpack containers from the forecast.
- This forecast includes waste from 622F (Weather Station) Accumulation Pad.

Waste Class Distribution

**6266 Waste Sampling & Characterization Facility
Total (excl. HAZ) = 490 m³**

Waste Class Data

The expected physical waste forms, hazardous characteristics, container types, and LDR waste stream identification distribution of the 6266 Waste Sampling and Characterization Facility's forecasted wastes are described in the following charts.

LLW Data

Physical Waste Form Distribution

Container Distribution

MLLW Data

Physical Waste Form Distribution

Hazardous Characteristic Distribution

Container Distribution

LDR Waste Stream Identification Distribution

Note: Due to rounding, totals may not equal sum of individual values. Numbers over 10 m³ are rounded to the nearest 10 m³, numbers less than 10 m³ are rounded to integers, and numbers less than 1 are rounded to nearest 0.01 m³.

Annual Volumes

Annual Minimum, Baseline and Maximum Volumes

Annual LLW Baseline Volumes

Annual MLLW Baseline Volumes

Comparison to Previous Baseline(s)

The FY2001.0 forecast shows a 50% decrease from the FY2000.0 forecast of 970 m³ due to

the removal of the overpack containers from the forecast.

In addition, the FY2001.0 forecast includes waste from 622F (Weather Station) Accumulation Pad; however, these volumes are bounded by the maximum estimates. Therefore, the addition of 622F has not changed the forecast.

The FY2000.0 forecast shows a 27% decrease from the FY99.0 forecast of 1,320 m³.

Comparison to Previous Baseline(s) by Waste Class

6266 Waste Sampling & Characterization Facility Comparison to Previous Forecasts	FY2001.0 Forecast (m³)	FY2000.0 Forecast (m³)	FY1999.0 Forecast (m³)
Waste Class			
LLW_I	300	480	820
CH_MLLW	190	480	490
Total	490	960	1,320

Note: Due to rounding, totals may not equal sum of individual values. Numbers over 10 m³ are rounded to the nearest 10 m³, numbers less than 10 m³ are rounded to integers, and numbers less than 1 are rounded to nearest 0.01 m³.

Background

The mission of the 6266 Waste Sampling and Characterization Facility is to analyze low-level radioactive and non-radioactive samples that may originate from any location on the Hanford Site. LLW consists of compactible and non-compactible waste. Most of the LLW that is generated qualifies for compaction. MLLW will contain laboratory lab pack waste as well as commercial lab sample returns consisting of organic compounds. The forecast includes commercial lab sample returns.

Forecast Assumptions and Comments

This forecast is based on historical generation, current known processes rates and characterization with facility closure planned for 2046.

This forecast includes waste generated from the SAS vapor program, maintenance waste and waste generated from the analytical analysis process.

Hazardous waste consists of maintenance waste, expired reagents and standards.

Compactible LLW is accumulated until there is a sufficient quantity to ship to ATG for compaction. ATG ships the waste to the burial grounds.

Other Forecast Data

- **Hazardous Waste**

- A life cycle total of 9 m³ of hazardous waste has been reported by 6266 Waste Sampling and Characterization Facility.

For questions or comments, please contact Roberta Barcot
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Environmental Restoration

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» <u>Comparison to Previous Baseline(s)</u>	

Highlights of LLW, MLLW, and TRU(M) Waste Forecast

- The life cycle total of LLW, MLLW, and TRU(M) waste expected from Environmental Restoration is 11,670 m³, or 7% of the forecast total.
- The forecast life cycle for the Environmental Restoration functional group ends in 2042.
- CH_TRU(M) is the primary waste class forecast, representing 97% (11,340 m³) of the Environmental Restoration waste volume.
- As shown in the generator distribution chart below, the only generator included in this program is Surplus Facilities.
- The FY2001.0 forecast for Environmental Restoration shows a 9,780 m³ increase from the FY2000.0 forecast of 1,890 m³ primarily due to revised CH_TRU(M) waste forecast estimates for the 618-11 Burial Grounds.

Waste Class Distribution

Generator Distributions

Waste Class Data

The expected physical waste forms, hazardous characteristics, container types, and LDR waste stream identification distribution of Environmental Restoration forecasted wastes are described in the following charts.

LLW is expected to be primarily organic solids (75%) with some debris (25%). LLW will largely be shipped in 208 Liter Drums (68%) and MB-Vs (29%).

MLLW is also primarily organic solids (75%) with some debris (25%) and will largely be shipped in MB-Vs (55%) and 208 Liter Drums (36%). Hazardous characteristics of the forecast MLLW are primarily organic (74%) and metals (27%) which makes the LDR waste stream identification distribution primarily organic carbonaceous debris requiring thermal treatment.

TRU(M) waste are expected to be almost entirely debris. Hazardous characteristics of TRUM waste are forecast entirely as metals. TRU(M) waste will be shipped in SWBs (85%) and 208 liter drums (15%).

LLW Data

Physical Waste Form Distribution

Container Distribution

MLLW Data

Physical Waste Form Distribution

Hazardous Characteristic Distribution

Container Distribution

LDR Waste Stream Identification Distribution

TRU(M) Waste Data

Physical Waste Form Distribution

Hazardous Characteristic Distribution

Container Distribution

Environmental Restoration Functional Group
TRU(M) Total = 11,440 m³

Note: Due to rounding, totals may not equal sum of individual values. Numbers over 10 m³ are rounded to the nearest 10 m³, numbers less than 10 m³ are rounded to integers, and numbers less than 1 are rounded to nearest 0.01 m³.

Annual Waste Class Volumes

Environmental Restoration waste is expected to be generated intermittently throughout the functional group's life cycle, with the majority of the waste forecast from 2037 to 2042 which reflects the waste projection for the 618-11 Burial Grounds. The shipment schedule is based on cleanup projects currently within the Environmental Restoration program.

Annual Minimum, Baseline, and Maximum Volumes

Annual Baseline by Waste Class

Annual LLW Baseline Volumes

**Annual LLW Baseline By Waste Class
Environmental Restoration**

Annual MLLW Baseline Volumes

**Annual MLLW Baseline By Waste Class
Environmental Restoration**

Annual TRU(M) Waste Baseline Volumes

**Annual TRU(M) Baseline By Waste Class
Environmental Restoration**

Summary Table (Volumes in m³)

(in descending order by total volume)

Environmental Restoration Summary Volumes	LLW_I	LLW_III	CH_MLLW	RH_MLLW	CH_TRU(M)	RH_TRU(M)	FY 2001.0 Forecast (m ³)	% of Total
Generators								
Surplus Facilities	180	--	50	--	11,340	100	11,670	100%
Total	180	--	50	--	11,340	100	11,670	100%
Percent	2%		< 1%		97%	< 1%	100%	

Note: Due to rounding, totals may not equal sum of individual values. Numbers over 10 m³ are rounded to the nearest 10 m³, numbers less than 10 m³ are rounded to integers, and numbers less than 1 are rounded to nearest 0.01 m³.

Comparison to Previous Baseline(s)

The FY2001.0 forecast for Environmental Restoration shows a 9,780 m³ increase from the FY2000.0 forecast of 1,890 m³ due to revised CH_TRU(M) waste forecast estimates for the 618-11 Burial Grounds.

The FY2000.0 forecast shows a 19% (300 m³) increase from the FY99.0 forecast of 1,590 m³. This increase is due to the forecast being altered to match the EM-40 Waste Stream Disposition Map.

Comparison to Previous Baseline(s) by Waste Class

Environmental Restoration Comparison to Previous Forecasts	FY2001.0 Forecast (m ³)	FY2000.0 Forecast (m ³)	FY1999.0 Forecast (m ³)
Waste Class			
LLW_I	180	430	40
CH_MLLW	50	50	50
CH_TRU(M)	11,340	1,410	1,490
RH_TRU(M)	100	--	--
Total	11,670	1,890	1,590

Note: Due to rounding, totals may not equal sum of individual values. Numbers over 10 m³ are rounded to the nearest 10 m³, numbers less than 10 m³ are rounded to integers, and numbers less than 1 are rounded to nearest 0.01 m³.

Background

The mission of the Richland Environmental Restoration Project is to perform cleanup activities to preserve, protect, or restore the Hanford Site to allow other beneficial uses. The Remedial Action summary subproject includes the management, identification, assessment, and remediation of the Hanford Site past-practice waste sites that have been inactive since March 1, 1987. Also included are the identification and completion of interim stabilization actions to mitigate the potential for the expansion of contaminated zones and disposition of nonradioactive underground storage tanks and certain Resource Conservation and Recovery Act of 1976 (RCRA) facilities. Decontamination & Decommissioning (D&D) includes the surveillance & maintenance of facilities awaiting decommissioning as well as the D&D of facilities, abatement of asbestos, and compliance with all applicable regulations.

The ER Disposal Facilities Summary subproject includes the planning, construction, and

operation of all storage and disposal facilities required for the success of the Richland ER Project. The major piece of work scope is a final disposal facility that will receive and isolate low-level radioactive waste, hazardous waste, or a combination thereof, generated by remediation of the Hanford Site past-practice waste sites.

The waste identified in this forecast is primarily estimated from those projects and facilities currently under the D&D Subproject. No forecast will be submitted for waste generated under CERCLA or RCRA past practices cleanup activities.

Forecast Assumptions and Comments

The waste identified in this forecast is primarily from those projects and facilities currently under the Decontamination and Decommissioning Subproject. No forecast was submitted for waste generated under CERCLA or RCRA past practices clean-up activities. The facilities in this forecast are identified in the "Surplus Facilities Surveillance & Maintenance Plan - FY96" and "Facility Transition Work Scope - 9/95" (BHI00369). This plan assumes that transfer facilities have had major contamination removed prior to transition. Only a small amount of facility MLLW debris is anticipated each fiscal year. Since waste has not been identified characterization cannot be completed and any forecast would be inaccurate.

Increases in RH TRU waste volume estimates in FY2001 forecast are related to current engineering data for the 618-10 (FY09-FY14) and 618-11 (FY38-FY42) burial grounds.

Although waste acceptance protocols for transuranic (TRU) and transuranic-mixed (TRUM) waste have recently been developed, shipment dates for TRU and TRUM still have a low degree of predictability. Increases in TRU waste volume estimates in this FY2001 Forecast are related to current engineering data for the 618-10 and 618-11 (FY38-FY42) burial grounds and the FY01-FY03 Detailed Work Plan estimate for 233-S. All transuranic and transuranic mixed waste will be sent to Fluor Hanford.

Most facilities under the Environmental Restoration program are not fully characterized. A general building characterization is not sufficient to forecast solid waste quantities, physical waste forms, percentage of hazardous characteristics or the levels of radionuclides. Characterization is normally done just prior to decommissioning.

CERCLA wastes and RCRA Past Practice wastes are not included in this forecast. There also is a possibility that many of the current facilities may be reclassified as CERCLA sites. A reclassification will reduce the amount of forecast waste substantially because this reclassified waste will be deposited in the Environmental Restoration Disposal Facility (ERDF) unless they contain an untreatable Land Disposal Restricted (LDR) material. Because of the high probability that solid waste from the decontamination and decommissioning of ERC contract facilities will be classified as CERCLA, this estimate does not include quantities for these facilities.

Historical data is the least used form of characterization. This data is commonly used for a qualitative determination on the nature of required sampling. Normally, all wastes are characterized through individual package sampling, recent facility characterization, and/or NDA, all of which produce a higher degree of waste confidence than historical data. This type of waste sampling is done immediately prior to decontamination and decommissioning. Waste estimates for the radionuclide concentration will have a very low confidence level

Estimates for transuranic waste changed significantly with the FY2000 forecast due to new engineering estimates for 618-10 and 618-11 burial grounds. At this time, we find that predicting projects and waste generation beyond 12 months produces very low forecast confidence. Other projects which were previously forecast for a different time period are

presently in progress. Any forecasting beyond 6 months may fluctuate as priorities, budgets, and work scopes change.

Other Forecast Data

- **Hazardous Waste**

- No hazardous waste has been forecasted by this functional group.

For questions or comments, please contact Roberta Barcot
(e-mail: Roberta_A_Barcot@rl.gov, voice: (509) 373-4752).

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Environmental Restoration — Surplus Facilities

Because Surplus Facilities is the only generator within the Environmental Restoration functional group that will ship waste to the CWC, waste information for this generator is identical to that found on the functional group page.

For questions or comments, please contact Roberta Barcot
(e-mail: Roberta_A_Barcot@rl.gov, voice: (509) 373-4752).

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Infrastructure

Infrastructure Report Sections

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» <u>Annual Waste Class Volumes</u>	» <u>Other Infrastructure Forecast Data</u>
» <u>Summary Table</u>	»» <u>Detailed Forecast Data</u>
» <u>Comparison to Previous Baseline(s)</u>	

Highlights of LLW, MLLW, and TRU(M) Waste Forecast

- The life cycle total of LLW and MLLW expected from the Infrastructure functional group is 7,150 m³, or 4% of the forecast total.
- The forecast life cycle for the Infrastructure functional group ends in 2046.
- LLW_I is the primary waste class forecast, representing almost 100% (7,140 m³) of the Infrastructure functional group waste volume. As shown below, a very small amount of CH_MLLW (10 m³) is also forecasted by this functional group.
- As shown in the generator distribution chart below, the only generator included in this functional group is DynCorp.
- The FY2001.0 forecast shows a 6,950 m³ increase from the FY2000.0 forecast of 200 m³ due to tumble weed removal and its disposal as LLW. This waste stream was not previously included in the forecast.

Waste Class Distribution

Generator Distributions

Waste Class Data

The expected physical waste forms, hazardous characteristics, container types, and LDR waste stream identification distribution of Infrastructure's forecasted wastes are described in the following charts.

LLW is expected to be inorganic solids shipped in medium boxes (97%) and MB-V boxes (3%).

MLLW is also expected to be inorganic solids but will be shipped in 208 liter drums. The hazardous characteristics of the MLLW is expected to be entirely metals with the LDR waste stream identification distribution being inorganic debris requiring non-thermal treatment.

LLW Data

Physical Waste Form Distribution

Container Distribution

MLLW Data

Physical Waste Form Distribution

Hazardous Characteristic Distribution

Container Distribution

LDR Waste Stream Identification Distribution

Note: Due to rounding, totals may not equal sum of individual values. Numbers over 10 m³ are rounded to the nearest 10 m³, numbers less than 10 m³ are rounded to integers, and numbers less than 1 are rounded to nearest 0.01 m³.

Annual Waste Class Volumes

The waste generation of the Infrastructure functional group is expected to decrease linearly until 2011 after which it will be nearly constant at about 130 m³ per year.

Annual Minimum, Baseline, and Maximum Volumes

Annual Baseline by Waste Class

Annual LLW Baseline Volumes

**Annual LLW Baseline By Waste Class
Infrastructure**

Annual MLLW Baseline Volumes

**Annual MLLW Baseline By Waste Class
Infrastructure**

Summary Table (Volumes in m³)

(in descending order by total volume)

Infrastructure Summary Volumes Generators	LLW_I	LLW_III	CH_MLLW	RH_MLLW	CH_TRU(M)	RH_TRU(M)	FY 2001.0 Forecast (m³)	% of Total
DynCorp	7,140	--	10	--	--	--	7,150	100%
Total	7,140	--	10	--	--	--	7,150	100%
Percent	99%		< 1%				100%	

Note: Due to rounding, totals may not equal sum of individual values. Numbers over 10 m³ are rounded to the nearest 10 m³, numbers less than 10 m³ are rounded to integers, and numbers less than 1 are rounded to nearest 0.01 m³.

Comparison to Previous Baseline(s)

The FY2001.0 forecast shows a 6,950 m³ increase from the FY2000.0 forecast of 200 m³ due to tumble weed removal and its disposal as LLW. This waste stream was not previously included in the forecast.

The FY2000.0 forecast shows a 98% decrease from the FY99.0 forecast of 9,850 m³ because the disposal of the locomotives is no longer expected.

Comparison to Previous Baseline(s) by Waste Class

Infrastructure Comparison to Previous Forecasts	FY2001.0 Forecast (m ³)	FY2000.0 Forecast (m ³)	FY1999.0 Forecast (m ³)
Waste Class			
LLW_I	7,140	190	9,730
CH_MLLW	10	10	120
Total	7,150	200	9,850

Note: Due to rounding, totals may not equal sum of individual values. Numbers over 10 m³ are rounded to the nearest 10 m³, numbers less than 10 m³ are rounded to integers, and numbers less than 1 are rounded to nearest 0.01 m³.

Background

DynCorp Tri-Cities Services provides all essential infrastructure service in support of the Hanford Site. General site services may require occasional cleanup/disposal of rad-contaminated debris/equipment (tumbleweeds (LLW), contaminated transformers, railcar equipment etc.).

Funding will remain available to complete tasks and present work scope will not change. Most waste generation results from non-routine activities where LLW and/or MLLW is generated incidental to other activities within the landlord scope of work. Compactor truck used to collect tumbleweeds is considered routine LLW generation.

Forecast Assumptions and Comments

This forecast includes an estimate of waste volume due to tumble weed removal and its disposal as LLW. Other LLW and MLLW waste are assumed to result from contaminated clothing and sampling.

It is assumed that funding will remain available to complete tasks and present work scope will not change.

LLW may be compacted by ATG (as appropriate) and MLLW will be stabilized prior to shipment.

Other Forecast Data

• Hazardous Waste

- No hazardous waste has been reported by generators in this functional group.

For questions or comments, please contact Roberta Barcot
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Liquid Waste

Liquid Waste Report Sections

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» <u>Annual Waste Class Volumes</u>	» <u>Other Liquid Waste Forecast Data</u>
» <u>Summary Table</u>	»» <u>Detailed Forecast Data</u>
» <u>Comparison to Previous Baseline(s)</u>	

Highlights of LLW, MLLW, and TRU(M) Waste Forecast

- The life cycle total of LLW and MLLW expected from the Liquid Waste functional group is 6,900 m³, or 4% of the forecast total.
- The forecast life cycle for Liquid Waste ends in 2046.
- LLW_I is the primary waste class forecast, representing 68% (4,700 m³) of the Liquid Waste functional group waste volume. As shown in the waste class distribution chart below, the remaining 32% (2,210 m³) of the waste volume is CH_MLLW.
- The 300 Area Liquid Effluent Facilities (LEF) are the major source of waste, forecasting 67% (4,640 m³) of the waste volume. The 200 Area Liquid Waste Processing Facilities (LWPF) account for 33% (2,260 m³).
- The FY2001.0 forecast shows a 6% decrease from the FY2000.0 forecast of 7,350 m³.

Waste Class Distribution

Generator Distributions

Waste Class Data

The expected physical waste forms, hazardous characteristics, container types, and LDR waste stream identification distribution of the Liquid Waste functional group's forecasted wastes are described in the following charts.

LLW is expected to be primarily inorganic solids that will be shipped mostly in medium boxes.

MLLW is expected to be primarily inorganic solids with a combination of ignitables, corrosives, metals, organics and state regulated hazardous characteristics. Most of the MLLW is expected to be shipped in 208 liter drums (97%) with a much smaller amount shipped in extra large boxes. The primary LDR waste stream identification distribution for this waste is LDR compliant waste that can be direct disposed.

LLW Data

Physical Waste Form Distribution

Container Distribution

MLLW Data

Physical Waste Form Distribution

Liquid Waste Functional Group
MLLV Total = 2,210 m³

Hazardous Characteristic Distribution

Liquid Waste Functional Group
MLLV Total = 2,210 m³

Container Distribution

Liquid Waste Functional Group
MLLV Total = 2,210 m³

LDR Waste Stream Identification Distribution

Liquid Waste Functional Group
MLLV Total = 2,210 m³

Note: Due to rounding, totals may not equal sum of individual values. Numbers over 10 m³ are rounded to the nearest 10 m³, numbers less than 10 m³ are rounded to integers, and numbers less than 1 are rounded to nearest 0.01 m³.

Annual Waste Class Volumes

The Liquid Waste functional group is expected to generate solid waste at a fairly constant rate of between 200 m³ and 300 m³ per year through 2030, corresponding to the life-cycle end date for 300 Area Liquid Effluent Facilities. Slight fluctuations occur through 2006 due to the CH_MLLW estimates from the 200 Area Liquid Waste Processing Facilities. These fluctuations reflect the assumed process feed streams at the facility.

Annual Minimum, Baseline, and Maximum Volumes

Annual Baseline by Waste Class

Annual LLW Baseline Volumes

Annual MLLW Baseline Volumes

Summary Table (Volumes in m³)

(in descending order by total volume)

Liquid Waste Summary Volumes	LLW_I	LLW_IN	CH_MLLW	RI_MLLW	CH_TRU(M)	RI_TRU(M)	FY 2001.0 Forecast (m³)	% of Total
Generators								
300 Area Liquid Effluent Facilities	4,590	--	50	--	--	--	4,640	67%
200 Area Liquid Waste Processing Facilities	100	--	2,160	--	--	--	2,260	33%
Total	4,700	--	2,210	--	--	--	6,900	100%
Percent	68%		32%				100%	

Note: Due to rounding, totals may not equal sum of individual values. Numbers over 10 m³ are rounded to the nearest 10 m³, numbers less than 10 m³ are rounded to integers, and numbers less than 1 are rounded to nearest 0.01 m³.

Comparison to Previous Baseline(s)

The FY2001.0 forecast shows a 6% decrease from the FY2000.0 forecast of 7,350 m³ primarily due to the elimination of the year 2000 volumes.

The FY2000.0 forecast shows a 2% decrease from the FY99.0 forecast of 7,520 m³ primarily due to the elimination of the FY99 forecasted volumes.

Comparison to Previous Baseline(s) by Waste Class

Liquid Waste Comparison to Previous Forecasts	FY2001.0 Forecast (m³)	FY2000.0 Forecast (m³)	FY1999.0 Forecast (m³)
Waste Class			
LLW_J	4,700	4,770	5,100
CH_MLLW	2,210	2,590	2,420
Total	6,910	7,350	7,520

Note: Due to rounding, totals may not equal sum of individual values. Numbers over 10 m³ are rounded to the nearest 10 m³, numbers less than 10 m³ are rounded to integers, and numbers less than 1 are rounded to nearest 0.01 m³.

Background

The Liquid Waste mission is to provide waste volume reduction support to tank waste remediation and to manage current and future liquid effluent streams in a cost-effective and legally compliant manner. The functional group generates solid waste during the treatment of liquid waste from the 242-A Evaporator, 200 Area facilities, and 300 Area facilities. The forecast life-cycle for generators within this program extends through 2046.

The facilities that generate solid waste have been grouped into two broad waste generators: the 200 Area Liquid Waste Processing Facilities and the 300 Area Liquid Effluent Facilities. The 200 Area Liquid Waste Processing Facilities include the 242-A Evaporator, Liquid Waste Retention Facility (LERF), the Effluent Treatment Facility (ETF), the 200 Area Treated Effluent Disposal Facility (TEDF), and state-approved land disposal sites in the 200 Area. The 300 Area Liquid Effluent Facilities include the 307 Basins, the 340 Waste Neutralization Facility, and the 300 Area Treated Effluent Disposal Facility (TEDF).

Forecast Assumptions and Comments

The 300 Area Liquid Effluent Facilities forecast assumes that wastewater characteristics and volumes do not change significantly. It is also assumed that funding is available for the 340 Waste Neutralization Facility shutdown and the generated debris will not require additional treatment.

The forecast wastes for 200 Area Liquid Waste Processing Facilities's are generated from the processing of waste water performed at 200 LWPF and also from maintenance activities associated with the operations. The waste volumes provided in this forecast are based on expected feeds scheduled to be processed at the 200 LWPF in the Multi-Year forecast. Waste characteristics were established by past operational knowledge, (i.e. Sampling, Process flow, Spent Solvents, etc).

Other Forecast Data

- **Hazardous Waste**

- A life cycle total of 170 m³ of hazardous waste has been reported by generators in this functional group.

For questions or comments, please contact Roberta Barcot
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Liquid Waste — 200 Area Liquid Waste Processing Facilities

200 Area Liquid Waste Processing Facilities Report Sections

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» <u>Comparison to Previous Baseline(s)</u>	»» <u>Detailed Forecast Data</u>

Highlights of LLW, MLLW, and TRU(M) Waste Forecast

- This generator contributes 2,260 m³, or 33% of the Liquid Waste's forecast.
- The forecast life cycle for the 200 Area Liquid Waste Processing Facilities ends in 2046.
- CH_MLLW is the primary waste class forecast, representing 95% (2,160 m³) of the waste volume. A small amount of LLW_I (100 m³) is also shown in the chart below.
- The FY2001.0 forecast shows a 13% decrease from the FY2000.0 forecast of 2,600 m³. This change reflects the current understanding of expected process feed at the facility.

Waste Class Distribution

**200 Area Liquid Waste Processing Facilities
Total (excl. HAZ) = 2,260 m³**

Waste Class Data

The expected physical waste forms, hazardous characteristics, container types, and LDR waste stream

identification distribution of the 200 Area Liquid Waste Processing Facilities' forecasted wastes are described in the following charts.

LLW Data

Physical Waste Form Distribution

200 Area Liquid Waste Processing Facilities
LLW Total = 100 m³

Container Distribution

200 Area Liquid Waste Processing Facilities
LLW Total = 100 m³

MLLW Data

Physical Waste Form Distribution

200 Area Liquid Waste Processing Facilities
MLLW Total = 2,160 m³

Hazardous Characteristic Distribution

200 Area Liquid Waste Processing Facilities
MLLW Total = 2,160 m³

Container Distribution

200 Area Liquid Waste Processing Facilities
MLLW Total = 2,160 m³

LDR Waste Stream Identification Distribution

200 Area Liquid Waste Processing Facilities
MLLW Total = 2,160 m³

Note: Due to rounding, totals may not equal sum of individual values. Numbers over 10 m³ are rounded to the nearest 10 m³, numbers less than 10 m³ are rounded to integers, and numbers less than 1 are rounded to nearest 0.01 m³.

Annual Volumes

Annual Minimum, Baseline, and Maximum Volumes

Annual LLW Baseline Volumes

Annual MLLW Baseline Volumes

Comparison to Previous Baseline(s)

The FY2001.0 forecast shows a 13% decrease from the FY2000.0 forecast of 2,600 m³. This change reflects the current understanding of expected process feed at the facility.

The FY2000.0 forecast shows a 4% increase from the FY99.0 forecast of 2,500 m³.

Comparison to Previous Baseline(s) by Waste Class

200 Area Liquid Waste Processing Facilities Comparison to Previous Forecasts	FY2001.0 Forecast (m³)	FY2000.0 Forecast (m³)	FY1999.0 Forecast (m³)
Waste Class			
LLW_J	100	70	70
CH_MLLW	2,160	2,530	2,420
Total	2,260	2,600	2,500

Note: Due to rounding, totals may not equal sum of individual values. Numbers over 10 m³ are rounded to the nearest 10 m³, numbers less than 10 m³ are rounded to integers, and numbers less than 1 are rounded to nearest 0.01 m³.

Background

The 200 Area Liquid Waste Processing Facilities's mission is to treat liquid waste generated from RCRA and CERCLA activities. The 200 Area Liquid Waste Processing Facilities include the 242-A Evaporator, Liquid Waste Retention Facility (LERF), the Effluent Treatment Facility (ETF), the 200 Area Treated Effluent Disposal Facility (TEDF), and state-approved land disposal sites in the 200 Area. Solid wastes are generated during the processing of liquid wastes by the Effluent Treatment Facility and 242-A Evaporator.

Forecast Assumptions and Comments

The forecast wastes for 200 Area Liquid Waste Processing Facilities's are generated from the processing of waste water performed at 200 LWPF and also from maintenance activities associated with the operations

The waste volumes provided in this forecast are based on expected feeds scheduled to be processed at the 200 LWPF in the Multi-Year forecast.

Waste characteristics were established by past operational knowledge, (i.e. Sampling, Process flow, Spent Solvents, etc).

Other Forecast Data

• Hazardous Waste

- A life cycle total of 100 m³ of hazardous waste has been reported by 200 Area Liquid Waste Processing Facilities.

For questions or comments, please contact Roberta Barcot
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Liquid Waste — 300 Area Liquid Effluent Facilities

300 Area Liquid Effluent Facilities Report Sections

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» <u>Comparison to Previous Baseline(s)</u>	»» <u>Detailed Forecast Data</u>

Highlights of LLW, MLLW, and TRU(M) Waste Forecast

- This generator contributes 4,640 m³, or 67% of the Liquid Waste functional group's forecast.
- The forecast life cycle for the 300 Area Liquid Effluent Facilities ends in 2030.
- LLW_I is the primary waste class forecast (4,590 m³); a small amount of CH_MLLW is also forecast (50 m³).
- The FY2001.0 forecast shows a 2% decrease from the FY2000.0 forecast of 4,750 m³ due to the elimination of the year 2000 volumes.

Waste Class Distribution

**300 Area Liquid Effluent Facilities
Total (excl. HAZ) = 4,640 m³**

Waste Class Data

The expected physical waste forms, hazardous characteristics, container types, and LDR waste stream

identification of the 300 Area Liquid Effluent Facilities' forecasted wastes are described in the following charts.

LLW Data

Physical Waste Form Distribution

300 Area Liquid Effluent Facilities
LLW Total = 4,590 m³

Container Distribution

300 Area Liquid Effluent Facilities
LLW Total = 4,590 m³

MLLW Data

Physical Waste Form Distribution

300 Area Liquid Effluent Facilities
MLLW Total = 50 m³

Hazardous Characteristic Distribution

300 Area Liquid Effluent Facilities
MLLW Total = 50 m³

Container Distribution

300 Area Liquid Effluent Facilities
MLLW Total = 50 m³

LDR Waste Stream Identification Distribution

300 Area Liquid Effluent Facilities
MLLW Total = 50 m³

Note: Due to rounding, totals may not equal sum of individual values. Numbers over 10 m³ are rounded to the nearest 10 m³, numbers less than 10 m³ are rounded to integers, and numbers less than 1 are rounded to nearest 0.01 m³.

Annual Volumes

Annual Minimum, Baseline, and Maximum Volumes

**Annual Minimum, Baseline, and Maximum Volumes
Liquid Waste — 300 Area Liquid Effluent Facilities**

Annual LLW Baseline Volumes

**Annual LLW Baseline By Waste Class
Liquid Waste--300 Area Liquid Effluent Facilities**

Annual MLLW Baseline Volumes

**Annual MLLW Baseline By Waste Class
Liquid Waste--300 Area Liquid Effluent Facilities**

Comparison to Previous Baseline(s)

The FY2001.0 forecast shows a 2% decrease from the FY2000.0 forecast of 4,750 m³ due to the elimination of the year 2000 volumes. In addition, the majority of the decrease in the CH_MLLW volume resulted from a reclassification of ion exchange resins from MLLW to LLW.

The FY2000.0 forecast shows a 6% decrease from the FY99.0 forecast due to the

elimination of the FY99 forecast volumes. In addition, the FY2000.0 forecast shows CH_MLLW that was not previously forecast, which will be generated from the removal of the resins at the 300 Area Treated Effluent Disposal Facility.

Comparison to Previous Baseline(s) by Waste Class

300 Area Liquid Effluent Facilities Comparison to Previous Forecasts	FY2001.0 Forecast (m³)	FY2000.0 Forecast (m³)	FY1999.0 Forecast (m³)
Waste Class			
LLW_I	4,590	4,690	5,030
CH_MLLW	50	60	--
Total	4,640	4,750	5,030

Note: Due to rounding, totals may not equal sum of individual values. Numbers over 10 m³ are rounded to the nearest 10 m³, numbers less than 10 m³ are rounded to integers, and numbers less than 1 are rounded to nearest 0.01 m³.

Background

The mission of the 300 Area Liquid Effluent Facilities (LEF) is to treat and dispose of 300 Area Process Sewer effluent and to collect and transport 300 Area radioactive liquid waste system discharges to the double-shell tanks. The 300 Area Liquid Effluent Facilities include the 307 Basins, the 340 Waste Neutralization Facility, and the 300 Area Treated Effluent Disposal Facility (TEDF).

Wastewaters are received, sampled, treated, and discharged at the 300 Area Treated Effluent Disposal Facility (TEDF). The 340 Waste Neutralization Facility entered deactivation transition in FY99.

Wastes generated by the 300 Area Liquid Effluent Facilities will include miscellaneous debris, personal protective equipment, and cleanout wastes from the 340 Waste Neutralization Facility maintenance and shutdown. Bulk LLW will be generated during wastewater treatment processes at the Treated Effluent Disposal Facility.

Forecast Assumptions and Comments

This forecast assumes that wastewater characteristics and volumes do not change significantly. It also assumes the 300 Area Treated Effluent Disposal Facility will continue to operate at its present processing rate.

Other Forecast Data

- **Hazardous Waste**

- A lifecycle total of 70 m³ of hazardous waste has been reported by 300 Area Liquid Effluent Facilities.

For questions or comments, please contact Roberta Barcot
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Offsite

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» <u>Summary Table</u>	»» <u>Detailed Forecast Data</u>
» <u>Comparison to Previous Baseline(s)</u>	

Highlights of LLW, MLLW, and TRU(M) Waste Forecast

- The life cycle total of LLW, MLLW, and TRU(M) waste expected from Offsite is 30,090 m³, or 17% of the forecast total.
- The forecast life cycle for the Offsite functional group ends in 2046.
- LLW_I is the primary waste class forecast, representing 91% (27,320 m³) of the Offsite waste volume. The remaining waste classes are shown below.
- Argonne National Laboratory-East and Brookhaven National Laboratory are the largest generators in this functional group representing 34% and 29% of the waste respectively. As shown in the generator distribution chart below, a number of other generators account for the remainder of the waste.
- The FY2001.0 forecast for Offsite shows a 7% decrease from the FY2000.0 forecast of 32,390 m³ due primarily to a decrease in waste expected from Parks Township since the waste forecast for shipment in FY2000 is no longer included in the forecast.

Waste Class Distribution

Offsite Functional Group
Total (excl. HAZ) = 30,090 m3

Generator Distributions

Offsite Functional Group
Total (excl. HAZ) = 30,690 m3

Waste Class Data

The expected physical waste forms, hazardous characteristics, container types, and LDR waste stream identification distribution for Offsite forecasted LLW, MLLW, and TRU(M) waste are described in the following charts.

LLW is expected to be primarily debris waste shipped mostly in small and medium boxes.

MLLW is expected to be inorganic solids and debris waste with the primary hazardous characteristic being metals. MLLW is expected to be shipped in 208 liter drums and require non-thermal treatment as inorganic solids (MLLW-02) and non-carbonaceous debris (MLLW-04 Non-OC).

TRU(M) waste is expected to be debris, final form, and inorganic solids shipped mostly in 208 liter drums. The primary hazardous characteristic is expected to be metals with PCBs <50ppm.

LLW Data**Physical Waste Form Distribution**

Offsite Functional Group
LLW Total = 30,020 m3

Container Distribution

Offsite Functional Group
LLW Total = 30,020 m3

MLLW Data

Physical Waste Form Distribution

Hazardous Characteristic Distribution

Container Distribution

LDR Waste Stream Identification Distribution

TRU(M) Waste Data

Physical Waste Form Distribution

Hazardous Characteristic Distribution

Container Distribution

Note: Due to rounding, totals may not equal sum of individual values. Numbers over 10 m³ are rounded to the nearest 10 m³, numbers less than 10 m³ are rounded to integers, and numbers less than 1 are rounded to nearest 0.01 m³.

Annual Waste Class Volumes

Offsite waste is expected to be generated from 2001 to the end of the Hanford life cycle in 2046. Most of the baseline volume is forecast from 2001 through 2006, generally fluctuating between 1,300 m³ and 3,800 m³ annually. From 2007 to the end of the life cycle in 2046, the baseline volumes remain fairly constant at about 500 m³ annually. The large maximum volumes from 2001 to 2009 are forecast by Rocky Flats, University of California, Davis, and Lawrence Berkeley Laboratory. These generators have large volumes of waste that are not currently approved for shipment to Hanford and therefore have been placed in the maximum forecast estimate. The Rocky Flats waste could be of particular significance because this waste is MLLW.

Annual Minimum, Baseline, and Maximum Volumes

Annual Baseline by Waste Class

Annual LLW Baseline Volumes

Annual MLLW Baseline Volumes

Annual TRU(M) Waste Baseline Volumes

Summary Table (Volumes in m³)

(in descending order by total volume)

Offsite Summary Volumes Generators	LLV_I	LLV_III	CH_MLLV	RH_MLLV	CH_TRU(M)	RH_TRU(M)	FY 2001.0 Forecast (m³)	% of Total
Argonne National Laboratory-East	9,420	860	--	--	--	--	10,280	34%
Brookhaven National Laboratory	8,590	--	--	--	--	--	8,590	29%
Princeton Plasma Physics Lab	2,370	--	--	--	--	--	2,370	8%
Fermi National Accelerator Laboratory	1,700	--	--	--	--	--	1,700	6%
Parks Township	1,560	--	--	--	--	--	1,560	5%
Energy Technology Engineering Center (ETEC)	1,510	--	--	--	3	10	1,530	5%
Battelle Columbus Laboratories	410	670	6	--	--	20	1,110	4%
Bettis Atomic Power-Laboratory	--	1,010	0.26	--	--	--	1,010	3%
Stanford Linear Accelerator Center	840	--	--	--	--	--	840	3%
Knolls Atomic Power-Shipyards	250	60	--	--	--	--	310	1%
Portsmouth Energy Systems	290	--	--	--	--	--	290	< 1%
Lawrence Berkeley Laboratory	250	--	--	--	--	--	250	< 1%
Ames Laboratory-Ames, Iowa	120	0.26	--	--	--	--	120	< 1%
Paducah Energy Systems	--	90	--	--	--	--	90	< 1%
Knolls Atomic Power-Laboratory	--	--	20	--	--	--	20	< 1%
Bates Accelerator-Massachusetts	10	--	--	--	--	--	10	< 1%
Puget Sound Naval Shipyards	--	--	10	--	--	--	10	< 1%
Siemens Power Corp.	--	--	--	--	--	9	9	< 1%
Pearl Harbor Naval Shipyards	--	--	3	--	--	--	3	< 1%
Missouri University Research Reactor	--	--	--	--	2	--	2	< 1%
Bettis Atomic Power-Shipyards	1	--	--	--	--	--	1	< 1%
Portsmouth Naval Shipyards	--	--	0.77	--	--	--	0.77	< 1%
University of California, Davis (LEHR)	--	--	--	--	--	--	--	--
Rocky Flats	--	--	--	--	--	--	--	--
Total	27,320	2,700	40	--	5	40	30,090	100%
Percent	91%	9%	< 1%		< 1%	< 1%	100%	

Note: Due to rounding, totals may not equal sum of individual values. Numbers over 10 m³ are rounded to the nearest 10 m³, numbers less than 10 m³ are rounded to integers, and numbers less than 1 are rounded to nearest 0.01 m³.

Comparison to Previous Baseline(s)

The FY2001.0 forecast shows a 7% decrease from the FY2000.0 forecast of 32,390 m³ due primarily to a decrease in waste expected from Parks Township since the waste forecast for shipment in FY2000 is no longer included in the forecast.

The FY2000.0 forecast for Offsite shows a 25% increase from the FY99.0 forecast of 25,930 m³ due to increased environmental waste expected from Brookhaven National Laboratory.

Comparison to Previous Baseline(s) by Waste Class

Offsite Comparison to Previous Forecasts Waste Class	FY2001.0 Forecast (m ³)	FY2000.0 Forecast (m ³)	FY1999.0 Forecast (m ³)
LLW_I	27,320	30,140	23,250
LLW_III	2,700	2,220	2,540
CH_MLLW	40	30	150
CH_TRU(M)	5	--	--
RH_TRU(M)	40	--	--
Total	30,090	32,390	25,930

Note: Due to rounding, totals may not equal sum of individual values. Numbers over 10 m³ are rounded to the nearest 10 m³, numbers less than 10 m³ are rounded to integers, and numbers less than 1 are rounded to nearest 0.01 m³.

Background

The missions for Offsite waste generators include general maintenance and operations, environmental restoration, D&D, and research and development. There are 24 generators within the Offsite functional group. Due to moratoriums placed on MLLW and TRU(M) waste, very little of this waste is included in the baseline forecast.

Forecast Assumptions and Comments

The most common assumptions among Offsite generators are that funding levels will remain as expected and the status for shipping waste to Hanford will not change. The majority of Offsite generators only include LLW in their forecast because Site Treatment Plans (STP) that designate Hanford as the primary MLLW treatment or disposal site have not been developed and/or approved. In addition, some generators have included D&D waste in their maximum estimate due to uncertainties surrounding acceptance of this waste.

Other Forecast Data

- **Hazardous Waste**

- No hazardous waste has been reported by Offsite generators.

For questions or comments, please contact Roberta Barcot
(e-mail: Roberta_A_Barcot@rl.gov, voice: (509) 373-4752).

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Offsite — Ames

Ames Report Sections

» Highlights	» Background
» Waste Class Data	» Forecast Assumptions and Comments
» Annual Volumes	» Other Ames Forecast Data
» Comparison to Previous Baseline(s)	» Detailed Forecast Data

Highlights of LLW, MLLW, and TRU(M) Waste Forecast

- This generator contributes 120 m³, or <1% of Offsite's waste forecast.
- The forecast life cycle for the Ames Laboratory ends in 2046.
- LLW_I and LLW_III are the only waste classes forecast.
- The FY2001.0 forecast shows a 2% increase from the FY2000.0 forecast of 110 m³.

Waste Class Distribution

Waste Class Data

The expected physical waste forms and container types of Ames' forecasted wastes are described in the following charts.

LLW Data

Physical Waste Form Distribution

Container Distribution

Note: Due to rounding, totals may not equal sum of individual values. Numbers over 10 m³ are rounded to the nearest 10 m³, numbers less than 10 m³ are rounded to integers, and numbers less than 1 are rounded to nearest 0.01 m³.

Annual Volumes

Annual Minimum, Baseline, and Maximum Volumes

Annual LLW Baseline Volumes

Comparison to Previous Baseline(s)

The FY2001.0 forecast shows a 2% increase from the FY2000.0 forecast of 110 m³ due to additional processing knowledge.

The FY2000.0 forecast shows a 29% increase from the FY99.0 forecast of 90 m³. All of the forecasted waste will be in the form of inorganic debris, as opposed to previous forecasts which included some inorganic solids.

Comparison to Previous Baseline(s) by Waste Class

Ames Laboratory-Ames, Iowa Comparison to Previous Forecasts	FY2001.0 Forecast (m ³)	FY2000.0 Forecast (m ³)	FY1999.0 Forecast (m ³)
Waste Class			
LLW_I	120	110	90
LLW_II	0.26	--	--
Total	120	110	90

Note: Due to rounding, totals may not equal sum of individual values. Numbers over 10 m³ are rounded to the nearest 10 m³, numbers less than 10 m³ are rounded to integers, and numbers less than 1 are rounded to nearest 0.01 m³.

Background

The primary mission of Ames Laboratory is to conduct basic and intermediate range applied research in physical, mathematical, and engineering sciences that underlie energy technologies and other areas of national importance. Ames Laboratory is involved in materials preparation and processing, chemical sciences and materials reliability to solve complex materials problems in energy production and utilization.

Forecast Assumptions and Comments

Ames Laboratory assumes that facility renovations will continue as research projects change. TRU and TRUM wastes will be shipped directly to WIPP. Ames' MLLW will continue to be disposed by a subcontractor.

Other Forecast Data

- **Hazardous Waste**

- No hazardous waste has been reported by Ames Laboratory.

For questions or comments, please contact Roberta Barcot
(e-mail: Roberta_A_Barcot@rl.gov, voice: (509) 373-4752).

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Offsite — Argonne National Laboratory - East

Argonne National Laboratory - East Report Sections

» Highlights	» Background
» Waste Class Data	» Forecast Assumptions and Comments
» Annual Volumes	» Other Argonne National Laboratory - East Forecast Data
» Comparison to Previous Baseline(s)	» Detailed Forecast Data

Highlights of LLW, MLLW, and TRU(M) Waste Forecast

- Argonne National Laboratory - East is expected to send the most offsite waste, contributing 10,280 m³, or 34% of Offsite's waste forecast.
- The forecast life cycle for the Argonne National Laboratory - East ends in 2046.
- LLW_I and LLW_III are the only waste classes forecast. LLW_I accounts for 92% (9,420 m³).
- The FY2001.0 forecast shows a 7% decrease from the FY2000.0 forecast of 11,040 m³.

Waste Class Distribution

Waste Class Data

The expected physical waste forms and container types of Argonne National Laboratory - East's forecasted wastes are described in the following charts.

LLW Data

Physical Waste Form Distribution

Argonne National Laboratory-East
LLW Total = 10,288 m³

Container Distribution

Argonne National Laboratory-East
LLW Total = 10,288 m³

Note: Due to rounding, totals may not equal sum of individual values. Numbers over 10 m³ are rounded to the nearest 10 m³, numbers less than 10 m³ are rounded to integers, and numbers less than 1 are rounded to nearest 0.01 m³.

Annual Volumes

Annual Minimum, Baseline, and Maximum Volumes

Annual LLW Baseline Volumes

Comparison to Previous Baseline(s)

The FY2001.0 forecast shows a 7% decrease from the FY2000.0 forecast due to the elimination of the year 2000 waste projections.

The FY2000.0 forecast shows a 13% decrease from the FY99.0 forecast of 12,740 m³

Comparison to Previous Baseline(s) by Waste Class

Argonne National Laboratory-East Comparison to Previous Forecasts	FY2001.0 Forecast (m ³)	FY2000.0 Forecast (m ³)	FY1999.0 Forecast (m ³)
Waste Class			
LLW_I	9,420	10,150	11,860
LLW_III	860	890	890
Total	10,280	11,040	12,740

Note: Due to rounding, totals may not equal sum of individual values. Numbers over 10 m³ are rounded to the nearest 10 m³, numbers less than 10 m³ are rounded to integers, and numbers less than 1 are rounded to nearest 0.01 m³.

Background

Argonne National Laboratory - East is one of the U.S. Department of Energy's largest research centers. Argonne's research falls into four broad categories: (1) Basic Science, (2) Scientific Facilities, (3) Energy Resources, and (4) Environmental Management. Most of Argonne's waste is from bench-scale research.

Forecast Assumptions and Comments

General laboratory waste streams will be generated as a result of research and development; it is assumed that current and future funding will be available.

Other Forecast Data

• Hazardous Waste

- No hazardous waste has been reported by Argonne National Laboratory - East.

For questions or comments, please contact Roberta Barcot
(e-mail: Roberta_A_Barcot@rl.gov, voice: (509) 373-4752).

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Offsite — Bates Accelerator - Massachusetts

Bates Accelerator - Massachusetts Report Sections

» <u>Highlights</u>	» <u>Background</u>
» <u>Waste Class Data</u>	» <u>Forecast Assumptions and Comments</u>
» <u>Annual Volumes</u>	» <u>Other Bates Accelerator - Massachusetts Forecast Data</u>
» <u>Comparison to Previous Baseline(s)</u>	»» <u>Detailed Forecast Data</u>

Highlights of LLW, MLLW, and TRU(M) Waste Forecast

- This generator contributes 10 m³, or <1% of Offsite's waste forecast.
- The forecast life cycle for the Bates Accelerator-Massachusetts ends in 2045.
- LLW_I is the only waste class forecast.
- The FY2001.0 forecast shows no volume change from the FY2000.0 forecast.

Waste Class Distribution

Waste Class Data

The physical waste forms and container types for Bates Accelerator-Massachusetts' waste is shown in the following charts.

LLW Data

Physical Waste Form Distribution

Container Distribution

Note: Due to rounding, totals may not equal sum of individual values. Numbers over 10 m³ are rounded to the nearest 10 m³, numbers less than 10 m³ are rounded to integers, and numbers less than 1 are rounded to nearest 0.01 m³.

Annual Volumes

Annual Minimum, Baseline, and Maximum Volumes

Annual LLW Baseline Volumes

Comparison to Previous Baseline(s)

The FY2001.0 and FY2000.0 forecasts show no volume change from the FY99.0 forecast.

Comparison to Previous Baseline(s) by Waste Class

Bates Accelerator-Massachusetts Comparison to Previous Forecasts	FY2001.0 Forecast (m ³)	FY2000.0 Forecast (m ³)	FY1999.0 Forecast (m ³)
Waste Class			
LLW_I	10	10	10
Total	10	10	10

Note: Due to rounding, totals may not equal sum of individual values. Numbers over 10 m³ are rounded to the nearest 10 m³, numbers less than 10 m³ are rounded to integers, and numbers less than 1 are rounded to nearest 0.01 m³.

Background

Bates Linear Accelerator is a high energy electron facility with a principle focus on electron scattering. The generated waste will be limited to class CH_LLW_I and consist of resin used in the cooling water purification system and activated machine components.

Forecast Assumptions and Comments

This forecast is based on waste generated from existing operations. It is assumed that the accelerator will continue to operate at existing levels.

Waste generated from the decommissioning of Bates is expected to be shipped to Hanford, however, volumes and shipping dates are not known at this time.

Other Forecast Data

- **Hazardous Waste**

- No hazardous waste has been reported by Bates Accelerator-Massachusetts.

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(e-mail: Roberta_A_Barcot@rl.gov, voice: (509) 373-4752).

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Offsite — Battelle Columbus Laboratories

Battelle Columbus Laboratories Report Sections

» Highlights	» Background
» Waste Class Data	» Forecast Assumptions and Comments
» Annual Volumes	» Other Battelle Columbus Laboratories Forecast Data
» Comparison to Previous Baseline(s)	»» Detailed Forecast Data

Highlights of LLW, MLLW, and TRU(M) Waste Forecast

- This generator contributes 1,110 m³, or 4% of Offsite's waste forecast.
- The forecast life cycle for Battelle Columbus Laboratories ends in 2005.
- LLW_III and LLW_I are the primary waste classes forecast, representing 61% and 37% of the total forecast. As shown below, a small amount CH_MLLW is also forecast. The amount of CH_MLLW forecast is consistent with the Site Treatment Plan (STP) for Battelle Columbus.
- The FY2001.0 forecast shows a 11% decrease from the FY2000.0 forecast of 1,240 m³ due to the elimination of the year 2000 forecast volumes.

Waste Class Distribution

Waste Class Data

The expected physical waste forms, hazardous characteristics, container types LDR waste stream identification distribution of Battelle Columbus' forecast wastes are described in the following charts.

LLW Data

Physical Waste Form Distribution

Battelle Columbus Laboratories
LLW Total = 1,090 m3

Container Distribution

Battelle Columbus Laboratories
LLW Total = 1,090 m3

MLLW Data

Physical Waste Form Distribution

Battelle Columbus Laboratories
MLLW Total = 6 m3

Hazardous Characteristic Distribution

Battelle Columbus Laboratories
MLLW Total = 6 m3

Container Distribution

Battelle Columbus Laboratories
MLLW Total = 6 m3

LDR Waste Stream Identification Distribution

Battelle Columbus Laboratories
MLLW Total = 6 m3

TRU(M)Waste Data

Physical Waste Form Distribution

Battelle Columbus Laboratories
TRU(M) Total = 28 m³

Hazardous Characteristic Distribution

Battelle Columbus Laboratories
Total (TRUM only) = 4 m³

Container Distribution

Battelle Columbus Laboratories
TRU(M) Total = 28 m³

Note: Due to rounding, totals may not equal sum of individual values. Numbers over 10 m³ are rounded to the nearest 10 m³, numbers less than 10 m³ are rounded to integers, and numbers less than 1 are rounded to nearest 0.01 m³.

Annual Volumes

Annual Minimum, Baseline, and Maximum Volumes

Annual LLW Baseline Volumes

Annual MLLW Baseline Volumes

Annual TRU(M) Waste Baseline Volumes

Comparison to Previous Baseline(s)

The FY2001.0 forecast shows a 11% decrease from the FY2000.0 forecast of 1,240 m³ due to the elimination of the year 2000 forecast volumes.

The FY2000.0 forecast shows a 27% decrease from the FY99.0 forecast of 1,700 m³ due to a change in the decontamination and decommissioning (D&D) schedule.

Comparison to Previous Baseline(s) by Waste Class

Battelle Columbus Laboratories Comparison to Previous Forecasts	FY2001.0 Forecast (m ³)	FY2000.0 Forecast (m ³)	FY1999.0 Forecast (m ³)
Waste Class			
LLW_I	410	500	760
LLW_III	670	730	940
CH_MLLW	6	6	8
RH_TRU(M)	20	--	--
Total	1,110	1,240	1,700

Note: Due to rounding, totals may not equal sum of individual values. Numbers over 10 m³ are rounded to the nearest 10 m³, numbers less than 10 m³ are rounded to integers, and numbers less than 1 are rounded to nearest 0.01 m³.

Background

Battelle Columbus Laboratory is a nonprofit research and development corporation that began operations in 1929. Waste designated for Hanford originates from decontamination and decommission of facilities that were used to perform DOE and commercial nuclear research. The MLLW is a result of the removal of radioactive drain lines.

LLW_I will be generated from removal of material and equipment from baseline areas, removal of building structures and soil, and will include secondary waste generated from these activities such as plastic, HEPA filters, rubber gloves and herculite. LLW_III will be generated from the same activities as LLW_I but from areas with higher contamination levels as in the case of the JN-1 Hot Cells. MLLW will be generated from removal of contaminated drain lines. RH_TRU(M) waste will be generated from removal of waste from a hot cell facility.

Forecast Assumptions and Comments

The primary assumptions for this forecast are that (1) Battelle will receive full DOE funding to decontaminate and decommission the former nuclear sciences area at the West Jefferson, Ohio site to completion, and (2) the Sonatol decontamination process will be used at the West Jefferson hot cell facility to redesignate a significant portion of suspect TRU waste as LLW. In addition, it is assumed that LLW_I and LLW_III will be shipped to GTS Duratek (formerly SEG) in Oak Ridge, TN for supercompaction prior to disposal at Hanford.

Other Forecast Data

• Hazardous Waste

- No hazardous waste has been reported by Battelle Columbus Laboratories.

For questions or comments, please contact Roberta Barcot
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Offsite — Bettis Atomic Power-Laboratory

Bettis Atomic Power-Laboratory Report Sections

» <u>Highlights</u>	» <u>Background</u>
» <u>Waste Class Data</u>	» <u>Forecast Assumptions and Comments</u>
» <u>Annual Volumes</u>	» <u>Other Bettis Atomic Power-Laboratory Forecast Data</u>
» <u>Comparison to Previous Baseline(s)</u>	»» <u>Detailed Forecast Data</u>

Highlights of LLW, MLLW, and TRU(M) Waste Forecast

- This generator contributes 1,010 m³, or 3% of Offsite's waste forecast.
- The forecast life cycle for the Bettis Atomic Power-Laboratory ends in 2008.
- LLW_III is the primary waste class forecast. As shown below, a small amount CH_MLLW is also forecast. The amount of CH_MLLW forecast is consistent with the Site Treatment Plan (STP) for BAPL.
- The FY2001.0 forecast shows a 43% increase from the FY2000.0 forecast of 710 m³ because the life-cycle was extended from 2005 to 2008.

Waste Class Distribution

Waste Class Data

The expected physical waste forms, hazardous characteristics, container types, and LDR waste stream identification distribution of Bettis Atomic Power-Laboratory's forecast wastes are described in the following charts.

LLW Data

Physical Waste Form Distribution

Container Distribution

MLLW Data

Physical Waste Form Distribution

Hazardous Characteristic Distribution

Container Distribution

LDR Waste Stream Identification Distribution

Note: Due to rounding, totals may not equal sum of individual values. Numbers over 10 m³ are rounded to the nearest 10 m³, numbers less than 10 m³ are rounded to integers, and numbers less than 1 are rounded to nearest 0.01 m³.

Annual Volumes

Annual Minimum, Baseline, and Maximum Volumes

Annual LLW Baseline Volumes

Annual MLLW Baseline Volumes

Comparison to Previous Baseline(s)

The FY2001.0 forecast shows a 43% increase from the FY2000.0 forecast of 710 m³ due to the extension of the forecast life-cycle from 2005 to 2008.

The FY2000.0 forecast shows a 2% decrease from the FY99.0 forecast of 730 m³.

Comparison to Previous Baseline(s) by Waste Class

Bettis Atomic Power-Laboratory Comparison to Previous Forecasts	FY2001.0 Forecast (m³)	FY2000.0 Forecast (m³)	FY1999.0 Forecast (m³)
Waste Class			
LLW_I	--	350	360
LLW_II	1,010	360	370
CH_MLLW	0.26	1	0.77
Total	1,010	710	730

Note: Due to rounding, totals may not equal sum of individual values. Numbers over 10 m³ are rounded to the nearest 10 m³, numbers less than 10 m³ are rounded to integers, and numbers less than 1 are rounded to nearest 0.01 m³.

Background

The Bettis Atomic Power-Laboratory is operated by the U.S. Department of Energy and is engaged solely in the design and development of naval nuclear propulsion plants. Wastes designated to Hanford are generated from decontamination and decommission of the L-Building.

Forecast Assumptions and Comments

Removal of the L-Building inactive fuel processing equipment is expected to be completed by 2008.

Other Forecast Data

- **Hazardous Waste**

- No hazardous waste has been reported by Bettis Atomic Power-Laboratory.

For questions or comments, please contact Roberta Barcot
(e-mail: Roberta_A_Barcot@rl.gov, voice: (509) 373-4752).

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Offsite — Bettis Atomic Power-Shipyards

Bettis Atomic Power-Shipyards Report Sections

» Highlights	» Background
» Waste Class Data	» Forecast Assumptions and Comments
» Annual Volumes	» Other Bettis Atomic Power-Shipyards Forecast Data
» Comparison to Previous Baseline(s)	»» Detailed Forecast Data

Highlights of LLW, MLLW, and TRU(M) Waste Forecast

- This generator contributes 1 m³, or <1% of Offsite's waste forecast.
- Bettis Atomic Power-Shipyards expects to ship waste only in the year 2012.
- LLW_I is the only waste class forecast.
- The FY2001.0 forecast shows no change from the FY2000.0 forecast.

Waste Class Distribution

Waste Class Data

As shown in the charts below, Bettis Atomic Power-Shipyards' waste is forecast entirely as debris and is expected to be shipped in small boxes.

LLW Data

Physical Waste Form Distribution

Container Distribution

Note: Due to rounding, totals may not equal sum of individual values. Numbers over 10 m³ are rounded to the nearest 10 m³, numbers less than 10 m³ are rounded to integers, and numbers less than 1 are rounded to nearest 0.01 m³.

Annual Volumes

Annual Minimum, Baseline, and Maximum Volumes

Annual LLW Baseline Volumes

Comparison to Previous Baseline(s)

The FY99.0 forecast includes a cooling pump that was expected to be shipped in the year 2001. However, both the FY2001.0 and FY2000.0 forecasts exclude this shipment.

Comparison to Previous Baseline(s) by Waste Class

Bettis Atomic Power-Shipyards Comparison to Previous Forecasts	FY2001.0 Forecast (m³)	FY2000.0 Forecast (m³)	FY1999.0 Forecast (m³)
Waste Class			
LLW_I	1	1	6
Total	1	1	6

Note: Due to rounding, totals may not equal sum of individual values. Numbers over 10 m³ are rounded to the nearest 10 m³, numbers less than 10 m³ are rounded to integers, and numbers less than 1 are rounded to nearest 0.01 m³.

Background

The mission of the Bettis Atomic Power-Shipyards is to support submarine and surface ship reactor defueling operations. LLW is generated as a result of this mission.

Forecast Assumptions and Comments

It is assumed that reactor components removed during refueling/defueling/deactivation operations are LLW_I.

Other Forecast Data

- **Hazardous Waste**

- No hazardous waste has been reported by Bettis Atomic Power-Shipyards.

For questions or comments, please contact Roberta Barcot
(e-mail: Roberta_A_Barcot@rl.gov, voice: (509) 373-4752).

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Offsite — Brookhaven National Laboratory

Brookhaven National Laboratory Report Sections

» Highlights	» Background
» Waste Class Data	» Forecast Assumptions and Comments
» Annual Volumes	» Other Brookhaven National Laboratory Forecast Data
» Comparison to Previous Baseline(s)	»» Detailed Forecast Data

Highlights of LLW, MLLW, and TRU(M) Waste Forecast

- Brookhaven is the second largest offsite generator, contributing 8,590 m³, or 29% of Offsite's waste forecast.
- The forecast life cycle for the Brookhaven National Laboratory ends in 2046.
- LLW_I is the only waste class forecast.
- The FY2001.0 forecast shows a 5% decrease from the FY2000.0 forecast of 8,990 m³ due to the elimination of the year 2000 forecast projections.

Waste Class Distribution

Brookhaven National Laboratory
Total (excl. HAZ) = 8,590 m3

Waste Class Data

The expected physical waste forms and container types of Brookhaven National Laboratory's forecasted

waste are described in the following charts.

LLW Data

Physical Waste Form Distribution

Brookhaven National Laboratory
LLW Total = 8,580 m³

Container Distribution

Brookhaven National Laboratory
LLW Total = 8,590 m³

Note: Due to rounding, totals may not equal sum of individual values. Numbers over 10 m³ are rounded to the nearest 10 m³, numbers less than 10 m³ are rounded to integers, and numbers less than 1 are rounded to nearest 0.01 m³.

Annual Volumes

Annual Minimum, Baseline, and Maximum Volumes

Annual LLW Baseline Volumes

Comparison to Previous Baseline(s)

The FY2001.0 forecast shows a 5% decrease from the FY2000.0 forecast of 8,990 m³ due to the elimination of the year 2000 forecast projections.

The FY2000.0 forecast shows a 435% increase over the FY99.0 forecast due to increased funding and environmental restoration activities.

Comparison to Previous Baseline(s) by Waste Class

Brookhaven National Laboratory Comparison to Previous Forecasts	FY2001.0 Forecast (m ³)	FY2000.0 Forecast (m ³)	FY1999.0 Forecast (m ³)
Waste Class			
LLW_I	8,590	8,990	1,660
Total	8,590	8,990	1,660

Note: Due to rounding, totals may not equal sum of individual values. Numbers over 10 m³ are rounded to the nearest 10 m³, numbers less than 10 m³ are rounded to integers, and numbers less than 1 are rounded to nearest 0.01 m³.

Background

Brookhaven's current mission is to conceive, design, construct, and operate research facilities for fundamental scientific studies and to carry out both basic and applied research in the physical, biomedical, and environmental sciences. Wastes are generated from the construction, operation, and dismantling of these facilities.

The waste types reported consist of activated and contaminated experimental equipment, laboratory waste such as glassware, blotting paper, and other dry wastes, and personal protective equipment used throughout the site.

Forecast Assumptions and Comments

The waste forecast is based on funding levels outlined in Brookhaven's Current Year Work Plan. It is also assumed that Brookhaven will continue to operate under its current mission.

Other Forecast Data

• Hazardous Waste

- No hazardous waste has been reported by Brookhaven National Laboratory.

For questions or comments, please contact Roberta Barcot
(e-mail: Roberta_A_Barcot@rl.gov, voice: (509) 373-4752).

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Offsite — Energy Technology Engineering Center (ETEC)

Energy Technology Engineering Center (ETEC) Report Sections

» Highlights

» Waste Class Data

» Annual Volumes

» Comparison to Previous
Baseline(s)

» Background

» Forecast Assumptions and Comments

» Other Energy Technology Engineering Center
(ETEC) Forecast Data

»» Detailed Forecast Data

Highlights of LLW, MLLW, and TRU(M) Waste Forecast

- This generator contributes 1,530 m³, or 5% of Offsite's waste forecast.
- The forecast life cycle for the Energy Technology Engineering Center (ETEC) ends in 2006.
- LLW_I is the primary waste class forecast.
- The FY2001.0 forecast shows a 1% increase from the FY2000.0 forecast of 1,510 m³ due to the addition of forecasted TRU(M) waste expected to be shipped to Hanford.

Waste Class Distribution

Energy Technology Engineering Center (ETEC)
Total (excl. HAZ) = 1,530 m³

Waste Class Data

The expected physical waste forms, hazardous characteristics, and container types of Energy Technology Engineering Center's forecast wastes are described in the following charts.

LLW Data

Physical Waste Form Distribution

Container Distribution

TRU(M) Waste Data

Physical Waste Form Distribution

Hazardous Characteristic Distribution

Container Distribution

Note: Due to rounding, totals may not equal sum of individual values. Numbers over 10 m³ are rounded to the nearest 10 m³, numbers less than 10 m³ are rounded to integers, and numbers less than 1 are rounded to nearest 0.01 m³.

Annual Volumes

Annual Minimum, Baseline, and Maximum Volumes

Annual LLW Baseline Volumes

Annual TRU(M) Waste Baseline Volumes

Comparison to Previous Baseline(s)

The FY2001.0 forecast shows a 1% increase from the FY2000.0 forecast of 1,510 m³ due to the addition of forecasted TRU(M) waste expected to be shipped to Hanford.

The FY2000.0 forecast shows a 32% decrease from the FY99.0 forecast of 2,210 due to changes in schedule and work estimation.

Comparison to Previous Baseline(s) by Waste Class

Energy Technology Engineering Center (ETEC) Comparison to Previous Forecasts	FY2001.0 Forecast (m³)	FY2000.0 Forecast (m³)	FY1999.0 Forecast (m³)
Waste Class			
LLW_	1,510	1,510	2,210
CH_TRU(M)	3	--	--
RH_TRU(M)	10	--	--
Total	1,530	1,510	2,210

Note: Due to rounding, totals may not equal sum of individual values. Numbers over 10 m³ are rounded to the nearest 10 m³, numbers less than 10 m³ are rounded to integers, and numbers less than 1 are rounded to nearest 0.01 m³.

Background

The Energy Technology Engineering Center (formerly reported as Rockwell-Canoga Park) was used for manufacturing, research and development, engineering, and testing in a broad range of technical fields, particularly nuclear reactor technology for the U.S. Department of Energy. This work ended in 1987 and subsequent efforts have been directed toward decontamination and decommissioning of the former nuclear facilities.

Forecast Assumptions and Comments

The FY2001.0 forecast is based on remediation and D&D of facilities as funded by DOE EM-40. The TRU(M) waste was previously generated.

Other Forecast Data

- Hazardous Waste**

- No hazardous waste has been reported by Energy Technology Engineering Center.

For questions or comments, please contact Roberta Barcot
(e-mail: Roberta_A_Barcot@rl.gov, voice: (509) 373-4752).

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Offsite — Fermi National Accelerator Laboratory

Fermi National Accelerator Laboratory Report Sections

» <u>Highlights</u>	» <u>Background</u>
» <u>Waste Class Data</u>	» <u>Forecast Assumptions and Comments</u>
» <u>Annual Volumes</u>	» <u>Other Fermi National Accelerator Laboratory Forecast Data</u>
» <u>Comparison to Previous Baseline(s)</u>	» <u>Detailed Forecast Data</u>

Highlights of LLW, MLLW, and TRU(M) Waste Forecast

- This generator contributes 1,700 m³, or 6% of Offsite's waste forecast.
- The forecast life cycle for the Fermi National Accelerator Laboratory ends in 2027.
- LLW_I is the only waste class forecast.
- The FY2001.0 forecast shows a 4% decrease from the FY2000.0 forecast of 1,770 m³ due to the exclusion of the previously forecasted waste designated for shipment in FY2000.

Waste Class Distribution

Fermi National Accelerator Laboratory
Total (excl. HAZ) = 1,700 m³

Waste Class Data

The expected physical waste forms and container types of Fermi's forecasted waste are described in the following charts.

LLW Data

Physical Waste Form Distribution

Fermi National Accelerator Laboratory
LLW Total = 1,788 m³

Container Distribution

Fermi National Accelerator Laboratory
LLW Total = 1,788 m³

Note: Due to rounding, totals may not equal sum of individual values. Numbers over 10 m³ are rounded to the nearest 10 m³, numbers less than 10 m³ are rounded to integers, and numbers less than 1 are rounded to nearest 0.01 m³.

Annual Volumes

Annual Minimum, Baseline, and Maximum Volumes

Annual LLW Baseline Volumes

Comparison to Previous Baseline(s)

The FY2001.0 forecast shows a 4% decrease from the FY2000.0 forecast of 1,770 m³ due to the shipment of previously forecast waste in FY2000.

The FY2000.0 forecast shows a 3% decrease from the FY99.0 forecast of 1,830 m³ due to the shipment of previously forecast waste in FY99.

Comparison to Previous Baseline(s) by Waste Class

Fermi National Accelerator Laboratory Comparison to Previous Forecasts	FY2001.0 Forecast (m³)	FY2000.0 Forecast (m³)	FY1999.0 Forecast (m³)
Waste Class			
LLW, I	1,700	1,770	1,830
Total	1,700	1,770	1,830

Note: Due to rounding, totals may not equal sum of individual values. Numbers over 10 m³ are rounded to the nearest 10 m³, numbers less than 10 m³ are rounded to integers, and numbers less than 1 are rounded to nearest 0.01 m³.

Background

The Fermi National Accelerator Laboratory is a national laboratory managed by the Universities Research Association, Inc. for the U.S. Department of Energy. Fermi's mission is to provide resources to conduct basic research in high-energy physics and related disciplines.

The facility consists of a series of proton accelerators which became operational in 1972, producing higher energy protons than any other accelerator in the world. Beam losses from normal operations of the accelerator activate accelerator components and equipment. These components become waste when they fail and are removed from service or are no longer needed. Small volumes of protective clothing are generated by technicians working on contaminated equipment or in contaminated areas. Small volumes of cooling water and vacuum pump oil may also be generated from maintenance operations.

Forecast Assumptions and Comments

Fermi assumes that radioactive waste will continue to be generated in approximately the same volumes as previous years and that nothing unforeseen will happen to increase the volumes. It is also assumed that the Department of Energy will provide the necessary funds to ship the waste for disposal as it is generated.

Other Forecast Data

• Hazardous Waste

- No hazardous waste has been reported by Fermi National Accelerator Laboratory.

For questions or comments, please contact Roberta Barcot
(e-mail: Roberta_A_Barcot@rl.gov, voice: (509) 373-4752).

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Offsite — Knolls Atomic Power-Laboratory

Knolls Atomic Power-Laboratory Report Sections

» <u>Highlights</u>	» <u>Background</u>
» <u>Waste Class Data</u>	» <u>Forecast Assumptions and Comments</u>
» <u>Annual Volumes</u>	» <u>Other Knolls Atomic Power-Laboratory Forecast Data</u>
» <u>Comparison to Previous Baseline(s)</u>	»» <u>Detailed Forecast Data</u>

Highlights of LLW, MLLW, and TRU(M) Waste Forecast

- This generator contributes 20 m³, or <1% of Offsite's waste forecast.
- The forecast life cycle for the Knolls Atomic Power-Laboratory ends in 2007.
- CH_MLLW is the only waste class forecast. The amount of CH_MLLW forecast is based on the Site Treatment Plan (STP) for Knolls Atomic Power-Laboratory.
- The FY2001.0 forecast shows a 9% increase from the FY2000.0 forecast of 10 m³ because the life-cycle was extended from 2005 to 2007.

Waste Class Distribution

Knolls Atomic Power-Laboratory
Total (excl. HAZ) = 20 m³

Waste Class Data

The expected physical waste forms, hazardous characteristics, container types, and LDR waste stream

identification distribution of Knolls Atomic Power-Laboratory's forecasted wastes are described in the following charts.

MLLW Data

Physical Waste Form Distribution

Knolls Atomic Power-Laboratory
MLLV Total = 20 m³

Hazardous Characteristic Distribution

Knolls Atomic Power-Laboratory
MLLV Total = 20 m³

Container Distribution

Knolls Atomic Power-Laboratory
MLLV Total = 20 m³

LDR Waste Stream Identification Distribution

Knolls Atomic Power-Laboratory
MLLV Total = 20 m³

Note: Due to rounding, totals may not equal sum of individual values. Numbers over 10 m³ are rounded to the nearest 10 m³, numbers less than 10 m³ are rounded to integers, and numbers less than 1 are rounded to nearest 0.01 m³.

Annual Volumes

Annual Minimum, Baseline, and Maximum Volumes

Annual MLLW Baseline Volumes

Comparison to Previous Baseline(s)

The FY2001.0 forecast shows a 9% increase from the FY2000.0 forecast of 10 m³ due to the extension of the life-cycle from 2005 to 2007.

The FY2000.0 forecast shows a 3 m³ increase from the FY99.0 forecast, which is not noticeable due to rounding.

Comparison to Previous Baseline(s) by Waste Class

Knolls Atomic Power-Laboratory Comparison to Previous Forecasts	FY2001.0 Forecast (m³)	FY2000.0 Forecast (m³)	FY1999.0 Forecast (m³)
Waste Class			
CH_MLLW	20	10	10
Total	20	10	10

Note: Due to rounding, totals may not equal sum of individual values. Numbers over 10 m³ are rounded to the nearest 10 m³, numbers less than 10 m³ are rounded to integers, and numbers less than 1 are rounded to nearest 0.01 m³.

Background

Knolls Atomic Power Laboratory is engaged in research and development for the design and operation of naval nuclear propulsion plants. The facility includes machine shops, waste handling facilities, and chemistry and metallurgy laboratories. The activities related to development of naval propulsion systems generate various forms of wastes.

Forecast Assumptions and Comments

The forecast is based on the Site Treatment Plans for the three KAPL sites: Windsor Site in Windsor, CT, Kesselring Site in West Milton, NY, and Niskayuna, NY. The waste generated and the availability of the treatment facilities at Hanford are the basis for the forecast.

Other Forecast Data

- Hazardous Waste

- No hazardous waste has been reported by Knolls Atomic Power-Laboratory.

For questions or comments, please contact Roberta Barcot
(e-mail: Roberta_A_Barcot@rl.gov, voice: (509) 373-4752).

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Offsite — Knolls Atomic Power-Shipyards

Knolls Atomic Power-Shipyards Report Sections

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» <u>Waste Class Data</u>	» <u>Forecast Assumptions and Comments</u>
» <u>Annual Volumes</u>	» <u>Other Knolls Atomic Power-Shipyards Forecast Data</u>
» <u>Comparison to Previous Baseline(s)</u>	»» <u>Detailed Forecast Data</u>

Highlights of LLW, MLLW, and TRU(M) Waste Forecast

- This generator contributes 310 m³, or 1% of Offsite's waste forecast.
- The forecast life cycle for the Knolls Atomic Power-Shipyards ends in 2006.
- LLW_I and LLW_III represent 81% (250 m³) and 19% (60 m³) of the forecast respectively.
- The FY2001.0 forecast shows a 21% decrease from the FY2000.0 forecast of 390 m³ due to changes to the number of main coolant pumps expected to be replaced. All of this decrease occurred in LLW_III.

Waste Class Distribution

Knolls Atomic Power-Shipyards
Total (excl. HAZ) = 310 m³

Waste Class Data

The expected physical waste forms and container types for Knolls Atomic Power-Shipyards' forecasted

waste is displayed in the following charts.

LLW Data

Physical Waste Form Distribution

Container Distribution

Note: Due to rounding, totals may not equal sum of individual values. Numbers over 10 m³ are rounded to the nearest 10 m³, numbers less than 10 m³ are rounded to integers, and numbers less than 1 are rounded to nearest 0.01 m³.

Annual Volumes

Annual Minimum, Baseline, and Maximum Volumes

Annual LLW Baseline Volumes

Comparison to Previous Baseline(s)

The FY2001.0 forecast shows a decrease of 21% (for LLW_III only) from the FY2000.0 forecast due to changes to the number of main coolant pumps expected to be replaced. All of this decrease occurred in LLW_III.

The FY2000.0 forecast shows a decrease of 19% from the FY99.0 forecast due to a decrease in the number of coolant pumps forecast to be sent to Hanford between 2000 and 2007.

Comparison to Previous Baseline(s) by Waste Class

Knolls Atomic Power-Shipyards Comparison to Previous Forecasts	FY2001.0 Forecast (m³)	FY2000.0 Forecast (m³)	FY1999.0 Forecast (m³)
Waste Class			
LLW_I	250	250	320
LLW_III	60	140	150
Total	310	390	470

Note: Due to rounding, totals may not equal sum of individual values. Numbers over 10 m³ are rounded to the nearest 10 m³, numbers less than 10 m³ are rounded to integers, and numbers less than 1 are rounded to nearest 0.01 m³.

Background

Waste designated for Hanford from Knolls Atomic Power-Shipyards is generated from support to reactor defueling operations and main coolant pump replacements.

Forecast Assumptions and Comments

It is assumed that reactor components removed during refueling/defueling/deactivation operations are LLW_I and LLW_III.

Other Forecast Data

• Hazardous Waste

- No hazardous waste has been reported by Knolls Atomic Power-Shipyards.

For questions or comments, please contact Roberta Barcot
(e-mail: Roberta_A_Barcot@rl.gov, voice: (509) 373-4752).

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Offsite — Lawrence Berkeley Laboratory

Lawrence Berkeley Laboratory Report Sections

» Highlights	» Background
» Waste Class Data	» Forecast Assumptions and Comments
» Annual Volumes	» Other Lawrence Berkeley Laboratory Forecast Data
» Comparison to Previous Baseline(s)	»» Detailed Forecast Data

Highlights of LLW, MLLW, and TRU(M) Waste Forecast

- This generator contributes 250 m³, or 1% of Offsite's waste forecast.
- The forecast life cycle for the Lawrence Berkeley Laboratory ends in 2030.
- LLW_I is the only waste class forecast.
- The FY2001.0 forecast shows a 8% decrease from the FY2000.0 forecast of 270 m³.
- Lawrence Berkeley Laboratory's maximum volume (11,070 m³) includes waste from the Decontamination and Decommissioning of Bevatron and 88-in Cyclotron. These wastes are not included in the baseline because other options are currently being explored for disposition of this waste.

Waste Class Distribution

Lawrence Berkeley Laboratory
Total (excl. HAZ) = 250 m3

Waste Class Data

The expected physical waste forms and container types of Lawrence Berkeley Laboratory's forecast wastes are described in the following charts.

LLW Data

Physical Waste Form Distribution

Container Distribution

Note: Due to rounding, totals may not equal sum of individual values. Numbers over 10 m³ are rounded to the nearest 10 m³, numbers less than 10 m³ are rounded to integers, and numbers less than 1 are rounded to nearest 0.01 m³.

Annual Volumes

Annual Minimum, Baseline, and Maximum Volumes

Annual LLW Baseline Volumes

Comparison to Previous Baseline(s)

The FY2001.0 forecast shows a 8% decrease from the FY2000.0 forecast of 270 m³ due to the elimination of the year 2000 projections.

The FY2000.0 forecast shows a 24% increase over the FY99.0 forecast due to the addition of 30 208 liter drums in FY2000.

Comparison to Previous Baseline(s) by Waste Class

Lawrence Berkeley Laboratory Comparison to Previous Forecasts	FY2001.0 Forecast (m ³)	FY2000.0 Forecast (m ³)	FY1999.0 Forecast (m ³)
Waste Class			
LLW_I	250	270	220
Total	250	270	220

Note: Due to rounding, totals may not equal sum of individual values. Numbers over 10 m³ are rounded to the nearest 10 m³, numbers less than 10 m³ are rounded to integers, and numbers less than 1 are rounded to nearest 0.01 m³.

Background

Lawrence Berkeley Laboratory is a multidisciplinary research laboratory. Wastes are a byproduct of research or fabrication operations for the research.

Forecast Assumptions and Comments

Lawrence Berkeley Laboratory assumes that only LLW is shipped to Hanford. Hazardous waste is shipped to commercial facilities, usually for thermal destruction, and is not included in this forecast. Per Lawrence Berkeley Laboratory's Site Treatment Plan (STP), Lawrence Berkeley Laboratory will not ship any mixed waste to Hanford. TRU(M) waste is assumed to be shipped directly to WIPP.

Lawrence Berkeley Laboratory waste volumes are made up of two components. The first is the waste generated from normal ongoing research and support activities, and the second is waste from the Decontamination and Decommissioning of Bevatron and 88-in Cyclotron. Only the first type is funded by EM-30 and appears in the 2006 plan. Therefore, only the waste in small boxes and 208-liter drums has been included in the baseline forecast. The

Bevatron and Cyclotron waste has been included in the maximum volume estimate. The possibility to re-use or recycle the Bevatron Decontamination and Decommissioning waste at Brookhaven National Laboratory and/or other facilities will continually be explored by Lawrence Berkeley Laboratory and DOE/HQ. If more concrete blocks are to be re-used, the maximum amount of waste to be sent to Hanford will decrease and an adjustment of estimate will then be made.

Other Forecast Data

- **Hazardous Waste**

- No hazardous waste has been reported by Lawrence Berkeley Laboratory.

For questions or comments, please contact Roberta Barcot
(e-mail: Roberta_A_Barcot@rl.gov, voice: (509) 373-4752).

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***Offsite* — Missouri University Research Reactor**

Missouri University Research Reactor Report Sections

» Highlights	» Background
» Waste Class Data	» Forecast Assumptions and Comments
» Annual Volumes	» Other Missouri University Research Reactor Forecast Data
» Comparison to Previous Baseline(s)	»» Detailed Forecast Data

Highlights of LLW, MLLW, and TRU(M) Waste Forecast

- This generator contributes 2 m³, or <1% of Offsite's waste forecast.
- The forecast life cycle for the Missouri University Research Reactor starts and ends in 2001.
- CH_TRU(M) waste is the only waste class generated.
- This is a new offsite waste generator for Hanford.

Waste Class Distribution

Missouri University Research Reactor
Total (excl. HAZ) = 2 m³

Waste Class Data

The expected physical waste forms, hazardous characteristics, and container types of Missouri University Research Reactor's forecast wastes are described in the following charts.

TRU(M) Waste Data

Physical Waste Form Distribution

Hazardous Characteristic Distribution

Container Distribution

Note: Due to rounding, totals may not equal sum of individual values. Numbers over 10 m³ are rounded to the nearest 10 m³, numbers less than 10 m³ are rounded to integers, and numbers less than 1 are rounded to nearest 0.01 m³.

Annual Volumes

Annual Minimum, Baseline, and Maximum Volumes

Annual TRU(M) Waste Baseline Volumes

Comparison to Previous Baseline(s)

This is the first year that Missouri University Research Reactor has forecasted waste designated for Hanford.

Comparison to Previous Baseline(s) by Waste Class

Missouri University Research Reactor Comparison to Previous Forecasts	FY2001.0 Forecast (m³)	FY2000.0 Forecast (m³)	FY1999.0 Forecast (m³)
Waste Class			
CH_TRU(M)	2	--	--
Total	2	--	--

Note: Due to rounding, totals may not equal sum of individual values. Numbers over 10 m³ are rounded to the nearest 10 m³, numbers less than 10 m³ are rounded to integers, and numbers less than 1 are rounded to nearest 0.01 m³.

Background

The Missouri University Research Reactor will generate waste as a result of decommissioning the laboratory.

Forecast Assumptions and Comments

The forecast is based on process knowledge.

Other Forecast Data

- **Hazardous Waste**

- No hazardous waste has been reported by Missouri University Research Reactor.

For questions or comments, please contact Roberta Barcot
(e-mail: Roberta_A_Barcot@rl.gov, voice: (509) 373-4752).

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Offsite — Paducah Energy Systems

Paducah Energy Systems Report Sections

» <u>Highlights</u>	» <u>Background</u>
» <u>Waste Class Data</u>	» <u>Forecast Assumptions and Comments</u>
» <u>Annual Volumes</u>	» <u>Other Paducah Energy Systems Forecast Data</u>
» <u>Comparison to Previous Baseline(s)</u>	»» <u>Detailed Forecast Data</u>

Highlights of LLW, MLLW, and TRU(M) Waste Forecast

- This generator contributes 90 m³, or <1% of Offsite's waste forecast.
- The forecast life cycle for the Paducah Energy Systems ends in 2010; previous forecasts showed the life-cycle ending in 2002.
- LLW_III is the only waste class forecast.
- The FY2001.0 baseline forecast shows a 12% decrease from the FY2000.0 forecast of 100 m³. However, 14,000 m³ of LLW_III (scrap metal debris) may be shipped in FY2002 and FY2003 and is included in the maximum volume.

Waste Class Distribution

Paducah Energy Systems
Total (excl. HAZ) = 90 m³

Waste Class Data

The expected physical waste forms and container types of Paducah Energy Systems' forecasted wastes are described in the following charts. The physical waste form is final form and will be treated by grouting prior to shipment.

LLW Data

Physical Waste Form Distribution

Container Distribution

Note: Due to rounding, totals may not equal sum of individual values. Numbers over 10 m³ are rounded to the nearest 10 m³, numbers less than 10 m³ are rounded to integers, and numbers less than 1 are rounded to nearest 0.01 m³.

Annual Volumes

Annual Minimum, Baseline, and Maximum Volumes

Annual LLW Baseline Volumes

Comparison to Previous Baseline(s)

The FY2001.0 baseline forecast shows a 12% decrease from the FY2000.0 forecast of 100 m³. However, 14,000 m³ of LLW_III (scrap metal debris) may be shipped in FY2002 and FY2003 and is included in the maximum volume.

The FY2000.0 forecast shows no change from the FY99.0 forecast.

Comparison to Previous Baseline(s) by Waste Class

Paducah Energy Systems Comparison to Previous Forecasts	FY2001.0 Forecast (m ³)	FY2000.0 Forecast (m ³)	FY1999.0 Forecast (m ³)
Waste Class			
LLW_III	90	100	100
Total	90	100	100

Note: Due to rounding, totals may not equal sum of individual values. Numbers over 10 m³ are rounded to the nearest 10 m³, numbers less than 10 m³ are rounded to integers, and numbers less than 1 are rounded to nearest 0.01 m³.

Background

The primary mission of Paducah Energy Systems is environmental restoration and waste management activities at the Paducah Gaseous Diffusion Plant.

Forecast Assumptions and Comments

The forecast is based on facility closure plans.

Other Forecast Data

- **Hazardous Waste**

- No hazardous waste has been reported by Paducah Energy Systems.

For questions or comments, please contact Roberta Barcot
(e-mail: Roberta_A_Barcot@rl.gov, voice: (509) 373-4752).

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Offsite — Parks Township

Parks Township Report Sections

» <u>Highlights</u>	» <u>Background</u>
» <u>Waste Class Data</u>	» <u>Forecast Assumptions and Comments</u>
» <u>Annual Volumes</u>	» <u>Other Parks Township Forecast Data</u>
» <u>Comparison to Previous Baseline(s)</u>	»» <u>Detailed Forecast Data</u>

Highlights of LLW, MLLW, and TRU(M) Waste Forecast

- This generator contributes 1,560 m³, or 5% of Offsite's waste forecast.
- The forecast life cycle for the Parks Township ends in 2001.
- LLW_I is the only waste class forecast.
- The FY2001.0 forecast shows a 44% decrease from the FY2000.0 forecast of 2,810 m³ since most of the waste was shipped in the year 2000; however, the forecast was extended to FY2001 to account for additional waste not originally expected to be shipped to Hanford and a small amount of waste not shipped during FY2000.

Waste Class Distribution

Waste Class Data

The expected physical waste forms and container types of Parks Township's forecasted wastes are described in the following charts.

LLW Data

Physical Waste Form Distribution

Container Distribution

Note: Due to rounding, totals may not equal sum of individual values. Numbers over 10 m³ are rounded to the nearest 10 m³, numbers less than 10 m³ are rounded to integers, and numbers less than 1 are rounded to nearest 0.01 m³.

Annual Volumes

Annual Minimum, Baseline, and Maximum Volumes

Annual LLW Baseline Volumes

Comparison to Previous Baseline(s)

The FY2001.0 forecast shows a 44% decrease from the FY2000.0 forecast of 2,810 m³ since most of the waste was shipped in the year 2000; however, the forecast was extended to FY2001 to account for additional waste not originally expected to be shipped to Hanford and a small amount of waste not shipped during FY2000.

FY2000.0 was the first year that Parks Township submitted a forecast.

Comparison to Previous Baseline(s) by Waste Class

Parks Township Comparison to Previous Forecasts	FY2001.0 Forecast (m³)	FY2000.0 Forecast (m³)	FY1999.0 Forecast (m³)
Waste Class			
LLW I	1,580	2,810	--
Total	1,580	2,810	--

Note: Due to rounding, totals may not equal sum of individual values. Numbers over 10 m³ are rounded to the nearest 10 m³, numbers less than 10 m³ are rounded to integers, and numbers less than 1 are rounded to nearest 0.01 m³.

Background

The Parks Township site located near Apollo, PA, is approximately 50 miles northeast of Pittsburgh, PA. The facility operated in the 1960s and 1970s in the production of nuclear fuel for reactors, including the Fast Flux Test Facility (FFTF) at the Hanford Site near Richland, WA. The facility also conducted classified research and production of materials for the Department of Energy (DOE) and the Department of Defense (DOD), and operated a small hot cell facility for the production of irradiation sources and decontamination and repair of reactor components. Currently, the site contractor is in the final stages of decontamination and decommissioning of the Parks Township site.

Forecast Assumptions and Comments

This forecast covers the walls, floor slab, and structural material from Building C High Enriched Uranium Facility, Building B Machine Shop, and Building A Plutonium Facility Decommissioning. Process Equipment in each of the three buildings was previously decontaminated and sent for LLW burial. The forecast includes the building shell and slab portions for the buildings only.

Other Forecast Data

• Hazardous Waste

- No hazardous waste has been reported by Parks Township.

For questions or comments, please contact Roberta Barcot
(e-mail: Roberta_A_Barcot@rl.gov, voice: (509) 373-4752).

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Offsite — Pearl Harbor Naval Shipyards

Pearl Harbor Naval Shipyards Report Sections

» <u>Highlights</u>	» <u>Background</u>
» <u>Waste Class Data</u>	» <u>Forecast Assumptions and Comments</u>
» <u>Annual Volumes</u>	» <u>Other Pearl Harbor Naval Shipyards Forecast Data</u>
» <u>Comparison to Previous Baseline(s)</u>	»» <u>Detailed Forecast Data</u>

Highlights of LLW, MLLW, and TRU(M) Waste Forecast

- This generator contributes 3 m³, or <1% of Offsite's waste forecast.
- The forecast life cycle for the Pearl Harbor Naval Shipyards ends in 2002.
- CH_MLLW is the only waste class forecast.
- The FY2001.0 forecast shows a 52% decrease from the FY2000.0 forecast of 7 m³ to reflect the most current Site Treatment Plan (STP).

Waste Class Distribution

Pearl Harbor Naval Shipyards
Total (excl. HAZ) = 3 m³

Waste Class Data

The expected physical waste forms, hazardous characteristics, container types, and LDR waste stream identification distribution of Pearl Harbor's forecast wastes are described in the following charts.

MLLW Data

Physical Waste Form Distribution

Hazardous Characteristic Distribution

Container Distribution

LDR Waste Stream Identification Distribution

Note: Due to rounding, totals may not equal sum of individual values. Numbers over 10 m³ are rounded to the nearest 10 m³, numbers less than 10 m³ are rounded to integers, and numbers less than 1 are rounded to nearest 0.01 m³.

Annual Volumes

Annual Minimum, Baseline, and Maximum Volumes

Annual MLLW Baseline Volumes

Comparison to Previous Baseline(s)

The FY2001.0 forecast shows a 52% decrease from the FY2000.0 forecast of 7 m³ to reflect the most current Site Treatment Plan (STP).

The FY2000.0 forecast is the same as the FY99.0 forecast of 7 m³.

Comparison to Previous Baseline(s) by Waste Class

Pearl Harbor Naval Shipyards Comparison to Previous Forecasts	FY2001.0 Forecast (m ³)	FY2000.0 Forecast (m ³)	FY1999.0 Forecast (m ³)
Waste Class			
CH_MLLW	3	7	7
Total	3	7	7

Note: Due to rounding, totals may not equal sum of individual values. Numbers over 10 m³ are rounded to the nearest 10 m³, numbers less than 10 m³ are rounded to integers, and numbers less than 1 are rounded to nearest 0.01 m³.

Background

Pearl Harbor Naval Shipyards is a U.S. Department of Navy facility that repairs, overhauls, and maintains Navy ships including nuclear-powered ships.

Forecast Assumptions and Comments

This forecast is based on the Site Treatment Plan (STP) Annual Update dated 4/30/00. The waste category (category 1), containers, and radionuclides were assumed based on limited information provided in the STP.

Other Forecast Data

- **Hazardous Waste**

- No hazardous waste has been reported by Pearl Harbor Naval Shipyards.

For questions or comments, please contact Roberta Barcot
(e-mail: Roberta_A_Barcot@rl.gov, voice: (509) 373-4752).

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Offsite — Portsmouth Energy Systems

Portsmouth Energy Systems Report Sections

» Highlights	» Background
» Waste Class Data	» Forecast Assumptions and Comments
» Annual Volumes	» Other Portsmouth Energy Systems Forecast Data
» Comparison to Previous Baseline(s)	»» Detailed Forecast Data

Highlights of LLW, MLLW, and TRU(M) Waste Forecast

- This generator contributes 290 m³, or 1% of Offsite's waste forecast.
- The forecast life cycle for the Portsmouth Energy Systems ends in 2006.
- LLW_I is the only waste class forecast.
- The FY2001.0 forecast shows the same volume as the FY2000.0 forecast.

Waste Class Distribution

Waste Class Data

The expected physical waste forms and container types of Portsmouth Energy Systems' forecasted wastes are described in the following charts.

LLW Data

Physical Waste Form Distribution

Container Distribution

Note: Due to rounding, totals may not equal sum of individual values. Numbers over 10 m³ are rounded to the nearest 10 m³, numbers less than 10 m³ are rounded to integers, and numbers less than 1 are rounded to nearest 0.01 m³.

Annual Volumes

Annual Minimum, Baseline, and Maximum Volumes

Annual LLW Baseline Volumes

Comparison to Previous Baseline(s)

The FY2001.0 forecast volume of 290 m³ is unchanged from the FY2000.0 and FY99.0 forecasts.

Comparison to Previous Baseline(s) by Waste Class

Portsmouth Energy Systems Comparison to Previous Forecasts	FY2001.0 Forecast (m ³)	FY2000.0 Forecast (m ³)	FY1999.0 Forecast (m ³)
Waste Class			
LLW_I	290	290	290
Total	290	290	290

Note: Due to rounding, totals may not equal sum of individual values. Numbers over 10 m³ are rounded to the nearest 10 m³, numbers less than 10 m³ are rounded to integers, and numbers less than 1 are rounded to nearest 0.01 m³.

Background

The mission of the Waste Management Division (WMD) at the Lockheed Martin Energy Systems (LMES) Portsmouth Site is to manage the Environmental Management and Enrichment Facilities wastes.

Forecast Assumptions and Comments

The X-744Y waste streams have been identified as candidates of CH LLW_I disposal at Hanford. This waste was generated as a result of activities associated from the gaseous diffusion process.

Other Forecast Data

- **Hazardous Waste**

- No hazardous waste has been reported by Portsmouth Energy Systems.

For questions or comments, please contact Roberta Barcot
(e-mail: Roberta_A_Barcot@rl.gov, voice: (509) 373-4752).

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Offsite — Portsmouth Naval Shipyards

Portsmouth Naval Shipyards Report Sections

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» <u>Waste Class Data</u>	» <u>Forecast Assumptions and Comments</u>
» <u>Annual Volumes</u>	» <u>Other Portsmouth Naval Shipyards Forecast Data</u>
» <u>Comparison to Previous Baseline(s)</u>	»» <u>Detailed Forecast Data</u>

Highlights of LLW, MLLW, and TRU(M) Waste Forecast

- This generator contributes 0.77 m³, or <1% of Offsite's waste forecast.
- The forecast life cycle for the Portsmouth Naval Shipyards ends in 2002.
- CH_MLLW is the only waste class forecast.
- The FY2001.0 forecast shows a 25% decrease from the FY2000.0 forecast of 1 m³ to reflect the most current Site Treatment Plan (STP).

Waste Class Distribution

Portsmouth Naval Shipyards
Total (excl. HAZ) = 0.77 m³

Waste Class Data

The expected physical waste forms, hazardous characteristics, container types, and LDR waste stream identification distribution of Portsmouth Naval Shipyards' forecast wastes are described in the following

charts.

MLLW Data

Physical Waste Form Distribution

Portsmouth Naval Shipyards
MLLV Total = 0.77 m³

Hazardous Characteristic Distribution

Portsmouth Naval Shipyards
MLLV Total = 0.77 m³

Container Distribution

Portsmouth Naval Shipyards
MLLV Total = 0.77 m³

LDR Waste Stream Identification Distribution

Portsmouth Naval Shipyards
MLLV Total = 0.77 m³

Note: Due to rounding, totals may not equal sum of individual values. Numbers over 10 m³ are rounded to the nearest 10 m³, numbers less than 10 m³ are rounded to integers, and numbers less than 1 are rounded to nearest 0.01 m³.

Annual Volumes

Annual Minimum, Baseline, and Maximum Volumes

Annual MLLW Baseline Volumes

**Annual MLLW Baseline By Waste Class
Offsite--Portsmouth Naval Shipyards**

Comparison to Previous Baseline(s)

The FY2001.0 forecast shows a 25% decrease from the FY2000.0 forecast of 1 m³ to reflect the most recent Site Treatment Plan (STP).

The FY2000.0 forecast is the same as the FY99.0 forecast of 1 m³.

Comparison to Previous Baseline(s) by Waste Class

Portsmouth Naval Shipyards Comparison to Previous Forecasts	FY2001.0 Forecast (m ³)	FY2000.0 Forecast (m ³)	FY1999.0 Forecast (m ³)
Waste Class			
CH_MLLW	0.77	1	1
Total	0.77	1	1

Note: Due to rounding, totals may not equal sum of individual values. Numbers over 10 m³ are rounded to the nearest 10 m³, numbers less than 10 m³ are rounded to integers, and numbers less than 1 are rounded to nearest 0.01 m³.

Background

Portsmouth Naval Shipyards is located on Seavey Island in the Piscataqua River, south of Kittery, Maine. The shipyard is a U.S. Navy facility that repairs, overhauls, and maintains Navy ships, including nuclear-powered ships.

Forecast Assumptions and Comments

The forecast is based on the Site Treatment Plan (STP), Annual Update dated 4/30/00. The waste category (category 1), containers, and radionuclides were assumed based on limited information provided by the STP.

Other Forecast Data

- Hazardous Waste**

- No hazardous waste has been reported by Portsmouth Naval Shipyards.

For questions or comments, please contact Roberta Barcot
(e-mail: Roberta_A_Barcot@rl.gov, voice: (509) 373-4752).

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Offsite — Princeton Plasma Physics Lab

Princeton Plasma Physics Lab Report Sections

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» <u>Waste Class Data</u>	» <u>Forecast Assumptions and Comments</u>
» <u>Annual Volumes</u>	» <u>Other Princeton Plasma Physics Lab Forecast Data</u>
» <u>Comparison to Previous Baseline(s)</u>	»» <u>Detailed Forecast Data</u>

Highlights of LLW, MLLW, and TRU(M) Waste Forecast

- This generator contributes 2,370 m³, or 8% of Offsite's waste forecast.
- The forecast life cycle for the Princeton Plasma Physics Lab ends in 2046.
- LLW_I is the only waste class forecasted.
- The FY2001.0 forecast shows an 2% increase from the FY2000.0 forecast of 2,320 m³ due to new schedules for the decontamination and decommissioning of Tokamak Fusion Test Reactor and more precise waste volume information.

Waste Class Distribution

Princeton Plasma Physics Lab
Total (excl. HAZ) = 2,370 m3

Waste Class Data

The expected physical waste forms and container types of Princeton's forecasted wastes are described in

the following charts.

LLW Data

Physical Waste Form Distribution

Container Distribution

Note: Due to rounding, totals may not equal sum of individual values. Numbers over 10 m³ are rounded to the nearest 10 m³, numbers less than 10 m³ are rounded to integers, and numbers less than 1 are rounded to nearest 0.01 m³.

Annual Volumes

Annual Minimum, Baseline, and Maximum Volumes

Annual LLW Baseline Volumes

Comparison to Previous Baseline(s)

The FY2001.0 forecast shows an 2% increase from the FY2000.0 forecast of 2,320 m³ due to new schedules for the decontamination and decommissioning of Tokamak Fusion Test Reactor and more precise waste volume information.

The FY2000.0 forecast shows a decrease of 3% from the FY99.0 forecast. MLLW is no longer forecast since it was treated at Princeton and shipped as LLW to Hanford.

Comparison to Previous Baseline(s) by Waste Class

Princeton Plasma Physics Lab Comparison to Previous Forecasts	FY2001.0 Forecast (m ³)	FY2000.0 Forecast (m ³)	FY1999.0 Forecast (m ³)
Waste Class			
LLW_I	2,370	2,320	2,280
CH_MLLW	--	--	100
Total	2,370	2,320	2,380

Note: Due to rounding, totals may not equal sum of individual values. Numbers over 10 m³ are rounded to the nearest 10 m³, numbers less than 10 m³ are rounded to integers, and numbers less than 1 are rounded to nearest 0.01 m³.

Background

The U.S. Department of Energy's Princeton Plasma Physics Laboratory is a collaborative national center for plasma and fusion science. In the course of this research, atoms of hydrogen are fused to form helium. As a result of this reaction, radioactive by-products are produced and must be disposed of in an approved manner.

Forecast Assumptions and Comments

The forecast assumes that decontamination and decommissioning of Tokamak Fusion Test Reactor will begin in 2000 and continue through 2002.

Other Forecast Data

• Hazardous Waste

- No hazardous waste has been reported by Princeton Plasma Physics Lab.

For questions or comments, please contact Roberta Barcot
(e-mail: Roberta_A_Barcot@rl.gov, voice: (509) 373-4752).

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Offsite — Puget Sound Naval Shipyards

Puget Sound Naval Shipyards Report Sections

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» <u>Waste Class Data</u>	» <u>Forecast Assumptions and Comments</u>
» <u>Annual Volumes</u>	» <u>Other Puget Sound Naval Shipyards Forecast Data</u>
» <u>Comparison to Previous Baseline(s)</u>	» <u>Detailed Forecast Data</u>

Highlights of LLW, MLLW, and TRU(M) Waste Forecast

- This generator contributes 10 m³, or <1% of Offsite's waste forecast.
- The forecast life cycle for the Puget Sound Naval Shipyards ends in 2001.
- CH_MLLW is the only waste class forecast.
- The FY2001.0 forecast shows an increase of 7 m³ from the FY2000.0 forecast of 3 m³ to reflect the most current Site Treatment Plan (STP).

Waste Class Distribution

Puget Sound Naval Shipyards
Total (excl. HAZ) = 10 m³

Waste Class Data

The expected physical waste forms, hazardous characteristics, container types, and LDR waste stream identification distribution of Puget Sound's forecasted wastes are described in the following charts.

MLLW Data

Physical Waste Form Distribution

Hazardous Characteristic Distribution

Container Distribution

LDR Waste Stream Identification Distribution

Note: Due to rounding, totals may not equal sum of individual values. Numbers over 10 m³ are rounded to the nearest 10 m³, numbers less than 10 m³ are rounded to integers, and numbers less than 1 are rounded to nearest 0.01 m³.

Annual Volumes

Annual Minimum, Baseline, and Maximum Volumes

Annual MLLW Baseline Volumes

Comparison to Previous Baseline(s)

The FY2001.0 forecast shows an increase of 7 m³ from the FY2000.0 forecast of 3 m³ to reflect the most current Site Treatment Plan (STP).

The FY2000.0 forecast shows a decrease of 85% (17 m³) from the FY99.0 forecast due to the shipment of previously forecast waste in FY99.

Comparison to Previous Baseline(s) by Waste Class

Puget Sound Naval Shipyards Comparison to Previous Forecasts	FY2001.0 Forecast (m³)	FY2000.0 Forecast (m³)	FY1999.0 Forecast (m³)
Waste Class			
CH_MLLW	10	3	20
Total	10	3	20

Note: Due to rounding, totals may not equal sum of individual values. Numbers over 10 m³ are rounded to the nearest 10 m³, numbers less than 10 m³ are rounded to integers, and numbers less than 1 are rounded to nearest 0.01 m³.

Background

Puget Sound Naval Shipyards is located on the west side of Sinclair Inlet on Puget Sound, south of Bremerton, Washington. The shipyard is a U.S. Navy facility that repairs, overhauls, and maintains Navy ships, including nuclear-powered ships.

Forecast Assumptions and Comments

The FY2001.0 data are based on the Site Treatment Plan (STP), Annual Update dated 4/30/00. The waste category (category 1), containers, and radionuclides were assumed based on limited information provided in the STP.

Other Forecast Data

• Hazardous Waste

- No hazardous waste has been reported by Puget Sound Naval Shipyards.

For questions or comments, please contact Roberta Barcot
(e-mail: Roberta_A_Barcot@rl.gov, voice: (509) 373-4752).

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Offsite — Rocky Flats

Rocky Flats Report Sections

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» <u>Waste Class Data</u>	» <u>Forecast Assumptions and Comments</u>
» <u>Annual Volumes</u>	» <u>Other Rocky Flats Forecast Data</u>
» <u>Comparison to Previous Baseline(s)</u>	»» <u>Detailed Forecast Data</u>

Highlights of LLW, MLLW, and TRU(M) Waste Forecast

- No waste is included in the baseline forecast for Rocky Flats.
- The maximum forecast life cycle for the Rocky Flats is 2002-2005.
- The FY2001.0 forecast includes a large amount of CH_MLLW (4,690 m³) only in the maximum estimates because Rocky Flats is not currently authorized to send MLLW to the Hanford site.

Waste Class Data

Because no waste is included in the baseline forecast for Rocky Flats, no waste class data are presented here.

Annual Volumes

Annual Minimum, Baseline, and Maximum Volumes

Comparison to Previous Baseline(s)

The FY2001.0 baseline forecast shows no change from the FY2000.0 and FY99.0 baseline forecasts. Although not shown in the table below, the maximum forecast volume decreased 28,990 m³ (86%) from the FY2000.0 maximum forecast of 33,680 m³. This decrease resulted primarily because Rocky Flats only included waste that meets the Hanford waste acceptance criteria in the current forecast.

Comparison to Previous Baseline(s) by Waste Class

Rocky Flats Comparison to Previous Forecasts		FY2001.0 Forecast (m ³)	FY2000.0 Forecast (m ³)	FY1999.0 Forecast (m ³)
Waste Class				
Total		--	--	--

Note: Due to rounding, totals may not equal sum of individual values. Numbers over 10 m³ are rounded to the nearest 10 m³, numbers less than 10 m³ are rounded to integers, and numbers less than 1 are rounded to nearest 0.01 m³.

Background

Rocky Flats' mission is to manage waste and materials and to clean up and convert the site to beneficial use in a manner that is safe, environmentally and socially responsible, physically secure, and cost effective. In addition, efforts are underway to accelerate cleanup and closure of the site. Wastes are generated through environmental restoration, decontamination and decommissioning, and residue stabilization in support of this accelerated closure.

Forecast Assumptions and Comments

The forecast was based on a goal to close the facility by 2005 and is consistent with funding levels.

Other Forecast Data

• Hazardous Waste

- No hazardous waste has been reported by Rocky Flats.

For questions or comments, please contact Roberta Barcot
(e-mail: Roberta_A_Barcot@rl.gov, voice: (509) 373-4752).

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Offsite — Siemens Power Corp.

Siemens Power Corp. Report Sections

» <u>Highlights</u>	» <u>Background</u>
» <u>Waste Class Data</u>	» <u>Forecast Assumptions and Comments</u>
» <u>Annual Volumes</u>	» <u>Other Siemens Power Corp. Forecast Data</u>
» <u>Comparison to Previous Baseline(s)</u>	»» <u>Detailed Forecast Data</u>

Highlights of LLW, MLLW, and TRU(M) Waste Forecast

- This generator contributes 9 m³, or <1% of Offsite's waste forecast.
- The forecast life cycle for the Siemens Power Corp. starts and ends in 2001.
- RH_TRU(M) waste is the only waste class generated.
- Siemens Power Corp. is a new offsite waste generator.

Waste Class Distribution

Waste Class Data

The expected physical waste forms and container types of Siemens Power Corp.'s forecast wastes are described in the following charts.

TRU(M) Data

Physical Waste Form Distribution

Siemens Power Corp.
TRU(M) Total = 9 m3

Container Distribution

Siemens Power Corp.
TRU(M) Total = 9 m3

Note: Due to rounding, totals may not equal sum of individual values. Numbers over 10 m³ are rounded to the nearest 10 m³, numbers less than 10 m³ are rounded to integers, and numbers less than 1 are rounded to nearest 0.01 m³.

Annual Volumes

Annual Minimum, Baseline, and Maximum Volumes

Annual TRU(M) Waste Baseline Volumes

Comparison to Previous Baseline(s)

Siemens Power Corp. is a new offsite waste generator for Hanford.

Comparison to Previous Baseline(s) by Waste Class

Siemens Power Corp. Comparison to Previous Forecasts	FY2001.0 Forecast (m³)	FY2000.0 Forecast (m³)	FY1999.0 Forecast (m³)
Waste Class			
RH_TRU(M)	9	--	--
Total	9	--	--

Note: Due to rounding, totals may not equal sum of individual values. Numbers over 10 m³ are rounded to the nearest 10 m³, numbers less than 10 m³ are rounded to integers, and numbers less than 1 are rounded to nearest 0.01 m³.

Background

Siemens Power Corp. produces nuclear fuel assemblies in Richland, WA that are used in commercial nuclear power plants to generate electricity.

Forecast Assumptions and Comments

It is assumed that DOE will accept RH_TRU(M) waste from Siemens Power Corp.

Other Forecast Data

- Hazardous Waste**

- No hazardous waste has been reported by Siemens Power Corp.

For questions or comments, please contact Roberta Barcot
(e-mail: Roberta_A_Barcot@rl.gov, voice: (509) 373-4752).

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Offsite — Stanford Linear Accelerator Center

Stanford Linear Accelerator Center Report Sections

» <u>Highlights</u>	» <u>Background</u>
» <u>Waste Class Data</u>	» <u>Forecast Assumptions and Comments</u>
» <u>Annual Volumes</u>	» <u>Other Stanford Linear Accelerator Center Forecast Data</u>
» <u>Comparison to Previous Baseline(s)</u>	»» <u>Detailed Forecast Data</u>

Highlights of LLW, MLLW, and TRU(M) Waste Forecast

- This generator contributes 840 m³, or 3% of Offsite's waste forecast.
- The forecast life cycle for the Stanford Linear Accelerator Center ends in 2046.
- LLW_I is the only waste class forecast.
- The FY2001.0 forecast shows a 6% increase from the FY2000.0 forecast of 790 m³ due to the addition of three sections of accelerator components not previously forecasted.

Waste Class Distribution

Stanford Linear Accelerator Center
Total (excl. HAZ) = 840 m³

Waste Class Data

The expected physical waste forms and container types of Stanford's forecasted wastes are described in the following charts.

LLW Data

Physical Waste Form Distribution

Container Distribution

Note: Due to rounding, totals may not equal sum of individual values. Numbers over 10 m³ are rounded to the nearest 10 m³, numbers less than 10 m³ are rounded to integers, and numbers less than 1 are rounded to nearest 0.01 m³.

Annual Volumes

Annual Minimum, Baseline, and Maximum Volumes

Annual LLW Baseline Volumes

Comparison to Previous Baseline(s)

The FY2001.0 forecast shows a 6% increase from the FY2000.0 forecast of 790 m³ due to the addition of three sections of accelerator components not previously forecasted.

The FY2000.0 forecast shows a 2% decrease from the FY99.0 forecast due to the shipment of previously FY99 forecasted waste.

Comparison to Previous Baseline(s) by Waste Class

Stanford Linear Accelerator Center Comparison to Previous Forecasts	FY2001.0 Forecast (m ³)	FY2000.0 Forecast (m ³)	FY1999.0 Forecast (m ³)
Waste Class			
LLW_I	840	790	810
Total	840	790	810

Note: Due to rounding, totals may not equal sum of individual values. Numbers over 10 m³ are rounded to the nearest 10 m³, numbers less than 10 m³ are rounded to integers, and numbers less than 1 are rounded to nearest 0.01 m³.

Background

The Stanford Linear Accelerator Center (SLAC) is a national laboratory operated by Stanford University for the U.S. Department of Energy. SLAC research facilities study the effects of electron-positron collisions to better understand the nature of the atomic nucleus and the relationship of subatomic particles. LLW is generated during normal operation of the accelerator in which some electrons may strike beam line components. When electrons strike the pipe and components, radioactive nuclei can be produced in the material. Some of the pipe and components will be discarded as LLW. This waste is produced on an irregular basis due to the nature of operations, and as such the production of LLW is not a planned activity.

Forecast Assumptions and Comments

Stanford Linear Accelerator Center (SLAC) assumes that waste generation and disposal will remain consistent with past rates due to no major changes in SLAC mission, no scheduled facility closure, and DOE funding supports SLAC waste disposal program at its present capabilities.

Other Forecast Data

- **Hazardous Waste**

- No hazardous waste has been reported by Stanford Linear Accelerator Center.

For questions or comments, please contact Roberta Barcot
(e-mail: Roberta_A_Barcot@rl.gov, voice: (509) 373-4752).

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Offsite — University of California, Davis (LEHR)

University of California, Davis (LEHR) Report Sections

» Highlights

» Waste Class Data

» Annual Volumes

» Comparison to Previous
Baseline(s)

» Background

» Forecast Assumptions and Comments

» Other University of California, Davis
Forecast Data

»» Detailed Forecast Data

Highlights of LLW, MLLW, and TRU(M) Waste Forecast

- This generator is not expected to ship any waste to Hanford; however, the maximum volume (780 m³) includes CERCLA waste that is not currently approved for shipment to Hanford.
- The forecast life cycle for the University of California, Davis ends in 2003.
- LLW_I is the only waste class forecast within the maximum volume.
- The FY2001.0 forecast shows 10 m³ less than the FY2000.0 forecast.

Waste Class Data

Because no waste is included in the baseline forecast for University of California, Davis, no waste class data are presented here.

Annual Volumes

Annual Minimum, Baseline, and Maximum Volumes

Comparison to Previous Baseline(s)

The FY2001.0 forecast shows 10 m³ less than the FY2000.0 forecast due to revised estimates.

The FY2000.0 forecast is approximately the same (within 2 m³) as the FY99.0 forecast. The FY2000.0 forecast life-cycle was extended from 2001 to 2004.

Comparison to Previous Baseline(s) by Waste Class

University of California, Davis (LEHR) Comparison to Previous Forecasts		FY2001.0 Forecast (m ³)	FY2000.0 Forecast (m ³)	FY1999.0 Forecast (m ³)
Waste Class				
LLW-I		--	10	10
Total		--	10	10

Note: Due to rounding, totals may not equal sum of individual values. Numbers over 10 m³ are rounded to the nearest 10 m³, numbers less than 10 m³ are rounded to integers, and numbers less than 1 are rounded to nearest 0.01 m³.

Background

Waste designated to Hanford is from the remediation of the former Laboratory for Energy-Related Health (LEHR) site. The waste classes are a result of the remediation and decontamination and decommissioning activities.

Forecast Assumptions and Comments

LEHR assumes DOE will maintain the level of funding indicated in the Project Baseline Summary for the site. The maximum is based on more contamination being found during site remediation and decontamination and decommissioning activities and that CERCLA wastes will be disposed of at the Hanford site.

Other Forecast Data

- **Hazardous Waste**

- No hazardous waste has been reported by University of California, Davis.

For questions or comments, please contact Roberta Barcot
(e-mail: Roberta_A_Barcot@rl.gov, voice: (509) 373-4752).

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Pacific Northwest National Laboratory

Pacific Northwest National Laboratory Report Sections

» Highlights	» Background
» Waste Class Data	» Forecast Assumptions and Comments
» Annual Waste Class Volumes	» Other Pacific Northwest National Laboratory Forecast Data
» Summary Table	»» Detailed Forecast Data
» Comparison to Previous Baseline(s)	

Highlights of LLW, MLLW, and TRU(M) Waste Forecast

- The life cycle total of LLW, MLLW, and TRU(M) waste expected from the Pacific Northwest National Laboratory is 540 m³, or <1% of the forecast total.
- The forecast life cycle for the Pacific Northwest National Laboratory ends in 2010.
- LLW_I is the primary waste class forecast, representing 44% (240 m³) of the Pacific Northwest National Laboratory's waste volume. As shown in the waste class distribution chart below, CH_MLLW (31% or 170 m³) and LLW_III (17% or 90 m³) also represent a significant fraction of the volume forecasted by this functional group.
- As shown in the generator distribution chart below, the only generator included in this functional group is the Pacific Northwest National Laboratory.
- The FY2001.0 forecast shows a 72% decrease from the FY2000.0 forecast of 1,940 m³ due to implementation of a new methodology for calculating forecast estimates using container counts.

Waste Class Distribution **Generator Distributions** **Waste Class Data**

The expected physical waste forms, hazardous characteristics, container types, and LDR waste stream identification distribution of the Pacific Northwest National Laboratory's forecasted wastes are described in the following charts.

LLW is expected to be debris shipped in medium boxes, 208 liter drums, and 322 liter drums.

MLLW will be primarily debris and lab packs, shipped in a variety of containers. The hazardous characteristics of the MLLW are primarily metals. The LDR waste stream identification distribution is primarily organic carbonaceous debris waste requiring thermal treatment.

TRU(M) waste will consist of debris and inorganic solids. TRU(M) waste is expected to be primarily debris waste shipped in 208 liter drums. The majority of TRU(M) waste will contain a combination of metals and organics, with state regulated and metals making up the rest of the waste.

LLW Data**Physical Waste Form Distribution** **Container Distribution** **MLLW Data**

Physical Waste Form Distribution

Pacific Northwest National Laboratory (PNNL) Functional Group
MLLV Total = 170 m3

Hazardous Characteristic Distribution

Pacific Northwest National Laboratory (PNNL) Functional Group
MLLV Total = 170 m3

Container Distribution

Pacific Northwest National Laboratory (PNNL) Functional Group
MLLV Total = 170 m3

LDR Waste Stream Identification Distribution

Pacific Northwest National Laboratory (PNNL) Functional Group
MLLV Total = 170 m3

TRU(M) Waste Data

Physical Waste Form Distribution

Pacific Northwest National Laboratory (PNNL) Functional Group
TRU(M) Total = 40 m3

Hazardous Characteristic Distribution

Pacific Northwest National Laboratory (PNNL) Functional Group
Total (TRU(M) only) = 40 m3

Container Distribution

Pacific Northwest National Laboratory (PNNL) Functional Group
TRU(M) Total = 40 m³

Note: Due to rounding, totals may not equal sum of individual values. Numbers over 10 m³ are rounded to the nearest 10 m³, numbers less than 10 m³ are rounded to integers, and numbers less than 1 are rounded to nearest 0.01 m³.

Annual Waste Class Volumes

Waste generation at the Pacific Northwest National Laboratory is expected to be constant throughout the life cycle at approximately 50 m³ per year. A very large range has been specified, resulting in potential maximum annual volumes of 500 m³ per year.

Annual Minimum, Baseline, and Maximum Volumes

Annual Baseline by Waste Class

Annual LLW Baseline Volumes

**Annual LLW Baseline By Waste Class
Pacific Northwest National Laboratory (PNNL)**

Annual MLLW Baseline Volumes

**Annual MLLW Baseline By Waste Class
Pacific Northwest National Laboratory (PNNL)**

Annual TRU(M) Waste Baseline Volumes

**Annual TRU(M) Baseline By Waste Class
Pacific Northwest National Laboratory (PNNL)**

Summary Table (Volumes in m³)

(in descending order by total volume)

Pacific Northwest National Laboratory (PNNL) Summary Volumes Generators	LLW_I	LLW_III	CH_MLLW	RH_MLLW	CH_TRU(M)	RH_TRU(M)	FY 2001.0 Forecast (m ³)	% of Total
Pacific Northwest National Laboratory	240	90	170	--	30	10	540	100%
Total	240	90	170	--	30	10	540	100%
Percent	44%	17%	31%		6%	3%	100%	

Note: Due to rounding, totals may not equal sum of individual values. Numbers over 10 m³ are rounded to the nearest 10 m³, numbers less than 10 m³ are rounded to integers, and numbers less than 1 are rounded to nearest 0.01 m³.

Comparison to Previous Baseline(s)

The FY2001.0 forecast shows a 72% decrease from the FY2000.0 forecast of 1,940 m³ due to implementation of a new methodology for calculating forecast estimates using container counts.

The FY2000.0 forecast shows a 13% decrease from the FY99.0 forecast of 2,230 m³ due to currently revised forecast estimates.

Comparison to Previous Baseline(s) by Waste Class

Pacific Northwest National Laboratory (PNNL) Comparison to Previous Forecasts Waste Class	FY2001.0 Forecast (m ³)	FY2000.0 Forecast (m ³)	FY1999.0 Forecast (m ³)
LLW_I	240	1,190	1,440
LLW_III	90	330	340
CH_MLLW	170	330	360
RH_MLLW	--	20	10
CH_TRU(M)	30	10	10
RH_TRU(M)	10	50	50
Total	540	1,940	2,230

Note: Due to rounding, totals may not equal sum of individual values. Numbers over 10 m³ are rounded to the nearest 10 m³, numbers less than 10 m³ are rounded to integers, and numbers less than 1 are rounded to nearest 0.01 m³.

Background

The Pacific Northwest National Laboratory (PNNL) is a national research laboratory that conducts research for the Department of Energy, other government agencies, and private industry to solve problems of national importance. Solid waste is generated on an ongoing basis during research and decontamination activities. Operational and clean-out waste generated prior to transitioning facilities from PNNL are included.

Forecast Assumptions and Comments

The forecast assumes that some of the LLW will be compacted at ATG prior to disposal, and that the MLLW will be treated prior to shipment.

Waste streams held at the Pacific Northwest National Laboratory with no defined disposal

pathway were not included in the forecast. These waste streams include fuel-like material stored in the 325 facility hot cells. When disposal pathways are identified for these waste streams, they will be included as an update to this forecast.

Other Forecast Data

- **Hazardous Waste**

- No hazardous waste has been reported by generators in this program.

For questions or comments, please contact Roberta Barcot
(e-mail: Roberta_A_Barcot@rl.gov, voice: (509) 373-4752).

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Pacific Northwest National Laboratory — PNNL

Because the laboratory is the only generator within the Pacific Northwest National Laboratory functional group, waste information for this generator is identical to that found on the functional group page.

For questions or comments, please contact Roberta Barcot
(e-mail: Roberta_A_Barcot@rl.gov, voice: (509) 373-4752).

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River Protection Program

River Protection Program Report Sections

» <u>Highlights</u>	» <u>Background</u>
» <u>Waste Class Data</u>	» <u>Forecast Assumptions and Comments</u>
» <u>Annual Waste Class Volumes</u>	» <u>Other River Protection Program Forecast Data</u>
» <u>Summary Table</u>	»» <u>Detailed Forecast Data</u>
» <u>Comparison to Previous Baseline(s)</u>	

Highlights of LLW, MLLW, and TRU(M) Waste Forecast

- The life cycle total of LLW, MLLW, and TRU(M) waste expected from the River Protection Program is 92,470 m³, or 53% of the forecast total.
- The forecast life cycle for the River Protection Program ends in 2032.
- The forecasted waste consists primarily of LLW_I (37%), RH_MLLW (34%), and CH_MLLW (26%). Additional waste classes are shown in the chart below.
- SST Long-Length Equipment and SST/DST Tank Farm Operations are the major sources of waste; forecasting 25% (23,500 m³), and 45% (41,190 m³) of the waste volume respectively. Other generators can be found in the waste generator chart below.
- The FY2001.0 forecast shows a 40,750 m³ increase from the FY2000.0 forecast of 51,720 m³. This increase is due to an increase in Tank Farm Operations correlating to the expected increase in waste volumes due to the verification project.

Waste Class Distribution

Generator Distributions

Waste Class Data

The expected physical waste forms, hazardous characteristics, container types, and LDR waste stream identification of the River Protection Program's forecasted wastes are described in the following charts.

LLW is almost exclusively debris and is expected to be shipped in a variety of boxes and drums.

MLLW is primarily debris with the hazardous characteristics expected to be metals mixed with organics. MLLW is expected to be shipped primarily in LECs and be classified as LDR compliant, thus directly disposed.

TRU(M) waste is primarily debris and shielding and contains a combination of metals and organics. Most of the TRU(M) waste will be shipped in LECs.

LLW Data

Physical Waste Form Distribution

Container Distribution

MLLW Data

Physical Waste Form Distribution

River Protection Program (RPP) Functional Group
MLLV Total = 54,960 m3

Hazardous Characteristic Distribution

River Protection Program (RPP) Functional Group
MLLV Total = 54,960 m3

Container Distribution

River Protection Program (RPP) Functional Group
MLLV Total = 54,960 m3

LDR Waste Stream Identification Distribution

River Protection Program (RPP) Functional Group
MLLV Total = 54,960 m3

TRU(M) Waste Data

Physical Waste Form Distribution

River Protection Program (RPP) Functional Group
TRU(M) Total = 2,040 m3

Hazardous Characteristic Distribution

River Protection Program (RPP) Functional Group
Total (TRUM only) = 2,020 m3

Container Distribution

River Protection Program (RPP) Functional Group
TRU(M) Total = 2,040 m³

Note: Due to rounding, totals may not equal sum of individual values. Numbers over 10 m³ are rounded to the nearest 10 m³, numbers less than 10 m³ are rounded to integers, and numbers less than 1 are rounded to nearest 0.01 m³.

Annual Waste Class Volumes

The River Protection Program will be generating waste from 2001 to 2032. From 2000 to 2028, baseline waste generation varies from slightly under 1,000 m³ to a little over 4,000 m³ per year. The main sources of waste during this period are general tank farm operations and the retrieval of the high level waste from the tanks (including removal of the long-length contaminated equipment). Waste from tank farm operations is generated throughout the life cycle of the program but generally declines toward the end of the life cycle. Phase 1 retrieval activities will generate wastes from 2001 through 2017. Waste forecast from 2017 to 2028 results from Phase 2 activities. Waste generation drops significantly in 2029 coinciding with the expected completion of Phase 2 retrieval activities.

Annual Minimum, Baseline, and Maximum Volumes

Annual Baseline by Waste Class

Annual LLW Baseline Volumes

**Annual LLW Baseline By Waste Class
River Protection Program (RPP)**

Annual MLLW Baseline Volumes

**Annual MLLW Baseline By Waste Class
River Protection Program (RPP)**

Annual TRU(M) Waste Baseline Volumes

**Annual TRU(M) Baseline By Waste Class
River Protection Program (RPP)**

Summary Table (Volumes in m³)

(in descending order by total volume)

River Protection Program (RPP) Summary Volumes	LLW_I	LLW_III	CH_MLLW	RH_MLLW	CH_TRU(M)	RH_TRU(M)	FY 2001.0 Forecast (m ³)	% of Total
Generators								
SST/DST Tank Farm Operations	28,040	--	13,020	140	--	--	41,190	45%
SST Long Length Equipment	--	--	--	22,520	490	490	23,500	25%
BNFL Tank Waste Pretreatment and Vitrification	5,500	1,220	7,270	920	--	70	14,980	16%
Waste Feed Delivery System (8 tanks)	--	--	380	2,770	990	--	4,130	4%
DST Retrieval Phase II (10 tanks)	--	--	1,350	1,680	--	--	3,030	3%
W-211 DST Retrieval Systems (10 tanks)	--	--	230	2,380	--	--	2,590	3%
SST Retrieval (149 tanks)	600	--	890	390	--	--	1,880	2%
W-314 Tank Farm Restoration	100	--	370	220	--	--	690	< 1%
Vadose Zone Well Drilling	--	--	470	--	--	--	470	< 1%
Total	34,240	1,220	23,970	30,980	1,480	570	92,470	100%
Percent	37%	1%	26%	34%	2%	< 1%	100%	

Note: Due to rounding, totals may not equal sum of individual values. Numbers over 10 m³ are rounded to the nearest 10 m³, numbers less than 10 m³ are rounded to integers, and numbers less than 1 are rounded to nearest 0.01 m³.

Comparison to Previous Baseline(s)

The FY2001.0 forecast shows a 40,750 m³ increase from the FY2000.0 forecast of 51,720 m³. This increase is due to an increase in Tank Farm Operations correlating to the expected increase in waste volumes due to the vitrification project.

The FY2000.0 forecast shows a 55% decrease from the FY99.0 forecast of 116,220 m³. This decrease results primarily from the elimination of the High-Level Vitrification Project and the Low-Level Vitrification Project forecasts. These forecasts were replaced by the BNFL Tank Waste Pretreatment and Vitrification forecast, however, the scope covered by this forecast is significantly reduced from the earlier forecasts. In particular, the BNFL forecast only includes Phase 1 of tank waste processing. The addition of Phase 2 processing may result in more comparable estimates.

Comparison to Previous Baseline(s) by Waste Class

River Protection Program (RPP) Comparison to Previous Forecasts	FY2001.0 Forecast (m ³)	FY2000.0 Forecast (m ³)	FY1999.0 Forecast (m ³)
Waste Class			
LLW_I	34,240	10,700	30,930
LLW_III	1,220	--	35,710
CH_MLLW	23,970	9,250	17,830
RH_MLLW	30,980	30,610	28,730
CH_TRU(M)	1,480	490	1,360
RH_TRU(M)	570	670	1,550
Total	92,470	51,720	116,220

Note: Due to rounding, totals may not equal sum of individual values. Numbers over 10 m³ are rounded to the nearest 10 m³, numbers less than 10 m³ are rounded to integers, and numbers less than 1 are rounded to nearest 0.01 m³.

Background

The River Protection Program is responsible for safe operation of the tank farms, interim

stabilization, waste transfers from single-shell tanks to double-shell tanks, facility upgrades to support safe operations and waste retrieval, treatment, and disposal, and vadose zone characterization.

The River Protection Program has four primary activities identified in the *Tank Waste Remediation System Baseline System Description* (1995) that could generate solid waste: managing tank waste, retrieving tank waste, processing tank waste, and disposing of secondary generated waste. Each of these primary activities is expected to generate solid waste that could potentially be managed by the Waste Management Program.

Forecast Assumptions and Comments

Waste generation rates for tank farm operations were based on actual quantities shipped in FY98 and FY99 and the expected increases or decreases in shipping quantities in the future.

Retrieval projects assume 23 double-shell tanks and 4 single-shell tanks will be retrieved during Phase 1 retrieval from 2001 to 2017. Phase 2 retrieval will retrieve the remaining 5 double-shell and 145 single-shell tanks from 2017 to 2028.

Tank Waste Pretreatment and Vitrification forecasts are based on the current RPP-WTP design as described in BNFLs April 24, 2000 deliverables to DOE-ORP.

It is assumed that low-activity waste melters and all MLLW in LECs will be received in a form that can be directly disposed without treatment.

Other Forecast Data

- **Hazardous Waste**

- A life cycle total of 440 m³ of hazardous waste has been reported by generators in this program.

For questions or comments, please contact Roberta Barcot
(e-mail: Roberta_A_Barcot@rl.gov, voice: (509) 373-4752).

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River Protection Program — BNFL Tank Waste Pretreatment and Vitrification

BNFL Tank Waste Pretreatment and Vitrification Report Sections

» <u>Highlights</u>	» <u>Background</u>
» <u>Waste Class Data</u>	» <u>Forecast Assumptions and Comments</u>
» <u>Annual Volumes</u>	» <u>Other BNFL Tank Waste Pretreatment and Vitrification Forecast Data</u>
» <u>Comparison to Previous Baseline(s)</u>	»» <u>Detailed Forecast Data</u>

Highlights of LLW, MLLW, and TRU(M) Waste Forecast

- This generator contributes 14,980 m³, or 16% of the River Protection Program's waste forecast.
- The forecast life cycle for BNFL Tank Waste Pretreatment and Vitrification begins in 2007 and continues through 2017.
- The majority of the waste is expected to be CH_MLLW (48%). See the additional waste classes in the pie graph below.
- The FY2001.0 forecast shows a 379% increase from the FY2000.0 forecast to reflect actual designs versus conceptual designs that were the basis of previous forecasts.

Waste Class Distribution

Waste Class Data

The physical waste forms, hazardous characteristics, container types, and LDR waste stream identification distribution forecast by BNFL Tank Waste Pretreatment and Vitrification are shown in the charts below.

LLW Data

Physical Waste Form Distribution

BNFL Tank Waste Pretreatment and Vitrification
LLW Total = 6,720 m3

Container Distribution

BNFL Tank Waste Pretreatment and Vitrification
LLW Total = 6,720 m3

MLLW Data

Physical Waste Form Distribution

BNFL Tank Waste Pretreatment and Vitrification
MLLW Total = 8,190 m3

Hazardous Characteristic Distribution

BNFL Tank Waste Pretreatment and Vitrification
MLLW Total = 8,190 m3

Container Distribution

BNFL Tank Waste Pretreatment and Vitrification
MLLW Total = 8,190 m3

LDR Waste Stream Identification Distribution

BNFL Tank Waste Pretreatment and Vitrification
MLLW Total = 8,190 m3

TRU(M) Waste Data

Physical Waste Form Distribution

Hazardous Characteristic Distribution

Container Distribution

Note: Due to rounding, totals may not equal sum of individual values. Numbers over 10 m³ are rounded to the nearest 10 m³, numbers less than 10 m³ are rounded to integers, and numbers less than 1 are rounded to nearest 0.01 m³.

Annual Volumes

Annual Minimum, Baseline, and Maximum Volumes

Annual LLW Baseline Volumes

Annual MLLW Baseline Volumes

Annual TRU(M) Waste Baseline Volumes

Comparison to Previous Baseline(s)

The FY2001.0 forecast shows a 379% increase from the FY2000.0 forecast to reflect actual designs versus conceptual designs that were the basis of previous forecasts.

The FY2000.0 forecast was the first forecast submittal for BNFL Tank Waste Pretreatment and Vitrification. Previous forecasts for tank waste vitrification were as much as an order of magnitude higher, however, these forecasts cannot necessarily be assumed to be representative

of the current BNFL design or scope. In particular, the current forecast only includes Phase 1 of tank waste processing. The addition of Phase 2 processing may result in more comparable estimates.

Comparison to Previous Baseline(s) by Waste Class

BNFL Tank Waste Pretreatment and Vitrification Comparison to Previous Forecasts	FY2001.0 Forecast (m ³)	FY2000.0 Forecast (m ³)	FY1999.0 Forecast (m ³)
Waste Class			
LLW_I	5,500	--	--
LLW_III	1,220	--	--
CH_MLLW	7,270	1,380	--
RH_MLLW	920	1,750	--
RH_TRU(M)	70	--	--
Total	14,960	3,130	--

Note: Due to rounding, totals may not equal sum of individual values. Numbers over 10 m³ are rounded to the nearest 10 m³, numbers less than 10 m³ are rounded to integers, and numbers less than 1 are rounded to nearest 0.01 m³.

Background

This forecast covers Phase 1 pretreatment and vitrification of tank waste by the privatization vendor (BNFL). Estimates for the low-activity waste melter and melter components are included, however, waste estimates for the HLW facility are not available at this time. In addition, estimates for Phase 2 waste processing have not been included.

Waste results from pretreatment and vitrification of tank waste. Types of waste included are pumps, valves, instruments, filters, laboratory wastes, and melter components.

Forecast Assumptions and Comments

This forecast is based on the current RPP-WTP design as described in BNFL's April 24, 2000 deliverables to DOE-ORP.

Other Forecast Data

- **Hazardous Waste**

- No hazardous waste has been forecasted by BNFL Tank Waste Pretreatment and Vitrification.

For questions or comments, please contact Roberta Barcot
(e-mail: Roberta_A_Barcot@rl.gov, voice: (509) 373-4752).

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River Protection Program — DST Retrieval Phase II (10 tanks)

DST Retrieval Phase II (10 tanks) Report Sections

» <u>Highlights</u>	» <u>Background</u>
» <u>Waste Class Data</u>	» <u>Forecast Assumptions and Comments</u>
» <u>Annual Volumes</u>	» <u>Other DST Retrieval Phase II (10 tanks) Forecast Data</u>
» <u>Comparison to Previous Baseline(s)</u>	»» <u>Detailed Forecast Data</u>

Highlights of LLW, MLLW, and TRU(M) Waste Forecast

- This generator contributes 3,030 m³, or 3% of the River Protection Program's waste forecast.
- The forecast life cycle for the DST Retrieval generator begins in 2002 and ends in 2028.
- All of the waste forecast by DST Retrieval is MLLW; the majority of which (55%) is remote-handled.
- The FY2001.0 forecast shows a 16% decrease from the FY2000.0 forecast of 3,630 m³ due to revised estimates based on 10 tanks versus 19 tanks.

Waste Class Distribution

DST Retrieval Phase II (10 tanks)
Total (excl. HAZ) = 3,039 m³

Waste Class Data

The expected physical waste forms, hazardous characteristics, container types, and LDR waste stream

identification of DST Retrieval's forecasted wastes are described in the following charts.

MLLW Data

Physical Waste Form Distribution

DST Retrieval Phase II (10 tanks)
MLLV Total = 3,030 m³

Hazardous Characteristic Distribution

DST Retrieval Phase II (10 tanks)
MLLV Total = 3,030 m³

Container Distribution

DST Retrieval Phase II (10 tanks)
MLLV Total = 3,030 m³

LDR Waste Stream Identification Distribution

DST Retrieval Phase II (10 tanks)
MLLV Total = 3,030 m³

Note: Due to rounding, totals may not equal sum of individual values. Numbers over 10 m³ are rounded to the nearest 10 m³, numbers less than 10 m³ are rounded to integers, and numbers less than 1 are rounded to nearest 0.01 m³.

Annual Volumes

Annual Minimum, Baseline, and Maximum Volumes

Annual MLLW Baseline Volumes

Annual MLLW Baseline By Waste Class
River Protection Program (RPP)–DST Retrieval Phase II (10 tanks)

Comparison to Previous Baseline(s)

The FY2001.0 forecast shows a 16% decrease from the FY2000.0 forecast due to revised estimates based on 10 tanks versus 19 tanks.

The FY2000.0 forecast shows a 12% increase from the FY99.0 forecast of 3,240 m³. The forecast increase is due to increasing the number of tanks included in the forecast from 17 to 19.

Comparison to Previous Baseline(s) by Waste Class

DST Retrieval Phase II (10 tanks) Comparison to Previous Forecasts	FY2001.0 Forecast (m³)	FY2000.0 Forecast (m³)	FY1999.0 Forecast (m³)
Waste Class			
CH_MLLW	1,350	1,650	1,480
RH_MLLW	1,680	1,980	1,760
Total	3,030	3,630	3,240

Note: Due to rounding, totals may not equal sum of individual values. Numbers over 10 m³ are rounded to the nearest 10 m³, numbers less than 10 m³ are rounded to integers, and numbers less than 1 are rounded to nearest 0.01 m³.

Background

The DST Retrieval Phase II (10 tanks) mission is to retrieve double-shell tank waste for processing, management of existing storage capacity, and continued safe storage. As projects are validated, separate forecasts will be developed for them. Waste classes result from construction activities in existing tank farms and from replacement of items during the operating life cycle.

CH_MLLW will be generated from excavation and demolition of non in-tank equipment/structures and from work in areas such as pits. RH_MLLW will result from removing components that have been exposed to tank waste.

Forecast Assumptions and Comments

It is assumed that all MLLW in LECs will be received in a form that can be directly disposed without treatment.

Other Forecast Data

- **Hazardous Waste**

- No hazardous waste has been forecasted by DST Retrieval.

For questions or comments, please contact Roberta Barcot
(e-mail: Roberta_A_Barcot@rl.gov, voice: (509) 373-4752).

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River Protection Program — SST Long-Length Equipment

SST Long-Length Equipment Report Sections

» <u>Highlights</u>	» <u>Background</u>
» <u>Waste Class Data</u>	» <u>Forecast Assumptions and Comments</u>
» <u>Annual Volumes</u>	» <u>Other SST Long-Length Equipment Forecast Data</u>
» <u>Comparison to Previous Baseline(s)</u>	»» <u>Detailed Forecast Data</u>

Highlights of LLW, MLLW, and TRU(M) Waste Forecast

- This generator contributes 23,500 m³, or 25% of the River Protection Program's waste forecast.
- The forecast life cycle for the SST Long-Length Equipment generator begins in 2007 and ends in 2028.
- Almost all of the forecasted waste (96%) is RH_MLLW.
- The total volume in the FY2001.0 forecast is the same as that in the FY2000.0 forecast.

Waste Class Distribution

SST Long Length Equipment
Total (excl. HAZ) = 23,500 m³

Waste Class Data

The physical waste forms, hazardous characteristics, container types, and LDR waste stream identification distribution forecast by SST Long-Length Equipment are shown in the charts below.

MLLW Data

Physical Waste Form Distribution

Hazardous Characteristic Distribution

Container Distribution

LDR Waste Stream Identification Distribution

TRU(M) Waste Data

Physical Waste Form Distribution

Hazardous Characteristic Distribution

Container Distribution

SST Long Length Equipment
TRU(M) Total = 980 m3

Note: Due to rounding, totals may not equal sum of individual values. Numbers over 10 m³ are rounded to the nearest 10 m³, numbers less than 10 m³ are rounded to integers, and numbers less than 1 are rounded to nearest 0.01 m³.

Annual Volumes

Annual Minimum, Baseline, and Maximum Volumes

Annual MLLW Baseline Volumes

Annual TRU(M) Waste Baseline Volumes

Comparison to Previous Baseline(s)

The total volume in the FY2001.0 forecast is the same as that in the FY2000.0 and FY99.0 forecasts.

Comparison to Previous Baseline(s) by Waste Class

SST Long Length Equipment Comparison to Previous Forecasts	FY2001.0 Forecast (m³)	FY2000.0 Forecast (m³)	FY1999.0 Forecast (m³)
Waste Class			
RH_MLLW	22,520	22,520	22,520
CH_TRU(M)	490	490	490
RH_TRU(M)	490	490	490
Total	23,500	23,500	23,500

Note: Due to rounding, totals may not equal sum of individual values. Numbers over 10 m³ are rounded to the nearest 10 m³, numbers less than 10 m³ are rounded to integers, and numbers less than 1 are rounded to nearest 0.01 m³.

Background

The single-shell tanks contain radioactive waste generated by Hanford operations starting in 1944. Retrieval of this waste will require some (but not all) long-length equipment to be removed from the tanks and managed as solid waste. The equipment used for retrieval will also be long-length equipment and some will require disposal.

The SST Long-Length Equipment mission is to retrieve single-shell tank waste for processing, management of existing storage capacity, and continued safe storage. The forecast currently includes one project (W523) yet to be validated and Phase 2 retrieval for a total of 149 single-shell tanks. As projects are validated, separate forecasts will be developed for them. This forecast only includes long-length contaminated equipment. Miscellaneous construction wastes associated with waste retrieval are included in SST Retrieval.

Forecast Assumptions and Comments

This forecast includes estimates for 4 single-shell tanks from one project yet to be validated (W523) and from Phase 2 retrieval activities. Project W-523 contains the following tanks in sequence and the dates of construction on the planning case: 1 SST in 2007, 1 SST in 2007-2008, 1 SST in 2009-2010, and 1 SST in 2011. The 145 remaining tanks are assumed to be retrieved at a constant rate from 2017 to 2028 as part of Phase 2 retrieval.

It is assumed that all MLLW in LECs will be received in a form that can be directly disposed without treatment.

Other Forecast Data

- **Hazardous Waste**

- No hazardous waste has been forecasted by SST Long-Length Equipment.

For questions or comments, please contact Roberta Barcot
(e-mail: Roberta_A_Barcot@rl.gov, voice: (509) 373-4752).

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River Protection Program — SST Retrieval (149 Tanks)

SST Retrieval Report Sections

» Highlights

» Waste Class Data

» Annual Volumes

» Comparison to Previous
Baseline(s)

» Background

» Forecast Assumptions and Comments

» Other SST Retrieval (149 Tanks) Forecast
Data

»» Detailed Forecast Data

Highlights of LLW, MLLW, and TRU(M) Waste Forecast

- This generator contributes 1,880 m³, or 2% of the River Protection Program's waste forecast.
- The forecast life cycle for the SST Retrieval generator begins in 2007 and ends in 2028.
- The waste is forecast as CH_MLLW (47%), LLW_I (32%), and RH_MLLW (21%) as shown below.
- The total volume in the FY2001.0 forecast is the same as that in the FY2000.0 forecast.

Waste Class Distribution

Waste Class Data

The physical waste forms, hazardous characteristics, container types, and LDR waste stream identification distribution forecast by SST Retrieval are shown in the charts below.

LLW Data

Physical Waste Form Distribution

Container Distribution

MLLW Data

Physical Waste Form Distribution

Hazardous Characteristic Distribution

Container Distribution

LDR Waste Stream Identification Distribution

Note: Due to rounding, totals may not equal sum of individual values. Numbers over 10 m³ are rounded to the nearest 10 m³, numbers less than 10 m³ are rounded to integers, and numbers less than 1 are rounded to nearest 0.01 m³.

Annual Volumes

Annual Minimum, Baseline, and Maximum Volumes

Annual LLW Baseline Volumes

Annual MLLW Baseline Volumes

Comparison to Previous Baseline(s)

The total volume in the FY2001.0 forecast is the same as that in the FY2000.0 and FY99.0 forecasts.

Comparison to Previous Baseline(s) by Waste Class

SST Retrieval (149 tanks) Comparison to Previous Forecasts	FY2001.0 Forecast (m³)	FY2000.0 Forecast (m³)	FY1999.0 Forecast (m³)
Waste Class			
LLW_I	600	600	600
CH_MLLW	890	890	890
RH_MLLW	390	390	390
Total	1,880	1,880	1,880

Note: Due to rounding, totals may not equal sum of individual values. Numbers over 10 m³ are rounded to the nearest 10 m³, numbers less than 10 m³ are rounded to integers, and numbers less than 1 are rounded to nearest 0.01 m³.

Background

The SST Retrieval (149 Tanks) mission is to retrieve single-shell tank waste for processing, management of existing storage capacity, and continued safe storage. The forecast currently includes one project (W523) yet to be validated and Phase 2 retrieval for a total of 149 single-shell tanks. As projects are validated, separate forecasts will be developed for them. This forecast only includes miscellaneous construction wastes associated with waste retrieval. Estimates for long-length contaminated equipment are included in the SST Long-Length Equipment forecast.

LLW_I will be generated from excavation and demolition of non in-tank equipment/structures. CH_MLLW will result from work in areas such as pits. RH_MLLW will result from removing components that have been exposed to tank waste but does not include long-length equipment.

Forecast Assumptions and Comments

This forecast includes estimates for 4 single-shell tanks from one project yet to be validated (W523) and from Phase 2 retrieval activities. Project W-523 contains the following tanks in sequence and the dates of construction on the planning case: 1 SST in 2007, 1 SST in 2007-2008, 1 SST in 2009-2010, and 1 SST in 2011. The 145 remaining tanks are assumed to be retrieved at a constant rate from 2017 to 2028 as part of Phase 2 retrieval.

Other Forecast Data

• Hazardous Waste

- No hazardous waste has been forecasted by SST Retrieval.

For questions or comments, please contact Roberta Barcot
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River Protection Program — SST/DST Tank Farm Operations

SST/DST Tank Farm Operations Report Sections

» <u>Highlights</u>	» <u>Background</u>
» <u>Waste Class Data</u>	» <u>Forecast Assumptions and Comments</u>
» <u>Annual Volumes</u>	» <u>Other [Generator] Forecast Data</u>
» <u>Comparison to Previous Baseline(s)</u>	» <u>Detailed Forecast Data</u>

Highlights of LLW, MLLW, and TRU(M) Waste Forecast

- This generator contributes 41,190 m³, or 45% of the River Protection Program's waste forecast.
- The forecast life cycle for the SST/DST Tank Farm Operations generator ends in 2032.
- LLW_I is the primary waste class forecast, representing 68% (28,040 m³) of the SST/DST Tank Farm Operations waste volume. Additional waste classes are shown in the chart below.
- The FY2001.0 forecast shows a 175% increase from the FY2000.0 forecast of 14,930 m³. The forecast increase results primarily from expected waste generation during the vitrification project.

Waste Class Distribution

SST/DST Tank Farm Operations
Total (esol. HAZ) = 41,190 m³

Waste Class Data

The expected physical waste forms, hazardous characteristics, container types, and LDR waste stream identification distribution of Tank Farm Operation's forecasted wastes are described in the following charts.

LLW Data

Physical Waste Form Distribution

SST/DST Tank Farm Operations
LLW Total = 28,040 m³

Container Distribution

SST/DST Tank Farm Operations
LLW Total = 28,040 m³

MLLW Data

Physical Waste Form Distribution

SST/DST Tank Farm Operations
MLLW Total = 13,150 m³

Hazardous Characteristic Distribution

SST/DST Tank Farm Operations
MLLW Total = 13,150 m³

Container Distribution

SST/DST Tank Farm Operations
MLLW Total = 13,150 m³

LDR Waste Stream Identification Distribution

SST/DST Tank Farm Operations
MLLW Total = 13,150 m³

Note: Due to rounding, totals may not equal sum of individual values. Numbers over 10 m³ are rounded to the nearest 10 m³, numbers less than 10 m³ are rounded to integers, and numbers less than 1 are rounded to nearest 0.01 m³.

Annual Volumes

Annual Minimum, Baseline, and Maximum Volumes

Annual LLW Baseline Volumes

Annual MLLW Baseline Volumes

Comparison to Previous Baseline(s)

The FY2001.0 forecast shows a 175% increase from the FY2000.0 forecast of 14,930 m³. The forecast increase results primarily from expected waste generation during the vitrification project.

The FY2000.0 forecast shows a 5% decrease from the FY99.0 forecast of 15,790 m³. The forecast decrease results primarily because waste forecast for shipment in FY99 is not

included in the FY2000.0 forecast.

Comparison to Previous Baseline(s) by Waste Class

SST/DST Tank Farm Operations Comparison to Previous Forecasts	FY2001.0 Forecast (m³)	FY2000.0 Forecast (m³)	FY1999.0 Forecast (m³)
Waste Class			
LLW_	28,040	9,990	10,580
CH_MLLW	13,020	3,930	4,120
RH_MLLW	140	1,010	1,090
Total	41,199	14,930	15,790

Note: Due to rounding, totals may not equal sum of individual values. Numbers over 10 m³ are rounded to the nearest 10 m³, numbers less than 10 m³ are rounded to integers, and numbers less than 1 are rounded to nearest 0.01 m³.

Background

Tank Farm Operations' mission is to manage the tank farm waste and facilities in a safe, compliant, and cost-effective manner. The waste generated from this project includes day-to-day operational and maintenance waste from the 200E and 200W tank farm facilities, and old tank farm excess equipment.

Forecast Assumptions and Comments

The forecast is based on the actual quantity shipped in FY98 and FY99 and the expected increases or decreases in shipping quantities in the future.

Secondary solid waste generated during closure of the tanks is not included in this forecast.

Other Forecast Data

- **Hazardous Waste**

- A total of 440 m³ of hazardous waste has been forecasted by SST/DST Tank Farm Operations.

For questions or comments, please contact Roberta Barcot
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River Protection Program — Vadose Zone Well Drilling

Vadose Zone Well Drilling Report Sections

» Highlights

» Waste Class Data

» Annual Volumes

» Comparison to Previous
Baseline(s)

» Background

» Forecast Assumptions and Comments

» Other Vadose Zone Well Drilling Forecast
Data

»» Detailed Forecast Data

Highlights of LLW, MLLW, and TRU(M) Waste Forecast

- This generator contributes 470 m³, or <1% of River Protection Program's waste forecast.
- The forecast life cycle for the Vadose Zone Well Drilling generator ends in 2019.
- CH_MLLW is the only waste class forecast.
- The FY2001.0 forecast shows a 80% increase from the FY2000.0 forecast due to process experience in the SX Farm.

Waste Class Distribution

Waste Class Data

The expected physical waste forms, hazardous characteristics, container types, and LDR waste stream identification of Vadose Zone Well Drilling's forecasted wastes are described in the following charts.

MLLW Data

Physical Waste Form Distribution

Vadose Zone Well Drilling
MLLV Total = 470 m³

Hazardous Characteristic Distribution

Vadose Zone Well Drilling
MLLV Total = 470 m³

Container Distribution

Vadose Zone Well Drilling
MLLV Total = 470 m³

LDR Waste Stream Identification Distribution

Vadose Zone Well Drilling
MLLV Total = 470 m³

Note: Due to rounding, totals may not equal sum of individual values. Numbers over 10 m³ are rounded to the nearest 10 m³, numbers less than 10 m³ are rounded to integers, and numbers less than 1 are rounded to nearest 0.01 m³.

Annual Volumes

Annual Minimum, Baseline, and Maximum Volumes

Annual MLLW Baseline Volumes

Comparison to Previous Baseline(s)

The FY2001.0 forecast shows a 80% increase from the FY2000.0 forecast due to process experience in the SX Farm.

The FY2000.0 forecast was the first forecast for Vadose Zone Well Drilling.

Comparison to Previous Baseline(s) by Waste Class

Vadose Zone Well Drilling Comparison to Previous Forecasts	FY2001.0 Forecast (m³)	FY2000.0 Forecast (m³)	FY1999.0 Forecast (m³)
Waste Class			
CH_MLLW	470	260	--
Total	470	260	--

Note: Due to rounding, totals may not equal sum of individual values. Numbers over 10 m³ are rounded to the nearest 10 m³, numbers less than 10 m³ are rounded to integers, and numbers less than 1 are rounded to nearest 0.01 m³.

Background

The mission of the Vadose Zone Well Drilling generator is to characterize the tank-farm subsurface in support of interim actions, retrieval operations, and tank farm Closure. Drilling and sampling through contaminated zones is necessary and will generate "listed" wastes. The first tank farms examined will be S-SX, B-BX-BY, T, and TX-TY. The remaining tank farms will follow and will coincide with the retrieval schedule.

Waste will consist of contaminated soils and laboratory returned soil samples.

Forecast Assumptions and Comments

The forecast is based on assumptions of two to four new characterization boreholes through facility closure.

Other Forecast Data

- **Hazardous Waste**

- No hazardous waste has been reported by Vadose Zone Well Drilling.

For questions or comments, please contact Roberta Barcot
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River Protection Program — W-211 DST Retrieval Systems (10 tanks)

W-211 DST Retrieval Systems Report Sections

» <u>Highlights</u>	» <u>Background</u>
» <u>Waste Class Data</u>	» <u>Forecast Assumptions and Comments</u>
» <u>Annual Volumes</u>	» <u>Other W-211 DST Retrieval Systems Forecast Data</u>
» <u>Comparison to Previous Baseline(s)</u>	» <u>Detailed Forecast Data</u>

Highlights of LLW, MLLW, and TRU(M) Waste Forecast

- This generator contributes 2,590 m³, or 3% of the River Protection Program's waste forecast.
- The forecast life cycle for the DST Retrieval generator begins in 2002 and ends in 2028.
- The majority (91%) of waste forecast is RH_MLLW.
- The FY2001.0 forecast represents a 28% decrease from the FY2000.0 forecast of 3,620 m³ resulting from a new selection of tanks included under this project. In addition, TRU waste was deleted from the forecast because tank SY-102 is no longer in the project scope.

Waste Class Distribution

W-211 DST Retrieval Systems (10 tanks)
Total (excl. HAZ) = 2,590 m³

Waste Class Data

The physical waste forms, hazardous characteristics, container types, and LDR waste stream identification distribution forecast by W-211 DST Retrieval Systems are shown in the charts below.

MLLW Data

Physical Waste Form Distribution

V-211 DST Retrieval Systems (10 tanks)
MLLW Total = 2,590 m³

Hazardous Characteristic Distribution

V-211 DST Retrieval Systems (10 tanks)
MLLW Total = 2,590 m³

Container Distribution

V-211 DST Retrieval Systems (10 tanks)
MLLW Total = 2,590 m³

LDR Waste Stream Identification Distribution

V-211 DST Retrieval Systems (10 tanks)
MLLW Total = 2,590 m³

Note: Due to rounding, totals may not equal sum of individual values. Numbers over 10 m³ are rounded to the nearest 10 m³, numbers less than 10 m³ are rounded to integers, and numbers less than 1 are rounded to nearest 0.01 m³.

Annual Volumes

Annual Minimum, Baseline, and Maximum Volumes

Annual MLLW Baseline Volumes

Annual MLLW Baseline By Waste Class
River Protection Program (RPP)–W-211 DST Retrieval Systems (10 tanks)

Comparison to Previous Baseline(s)

The FY2001.0 forecast represents a 28% decrease from the FY2000.0 forecast of 3,620 m³ resulting from a new selection of tanks included under this project. In addition, TRU waste was deleted from the forecast because tank SY-102 is no longer in the project scope.

The FY2000.0 forecast represents a 5% decrease from the FY99.0 forecast of 3,820 m³ because the forecast included 9 tanks instead of 10.

Comparison to Previous Baseline(s) by Waste Class

V-211 DST Retrieval Systems (10 tanks) Comparison to Previous Forecasts	FY2001.0 Forecast (m³)	FY2000.0 Forecast (m³)	FY1999.0 Forecast (m³)
Waste Class			
CH_MLLW	230	690	810
RH_MLLW	2,360	2,740	2,830
RH_TRU(M)	--	180	180
Total	2,590	3,620	3,820

Note: Due to rounding, totals may not equal sum of individual values. Numbers over 10 m³ are rounded to the nearest 10 m³, numbers less than 10 m³ are rounded to integers, and numbers less than 1 are rounded to nearest 0.01 m³.

Background

The W-211 mission is to retrieve DST waste for processing, management of existing storage capacity, and continued safe storage. Waste classes result from construction activities in existing tank farms and from replacement of items during the operating life cycle.

CH_MLLW will be generated from excavation and demolition of non in-tank equipment/structures and from work in such areas as pits. RH_MLLW will result from removing components that have been exposed to tank waste.

Forecast Assumptions and Comments

The schedule reflects current plans to support feed staging to processing plants and the scope reflects ten DST retrieval systems. Construction of the first three retrieval systems will start in FY2001, so no waste will be generated until FY2002. Construction of the last system will be completed in FY2010. Decontamination systems will clean removed in-tank components to LLW Class III. Waste generated in the tank farms will be mixed waste.

It is assumed that all MLLW in LECs will be received in a form that can be directly disposed without treatment.

Other Forecast Data

- **Hazardous Waste**

- No hazardous waste has been forecasted by W-211 DST Retrieval Systems.

For questions or comments, please contact Roberta Barcot
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River Protection Program — W-314 Tank Farm Restoration

W-314 Tank Farm Restoration Report Sections

» <u>Highlights</u>	» <u>Background</u>
» <u>Waste Class Data</u>	» <u>Forecast Assumptions and Comments</u>
» <u>Annual Volumes</u>	» <u>Other W-314 Tank Farm Restoration Forecast Data</u>
» <u>Comparison to Previous Baseline(s)</u>	» <u>Detailed Forecast Data</u>

Highlights of LLW, MLLW, and TRU(M) Waste Forecast

- This generator contributes 690 m³, or <1% of River Protection Program's waste forecast.
- The forecast life cycle for the W-314 Tank Farm Restoration generator ends in 2005.
- CH_MLLW and RH_MLLW are the primary waste classes forecast, representing 53% (370 m³) and 32% (220 m³) of the W-314 Tank Farm Restoration waste volume.
- The FY2001.0 forecast shows a 10% decrease from the FY2000.0 forecast of 770 m³ primarily due to the elimination of the year 2000 volumes.

Waste Class Distribution

W-314 Tank Farm Restoration
Total (excl. HAZ) = 690 m³

Waste Class Data

The expected physical waste forms, hazardous characteristics, container types, and LDR waste stream

identification distribution of W-314 Tank Farm Restoration's forecasted wastes are described in the following charts.

LLW Data

Physical Waste Form Distribution

Container Distribution

MLLW Data

Physical Waste Form Distribution

Hazardous Characteristic Distribution

Container Distribution

LDR Waste Stream Identification Distribution

Note: Due to rounding, totals may not equal sum of individual values. Numbers over 10 m³ are rounded to the nearest 10 m³, numbers less than 10 m³ are rounded to integers, and numbers less than 1 are rounded to nearest 0.01 m³.

Annual Volumes

Annual Minimum, Baseline, and Maximum Volumes

Annual LLW Baseline Volumes

Annual MLLW Baseline Volumes

Comparison to Previous Baseline(s)

The FY2001.0 forecast shows a 10% decrease from the FY2000.0 forecast of 770 m³ primarily due to the elimination of the year 2000 volumes.

The FY2000.0 forecast shows a 66% increase from the FY99.0 forecast of 470 m³ due to forecast refinements based on updated design and planning information.

Comparison to Previous Baseline(s) by Waste Class

W-314 Tank Farm Restoration Comparison to Previous Forecasts	FY2001.0 Forecast (m³)	FY2000.0 Forecast (m³)	FY1999.0 Forecast (m³)
Waste Class			
LLW_J	100	110	40
CH_MLLW	370	440	300
RH_MLLW	220	230	130
Total	690	770	470

Note: Due to rounding, totals may not equal sum of individual values. Numbers over 10 m³ are rounded to the nearest 10 m³, numbers less than 10 m³ are rounded to integers, and numbers less than 1 are rounded to nearest 0.01 m³.

Background

Project W-314 Tank Farm Restoration supports upgrades to valve pits and pump pits to support delivery volume requirements to the vitrification plant (Privatization Contractor). Waste is related to construction materials, debris and jumpers left discarded in pits, cover blocks, existing jumpers changed out during construction, tank instrument trees, and soils and slurry from core drilling ports in the cover blocks.

Forecast Assumptions and Comments

Project W-314 Tank Farm Restoration has been split into two phases. Phase 1 will generate waste from 2001 to 2003 and is based on historical data, mission and project plans, and process knowledge of scheduled construction activities. Phase 2 is assumed to ship waste in 2004 and 2005.

Other Forecast Data

• Hazardous Waste

- No hazardous waste has been reported by W-314 Tank Farm Restoration.

For questions or comments, please contact Roberta Barcot
(e-mail: Roberta_A_Barcot@rl.gov, voice: (509) 373-4752).

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River Protection Program — Waste Feed Delivery System (8 tanks)

Waste Feed Delivery System (8 tanks) Report Sections

» Highlights

» Waste Class Data

» Annual Volumes

» Comparison to Previous
Baseline(s)

» Background

» Forecast Assumptions and Comments

» Other Waste Feed Delivery System (8 tanks)
Forecast Data

»» Detailed Forecast Data

Highlights of LLW, MLLW, and TRU(M) Waste Forecast

- This generator contributes 4,130 m³, or 4% of the River Protection Program's waste forecast.
- The forecast life cycle for the Waste Feed Delivery System (8 tanks) generator begins in 2002 and ends in 2028.
- Most of the forecasted waste (67%) is RH_MLLW.
- This is the first forecast submittal for Waste Feed Delivery System.

Waste Class Distribution

Waste Feed Delivery System (8 tanks)
Total (excl. HAZ) = 4,130 m³

Waste Class Data

The physical waste forms, hazardous characteristics, container types, and LDR waste stream identification distribution forecast by Waste Feed Delivery System are shown in the charts below.

MLLW Data

Physical Waste Form Distribution

Waste Feed Delivery System (8 tanks)
MLLV Total = 3,140 m3

Hazardous Characteristic Distribution

Waste Feed Delivery System (8 tanks)
MLLV Total = 3,140 m3

Container Distribution

Waste Feed Delivery System (8 tanks)
MLLV Total = 3,140 m3

LDR Waste Stream Identification Distribution

Waste Feed Delivery System (8 tanks)
MLLV Total = 3,140 m3

TRU(M) Waste Data

Physical Waste Form Distribution

Waste Feed Delivery System (8 tanks)
TRU(M) Total = 990 m3

Hazardous Characteristic Distribution

Waste Feed Delivery System (8 tanks)
Total (TRUM only) = 990 m3

Container Distribution

Waste Feed Delivery System (8 tanks)
TRU(M) Total = 990 m³

Note: Due to rounding, totals may not equal sum of individual values. Numbers over 10 m³ are rounded to the nearest 10 m³, numbers less than 10 m³ are rounded to integers, and numbers less than 1 are rounded to nearest 0.01 m³.

Annual Volumes

Annual Minimum, Baseline, and Maximum Volumes

Annual MLLW Baseline Volumes

Annual TRU(M) Waste Baseline Volumes

Annual TRU(M) Baseline By Waste Class
River Protection Program (RPP)--Waste Feed Delivery System (8 tanks)

Comparison to Previous Baseline(s)

This is the first forecast submittal for Waste Feed Delivery Systems.

Comparison to Previous Baseline(s) by Waste Class

Waste Feed Delivery System (8 tanks) Comparison to Previous Forecasts	FY2001.0 Forecast (m³)	FY2000.0 Forecast (m³)	FY1999.0 Forecast (m³)
Waste Class			
CH_MLLW	380	--	--
RH_MLLW	2,770	--	--
CH_TRU(M)	990	--	--
Total	4,130	--	--

Note: Due to rounding, totals may not equal sum of individual values. Numbers over 10 m³ are rounded to the nearest 10 m³, numbers less than 10 m³ are rounded to integers, and numbers less than 1 are rounded to nearest 0.01 m³.

Background

The Waste Feed Delivery System (Project W-521) mission is to install SSC's to permit retrieval and transfer of DST waste for processing, management of existing storage capacity, and continued safe storage. Waste classes result from construction activities in existing tank farms and from replacement of items during the operating life-cycle. The final retrieval system will be installed in FY2011.

Forecast Assumptions and Comments

The schedule reflects current plans to support waste feed staging and delivery to processing plants and includes eight DST retrieval systems. Construction of the first retrieval system will start in late FY2002. Construction on the AP Farm Upgrades and the RPP Vitrification Plant pipelines will commence in early FY2002.

Other Forecast Data

- Hazardous Waste

- No hazardous waste has been forecasted by Waste Feed Delivery System.

For questions or comments, please contact Roberta Barcot
(e-mail: Roberta_A_Barcot@rl.gov, voice: (509) 373-4752).

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Solid Waste

Solid Waste Report Sections

» <u>Highlights</u>	» <u>Background</u>
» <u>Waste Class Data</u>	» <u>Forecast Assumptions and Comments</u>
» <u>Annual Waste Class Volumes</u>	» <u>Other Solid Waste Forecast Data</u>
» <u>Summary Table</u>	»» <u>Detailed Forecast Data</u>
» <u>Comparison to Previous Baseline(s)</u>	

Highlights of LLW, MLLW, and TRU(M) Waste Forecast

- The life cycle total of LLW and MLLW expected from the Solid Waste functional group is 2,590 m³, or 1% of the forecast total.
- The forecast life cycle for Solid Waste ends in 2046.
- LLW_I is the primary waste class forecast, representing 91% (2,360 m³) of Solid Waste's forecasted volume.
- T Plant is the primary waste generator in the Solid Waste functional group, forecasting 79% of the waste volume. Other generators in the functional group are shown below.
- The FY2001.0 forecast shows a 17% decrease from the FY2000.0 forecast of 3,140 m³ primarily due to changes in the Waste Receiving and Processing Facility forecast to reflect actual processing history.

Waste Class Distribution

Generator Distributions

Waste Class Data

The expected physical waste forms, hazardous characteristics, container types, and LDR waste stream identification distribution of Solid Waste's forecasted wastes are described in the following charts.

Debris is the primary waste form for LLW and MLLW. Hazardous characteristics are mostly organics, metals and state regulated.

LLW will be shipped primarily in MB-Vs, while MLLW will be shipped in 208 liter drums.

MLLW is mostly classified as organic carbonaceous debris requiring thermal treatment and non-organic carbonaceous debris requiring non-thermal treatment.

LLW Data

Physical Waste Form Distribution

Container Distribution

MLLW Data

Physical Waste Form Distribution

Hazardous Characteristic Distribution

Container Distribution

LDR Waste Stream Identification Distribution

Note: Due to rounding, totals may not equal sum of individual values. Numbers over 10 m³ are rounded to the nearest 10 m³, numbers less than 10 m³ are rounded to integers, and numbers less than 1 are rounded to nearest 0.01 m³.

Annual Waste Class Volumes

Waste generation by the Solid Waste functional group is expected to be fairly constant at around 70 m³ per year; however, every five years starting in 2004 there is a 10 m³ increase due to the Waste Receiving and Processing Facility. The peak in 2001 is due to waste generation at T-Plant and the Low-Level Waste Burial Grounds.

Annual Minimum, Baseline, and Maximum Volumes

Annual Baseline by Waste Class

Annual LLW Baseline Volumes

Annual MLLW Baseline Volumes

Summary Table (Volumes in m³)

(in descending order by total volume)

Solid Waste Summary Volumes Generators	LLW_I	LLW_M	CH_MLLW	RI_MLLW	CH_TRU(M)	RI_TRU(M)	FY 2001.0 Forecast (m³)	% of Total
221-T/2706-T T Plant Operations	1,830	--	230	--	--	--	2,060	79%
218 EAW Low Level Burial Grounds	310	--	--	--	--	--	310	12%
2336-WWaste Receiving and Processing Facility	220	--	8	--	--	--	220	9%
Total	2,360	--	238	--	--	--	2,590	100%
Percent	91%		9%				100%	

Note: Due to rounding, totals may not equal sum of individual values. Numbers over 10 m³ are rounded to the nearest 10 m³, numbers less than 10 m³ are rounded to integers, and numbers less than 1 are rounded to nearest 0.01 m³.

Comparison to Previous Baseline(s)

The FY2001.0 forecast shows a 17% decrease from the FY2000.0 forecast of 3,140 m³ due to changes in the Waste Receiving and Processing Facility forecast to reflect actual

processing history.

The FY2000.0 forecast shows a 4% decrease from the FY99.0 forecast of 3,260 m³ primarily due to the elimination of the FY99 forecasted volumes. The FY2000.0 forecast does not contain waste from the TRU Storage and Assay Facility (TRUSAF) because it no longer generates any waste. Furthermore, T-Plant no longer expects to generate RH_TRU(M) waste.

Comparison to Previous Baseline(s) by Waste Class

Solid Waste Comparison to Previous Forecasts Waste Class	FY2001.0 Forecast (m ³)	FY2000.0 Forecast (m ³)	FY1999.0 Forecast (m ³)
LLW_I	2,360	3,000	2,930
CH_MLLW	230	130	330
RH_MLLW	--	7	1
RH_TRU(M)	--	--	0.51
Total	2,590	3,140	3,260

Note: Due to rounding, totals may not equal sum of individual values. Numbers over 10 m³ are rounded to the nearest 10 m³, numbers less than 10 m³ are rounded to integers, and numbers less than 1 are rounded to nearest 0.01 m³.

Background

Solid Waste's mission is to receive, store, treat, decontaminate, and dispose of solid radioactive and non-radioactive hazardous waste in a safe, cost-effective, and environmentally compliant manner. Secondary solid waste will be generated to achieve this mission.

The Solid Waste functional group includes four waste generators: T Plant, 2336-W Waste Receiving and Processing (WRAP) Facility, 218 E/W Low-level Burial Grounds (LLBG), and the Central Waste Complex (CWC). Additional waste volumes may be generated by future treatment facilities; however, forecasts for these facilities are not available.

Forecast Assumptions and Comments

Solid Waste generators assume that operations in future years will be similar to the present. Furthermore, it is assumed that routine generation will not vary significantly over the period.

Other Forecast Data

- **Hazardous Waste**

- A life cycle total of 30 m³ of hazardous waste has been reported by generators in this functional group.

SWIFT Report – Solid Waste

For questions or comments, please contact Roberta Barcot
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Solid Waste — 218 E/W Low Level Burial Grounds

218 E/W Low Level Burial Grounds Report Sections

» <u>Highlights</u>	» <u>Background</u>
» <u>Waste Class Data</u>	» <u>Forecast Assumptions and Comments</u>
» <u>Annual Volumes</u>	» <u>Other 218 E/W Low Level Burial Grounds Forecast Data</u>
» <u>Comparison to Previous Baseline(s)</u>	»» <u>Detailed Forecast Data</u>

Highlights of LLW, MLLW, and TRU(M) Waste Forecast

- This generator contributes 310 m³, or 12% of Solid Waste's forecast.
- The forecast life cycle for the 218 E/W Low Level Burial Grounds (LLBG) ends in 2046.
- LLW_I is the only waste class forecast by LLBG.
- The FY2001.0 forecast shows a 6% decrease (310 m³) from the FY2000.0 forecast of 330 m³ since LLBG no longer expects to generate MLLW.

Waste Class Distribution

218 E/W Low Level Burial Grounds
Total (excl. HAZ) = 310 m3

Waste Class Data

The expected physical waste forms and container types of the Low Level Burial Grounds' forecasted wastes are described in the following charts.

LLW Data

Physical Waste Form Distribution

Container Distribution

Note: Due to rounding, totals may not equal sum of individual values. Numbers over 10 m³ are rounded to the nearest 10 m³, numbers less than 10 m³ are rounded to integers, and numbers less than 1 are rounded to nearest 0.01 m³.

Annual Volumes

Annual Minimum, Baseline, and Maximum Volumes

Annual LLW Baseline Volumes

Comparison to Previous Baseline(s)

The FY2001.0 forecast shows a 6% decrease from the FY2000.0 forecast due to the elimination of the MLLW previously forecasted. LLBG expects the waste to be hazardous versus MLLW.

The FY2000.0 forecast shows a 2096% (310 m³) increase from the FY99.0 forecast of 10 m³ because the life cycle was extended from 2027 to 2046 and because it includes tumbleweeds previously forecasted by T Plant.

Comparison to Previous Baseline(s) by Waste Class

218 E/W Low Level Burial Grounds Comparison to Previous Forecasts	FY2001.0 Forecast (m³)	FY2000.0 Forecast (m³)	FY1999.0 Forecast (m³)
Waste Class			
LLW_I	310	320	10
CH_MLLW	--	10	--
Total	310	330	10

Note: Due to rounding, totals may not equal sum of individual values. Numbers over 10 m³ are rounded to the nearest 10 m³, numbers less than 10 m³ are rounded to integers, and numbers less than 1 are rounded to nearest 0.01 m³.

Background

The current mission of the 218 E/W Low Level Burial Grounds is disposal of low level waste. Future disposal of mixed waste is planned in lined trenches.

Forecast Assumptions and Comments

It is assumed that any waste generated by the burial grounds will be LLW and that future operations will be similar to current operations.

Other Forecast Data

• Hazardous Waste

- 10 m³ of hazardous waste has been reported by 218 E/W Low Level Burial Grounds.

For questions or comments, please contact Roberta Barcot
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Solid Waste — 221-T/2706-T T Plant Operations

T Plant Operations Report Sections

» <u>Highlights</u>	» <u>Background</u>
» <u>Waste Class Data</u>	» <u>Forecast Assumptions and Comments</u>
» <u>Annual Volumes</u>	» <u>Other 221-T/2706-T T Plant Operations Forecast Data</u>
» <u>Comparison to Previous Baseline(s)</u>	»» <u>Detailed Forecast Data</u>

Highlights of LLW, MLLW, and TRU(M) Waste Forecast

- This generator contributes 2,060 m³, or 79% of Solid Waste's forecast.
- The forecast life cycle for the 221-T/2706-T T Plant Operations ends in 2035.
- LLW_I accounts for nearly all of the forecasted waste, representing 89% (1,830 m³).
- The FY2001.0 forecast shows a 51% increase from the FY2000.0 forecast of 1,360 m³ due to an increase in expected work activity at the facility.

Waste Class Distribution

Waste Class Data

The expected physical waste forms, hazardous characteristics, container types, and LDR waste stream identification distribution of T Plant Operations' forecasted wastes are described in the following charts.

LLW Data

Physical Waste Form Distribution

221-T/2706-T T Plant Operations
LLW Total = 1,839 m³

Container Distribution

221-T/2706-T T Plant Operations
LLW Total = 1,839 m³

MLLW Data

Physical Waste Form Distribution

221-T/2706-T T Plant Operations
MLLW Total = 230 m³

Hazardous Characteristic Distribution

221-T/2706-T T Plant Operations
MLLW Total = 230 m³

Container Distribution

221-T/2706-T T Plant Operations
MLLW Total = 230 m³

LDR Waste Stream Identification Distribution

221-T/2706-T T Plant Operations
MLLW Total = 230 m³

Note: Due to rounding, totals may not equal sum of individual values. Numbers over 10 m³ are rounded to the nearest 10 m³, numbers less than 10 m³ are rounded to integers, and numbers less than 1 are rounded to nearest 0.01 m³.

Annual Volumes

Annual Minimum, Baseline, and Maximum Volumes

Annual LLW Baseline Volumes

Annual MLLW Baseline Volumes

Comparison to Previous Baseline(s)

The FY2001.0 forecast shows an increase of 51% from the FY2000.0 forecast due to an increase in the expected work activity at the facility.

The FY2000.0 forecast shows a decrease of 22% from the FY99.0 forecast due to the transfer of previously forecast tumbleweeds to the forecast of the Low Level Burial

Grounds.

Comparison to Previous Baseline(s) by Waste Class

221-T/2706-T T Plant Operations Comparison to Previous Forecasts	FY2001.0 Forecast (m³)	FY2000.0 Forecast (m³)	FY1999.0 Forecast (m³)
Waste Class			
LLW_I	1,830	1,280	1,470
CH_MLLW	230	70	280
RH_MLLW	--	7	1
RH_TRU(M)	--	--	0.51
Total	2,060	1,360	1,750

Note: Due to rounding, totals may not equal sum of individual values. Numbers over 10 m³ are rounded to the nearest 10 m³, numbers less than 10 m³ are rounded to integers, and numbers less than 1 are rounded to nearest 0.01 m³.

Background

T Plant's current mission is treatment, verification, repackaging, and decontamination. Waste classes are produced from existing streams at T Plant or generated from the above activities. Waste will be in various forms, including waste produced from pad waste, routine cleanup, and routine maintenance.

Forecast Assumptions and Comments

This forecast is based on continued facility operation and historical data.

Other Forecast Data

- **Hazardous Waste**

- A life cycle total of 5 m³ of hazardous waste has been reported by 221-T/2706-T T Plant Operations.

For questions or comments, please contact Roberta Barcot
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Solid Waste — 224-T TRU Storage & Assay Facility

This generator is no longer submitting a forecast.

For questions or comments, please contact Roberta Barcot
(e-mail: Roberta_A_Barcot@rl.gov, voice: (509) 373-4752).

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Solid Waste — Waste Receiving and Processing (WRAP)

2336-W Waste Receiving and Processing (WRAP) Report Sections

» <u>Highlights</u>	» <u>Background</u>
» <u>Waste Class Data</u>	» <u>Forecast Assumptions and Comments</u>
» <u>Annual Volumes</u>	» <u>Other 2336-W Waste Receiving and Processing (WRAP) Forecast Data</u>
» <u>Comparison to Previous Baseline(s)</u>	»» <u>Detailed Forecast Data</u>

Highlights of LLW, MLLW, and TRU(M) Waste Forecast

- This generator contributes 220 m³, or 9% of Solid Waste's forecast.
- The forecast life cycle for the 2336-W Waste Receiving and Processing (WRAP) facility ends in 2032.
- LLW_I is the primary waste class forecast by WRAP. As shown below, a small amount of CH_MLLW is also forecast.
- The FY2001.0 forecast shows a decrease of 84% from the FY2000.0 forecast of 1,440 m³ to reflect actual processing history.

Waste Class Distribution

Waste Class Data

The expected physical waste forms, hazardous characteristics, container types, and LDR waste stream identification distribution for the 2336-W Waste Receiving and Processing Facility's forecasted wastes are described in the following charts.

LLW Data

Physical Waste Form Distribution

Container Distribution

MLLW Data

Physical Waste Form Distribution

Hazardous Characteristic Distribution

Container Distribution

LDR Waste Stream Identification Distribution

Note: Due to rounding, totals may not equal sum of individual values. Numbers over 10 m³ are rounded to the nearest 10 m³, numbers less than 10 m³ are rounded to integers, and numbers less than 1 are rounded to nearest 0.01 m³.

Annual Volumes

Annual Minimum, Baseline, and Maximum Volumes

Annual LLW Baseline Volumes

Annual MLLW Baseline Volumes

Comparison to Previous Baseline(s)

The FY2001.0 forecast shows a 84% decrease from the FY2000.0 forecast of 1,440 m³ to reflect actual processing history.

The FY2000.0 forecast shows a 3% decrease from the FY99.0 forecast of 1,480 m³ due to the elimination of the the FY99 forecast volumes.

Comparison to Previous Baseline(s) by Waste Class

2336-W Waste Receiving and Processing Facility Comparison to Previous Forecasts	FY2001.0 Forecast (m³)	FY2000.0 Forecast (m³)	FY1999.0 Forecast (m³)
Waste Class			
LLWJ	220	1,410	1,450
CH_MLLW	8	30	30
Total	220	1,440	1,480

Note: Due to rounding, totals may not equal sum of individual values. Numbers over 10 m³ are rounded to the nearest 10 m³, numbers less than 10 m³ are rounded to integers, and numbers less than 1 are rounded to nearest 0.01 m³.

Background

The mission of the 2336-W Waste Receiving and Processing Facility is to provide for characterization, processing, verification, and certification of Hanford's newly generated and retrieved waste. The forecast is based on waste generated from internal operation and maintenance activities.

Forecast Assumptions and Comments

It is assumed that most maintenance waste from the 2336-W Waste Receiving and Processing Facility process area will be collected as non-mixed LLW due to careful management of chemical materials. The forecast includes only secondary waste generated as part of facility operations.

Other Forecast Data

- Hazardous Waste**

- No hazardous waste has been reported by 2336-W Waste Receiving and Processing (WRAP) Facility.

For questions or comments, please contact Roberta Barcot
(e-mail: Roberta_A_Barcot@rl.gov, voice: (509) 373-4752).

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Solid Waste — Central Waste Complex

Central Waste Complex Report Sections

» <u>Highlights</u>	» <u>Background</u>
» <u>Waste Class Data</u>	» <u>Forecast Assumptions and Comments</u>
» <u>Annual Volumes</u>	» <u>Other Central Waste Complex Forecast Data</u>
» <u>Comparison to Previous Baseline(s)</u>	»» <u>Detailed Forecast Data</u>

Highlights of LLW, MLLW, and TRU(M) Waste Forecast

- This generator is not expected to generate radioactive solid waste; however, hazardous waste is expected to be generated.
- The forecast life cycle for the Central Waste Complex (CWC) ends in 2046.
- The FY2001.0 forecast differs from the FY2000.0 forecast in that all of the previously forecasted radioactive solid waste is now expected to be hazardous waste (10 m³).

Waste Class Data

Because no radioactive waste is included in the baseline forecast for the Central Waste Complex no waste class data are presented here.

Annual Volumes

Because no radioactive waste is included in the baseline forecast for the Central Waste Complex, annual volumes are not presented here.

Comparison to Previous Baseline(s)

The FY2001.0 forecast shows all of the previously forecasted radioactive waste from the FY2000.0 forecast as hazardous waste (10 m³) due to operational experience.

The FY2000.0 forecast shows a change of 1 m³ from the FY2000.0 forecast due to the elimination of the FY99 forecast volumes.

Comparison to Previous Baseline(s) by Waste Class

Central Waste Complex Comparison to Previous Forecasts	FY2001.0 Forecast (m ³)	FY2000.0 Forecast (m ³)	FY1999.0 Forecast (m ³)
Waste Class			
CH_MLLW	--	10	10
Total	--	10	10

Note: Due to rounding, totals may not equal sum of individual values. Numbers over 10 m³ are rounded to the nearest 10 m³, numbers less than 10 m³ are rounded to integers, and numbers less than 1 are rounded to nearest 0.01 m³.

Background

The Central Waste Complex's mission is the storage of mixed and transuranic waste for eventual treatment and disposal. Waste may be generated from spill response or operational activities which requires the use of personal protective equipment.

Forecast Assumptions and Comments

Although some category III and TRU wastes are stored in the Central Waste Complex, it is assumed that no waste that is generated will be TRU or category III. It is also assumed that waste operations in future years will be the same as current operations.

Other Forecast Data

- **Hazardous Waste**

- 10 m³ of hazardous waste has been reported by the Central Waste Complex.

For questions or comments, please contact Roberta Barcot
(e-mail: Roberta_A_Barcot@rl.gov, voice: (509) 373-4752).

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Spent Nuclear Fuel

Spent Nuclear Fuel Report Sections

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» <u>Annual Waste Class Volumes</u>	» <u>Other Spent Nuclear Fuel Forecast Data</u>
» <u>Summary Table</u>	» <u>Detailed Forecast Data</u>
» <u>Comparison to Previous Baseline(s)</u>	

Highlights of LLW, MLLW, and TRU(M) Waste Forecast

- The life cycle total of LLW, MLLW, and TRU(M) waste expected from the Spent Nuclear Fuel functional group is 940 m³, or <1% of the forecast total.
- The forecast life cycle for the Spent Nuclear Fuel functional group ends in 2040. Previous forecasts had a life-cycle end date of 2005.
- As shown in the waste class distribution chart below, the Spent Nuclear Fuel functional group forecasts several different waste classes with the majority of the waste being LLW_I waste (54% or 500 m³).
- The Spent Nuclear Fuel functional group currently has one generator, 100-K K-Basin Operations.
- The FY2001.0 forecast shows a 4% increase from the FY2000.0 forecast of 910 m³ due primarily to the additional LLW_I expected to be generated with the extension of the life-cycle end date from 2005 to 2040. The life-cycle was extended to accommodate potential waste generation at the Canister Storage Building (CSB) and the Cold Vacuum Drying (CVD) Building.

Waste Class Distribution

Spent Nuclear Fuel Functional Group
Total (excl. HAZ) = 940 m3

Generator Distributions

Spent Nuclear Fuel Functional Group
Total (excl. HAZ) = 940 m3

Waste Class Data

The expected physical waste forms, hazardous characteristics, container types, and LDR waste stream identification distribution of the Spent Nuclear Fuel's forecasted wastes are described in the following charts.

LLW is expected to be solely debris waste which will be shipped in 208 liter drums.

MLLW is expected to be solely debris waste with a variety of hazardous characteristics, mainly organics. MLLW will be shipped in 208 liter drums and has a LDR waste stream identification distribution of organic debris requiring thermal treatment.

TRU(M) waste is expected to be solely debris waste with the mixed components consisting primarily of organics. Most of the TRU(M) waste will be shipped in 208 liter drums.

LLW Data

Physical Waste Form Distribution

Spent Nuclear Fuel Functional Group
LLW Total = 500 m3

Container Distribution

Spent Nuclear Fuel Functional Group
LLW Total = 500 m3

MLLW Data

Physical Waste Form Distribution

Hazardous Characteristic Distribution

Container Distribution

LDR Waste Stream Identification Distribution

TRU(M) Waste Data

Physical Waste Form Distribution

Hazardous Characteristic Distribution

Container Distribution

Note: Due to rounding, totals may not equal sum of individual values. Numbers over 10 m³ are rounded to the nearest 10 m³, numbers less than 10 m³ are rounded to integers, and numbers less than 1 are rounded to nearest 0.01 m³.

Annual Waste Class Volumes

The Spent Nuclear Fuel functional group waste is expected to be shipped consistently at approximately 20 m³ from 2007 to the end of life cycle in 2040. The largest volumes of waste are expected in 2003 and 2004 which correlates to the removal of sludge.

Annual Minimum, Baseline, and Maximum Volumes

Annual Baseline by Waste Class

Annual LLW Baseline Volumes

**Annual LLW Baseline By Waste Class
Spent Nuclear Fuel**

Annual MLLW Baseline Volumes

**Annual MLLW Baseline By Waste Class
Spent Nuclear Fuel**

Annual TRU(M) Waste Baseline Volumes

**Annual TRU(M) Baseline By Waste Class
Spent Nuclear Fuel**

Summary Table (Volumes in m³)

(in descending order by total volume)

Spent Nuclear Fuel Summary Volumes Generators	LLW_I	LLW_III	CH_MLLW	RH_MLLW	CH_TRU(M)	RH_TRU(M)	FY 2001.0 Forecast (m ³)	% of Total
100-K K-Basin Operations	500	--	40	--	280	120	940	100%
Total	500	--	40	--	280	120	940	100%
Percent	54%		5%		29%	12%	100%	

Note: Due to rounding, totals may not equal sum of individual values. Numbers over 10 m³ are rounded to the nearest 10 m³, numbers less than 10 m³ are rounded to integers, and numbers less than 1 are rounded to nearest 0.01 m³.

Comparison to Previous Baseline(s)

The FY2001.0 forecast shows a 4% increase from the FY2000.0 forecast of 910 m³ due primarily to the additional LLW_I expected to be generated with the extension of the life-cycle end date from 2005 to 2040. The life-cycle was extended to accommodate potential waste generation at the Canister Storage Building (CSB) and the Cold Vacuum Drying (CVD) Building. The CSB is expected to generate little if any waste, however, it has been included in the forecast as a worst case scenario. Countering the additional waste from the CSB and CVD was a large decrease in the RH_TRU(M) waste forecast. This reduction resulted from a change from shielded containers for the K-Basin sludge to containers that will be stored as RH waste, thus dramatically reducing the required number of containers.

The FY2000.0 forecast shows a 175% increase from the FY99.0 forecast of 33 m³ due primarily to the addition of RH_TRU(M) waste from the K-Basin Fuel Sampling Project.

Comparison to Previous Baseline(s) by Waste Class

Spent Nuclear Fuel Comparison to Previous Forecasts Waste Class	FY2001.0 Forecast (m ³)	FY2000.0 Forecast (m ³)	FY1999.0 Forecast (m ³)
LLW_I	500	30	90
LLW_III	--	9	40
CH_MLLW	40	6	7
CH_TRU(M)	280	210	140
RH_TRU(M)	120	660	40
Total	940	910	330

Note: Due to rounding, totals may not equal sum of individual values. Numbers over 10 m³ are rounded to the nearest 10 m³, numbers less than 10 m³ are rounded to integers, and numbers less than 1 are rounded to nearest 0.01 m³.

Background

The Spent Nuclear Fuel's mission is to provide safe storage of spent nuclear fuel (SNF); remedy unsafe conditions; design, construct, operate, and maintain interim storage facilities until final disposition of SNF is determined; and stage the SNF for final disposition once further direction is received.

Currently, the K-Basin provides wet storage for spent fuel. Solid waste will be generated during the disposition of the spent fuel at K-Basin. Waste generating activities include:

maintenance and preparation of the K-Basins for storage and removal of all spent nuclear fuel, debris, and sludge; constructing, as necessary, new systems and facilities to condition and store the fuel; relocating the fuel to interim storage; and accepting spent nuclear fuel from other Hanford locations. Much of this waste will be designated as CERCLA and be dispositioned at the Environmental Restoration Disposal Facility (ERDF). This forecast only includes wastes that will be sent to Waste Management for disposition. This forecast also includes two new facilities: the Canister Storage Building (CSB) and the Cold Vacuum Drying (CVD) Facility.

Main categories of waste include housekeeping refuse and other debris; debris, piping, and scrap metal from basin clean-up; and spent ion exchange columns and water filters used to maintain water quality inside the basins.

Forecast Assumptions and Comments

In the preparation of this forecast, known waste was addressed and estimates were calculated according to expected operations. Upcoming revisions to plant configuration were also considered including expected waste generation due to routine maintenance and housekeeping.

Other Forecast Data

- **Hazardous Waste**

- No hazardous waste has been reported by generators in this functional group.

For questions or comments, please contact Roberta Barcot
(e-mail: Roberta_A_Barcot@rl.gov, voice: (509) 373-4752).

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Spent Nuclear Fuel — 100-K K-Basin Fuel Retrieval

Forecasted waste volumes for 100-K K-Basin Fuel Retrieval are now included in the forecast submitted by 100-K K-Basin Fuel Operations.

For questions or comments, please contact Roberta Barcot
(e-mail: Roberta_A_Barcot@rl.gov, voice: (509) 373-4752).

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Spent Nuclear Fuel — 100-K K-Basin Operations

Because the 100-K K-Basin Operations is the only generator within the Spent Nuclear Fuel functional group, waste information for this generator is identical to that found on the functional group page.

For questions or comments, please contact Roberta Barcot
(e-mail: Roberta_A_Barcot@rl.gov, voice: (509) 373-4752).

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Spent Nuclear Fuel — K-Basin Fuel Sampling Project

Forecasted waste volumes for K-Basin Fuel Sampling Project are now included in the forecast submitted by 100-K K-Basin Fuel Operations.

For questions or comments, please contact Roberta Barcot
(e-mail: Roberta_A_Barcot@rl.gov, voice: (509) 373-4752).

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Transition Activities

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» <u>Comparison to Previous Baseline(s)</u>	

Highlights of LLW, MLLW, and TRU(M) Waste Forecast

- The life cycle total of LLW, MLLW, and TRU(M) waste expected from Transition Activities is 15,810 m³, or 9% of the forecast total.
- The forecast life cycle for the Transition Activities functional group ends in 2038.
- LLW_I is the primary waste class forecast, representing 67% (10,600 m³) of the Transition Activities waste volume. Other waste classes are shown in the pie graph below.
- The Plutonium Finishing Plant is the major source of waste, forecasting 62% (9,750 m³) of the waste volume. The 300 Area Accelerated Closure Project accounts for 13% (2,030 m³). Other generators can be found in the waste generator chart below.
- The FY2001.0 forecast for Transition Activities shows a 68% decrease from the FY2000.0 forecast of 49,610 m³ primarily due to the adjusted estimates of LLW_I from the Plutonium Finishing Plant.

Waste Class Distribution

Transition Activities Functional Group
Total (excl. HAZ) = 15,810 m3

Generator Distributions

Transition Activities Functional Group
Total (excl. HAZ) = 15,810 m3

Waste Class Data

The expected physical waste forms, hazardous characteristics, container types, and LDR waste stream identification distribution of Transition Activities' forecasted wastes are described in the following charts.

LLW is expected to be primarily debris waste that will be shipped in mostly in MB-V's.

MLLW is expected to be mostly debris waste as well as lab packs and inorganic solids that constitute a variety of hazardous characteristics. MLLW will be shipped mostly in 208 liter drums and distributes in a variety of LDR waste stream identification distributions.

TRU(M) waste is also expected to be mostly debris waste with a portion of the mixed TRU expected to constitute metals as the primary hazardous characteristic. TRU(M) waste is expected to be shipped primarily in 208 liter drums.

GTC_III waste is expected to be debris waste shipped in 208 liter drums.

LLW Data**Physical Waste Form Distribution**

Transition Activities Functional Group
LLW Total = 12,350 m3

Container Distribution

Transition Activities Functional Group
LLW Total = 12,350 m3

MLLW Data

Physical Waste Form Distribution

Transition Activities Functional Group
MLLV Total = 590 m3

Hazardous Characteristic Distribution

Transition Activities Functional Group
MLLV Total = 590 m3

Container Distribution

Transition Activities Functional Group
MLLV Total = 590 m3

LDR Waste Stream Identification Distribution

Transition Activities Functional Group
MLLV Total = 590 m3

TRU(M) Waste Data

Physical Waste Form Distribution

Transition Activities Functional Group
TRU(M) Total = 2,860 m3

Hazardous Characteristic Distribution

Transition Activities Functional Group
Total (TRUM only) = 680 m3

Container Distribution

GTC_III Data

Physical Waste Form Distribution

Container Distribution

Note: Due to rounding, totals may not equal sum of individual values. Numbers over 10 m³ are rounded to the nearest 10 m³, numbers less than 10 m³ are rounded to integers, and numbers less than 1 are rounded to nearest 0.01 m³.

Annual Waste Class Volumes

Transition Activities waste is expected to be generated from 2001 to the end of life cycle in 2038. Most of the waste is expected from 2001 through 2011. These volumes correspond primarily to the schedule of the Plutonium Finishing Plant and the 300 Area Accelerated Closure Project.

Annual Minimum, Baseline, and Maximum Volumes

Annual Baseline by Waste Class

Annual LLW Baseline Volumes

Annual MLLW Baseline Volumes

Annual TRU(M) Waste Baseline Volumes

Annual GTC_III Waste Baseline Volumes

Summary Table (Volumes in m³)

(in descending order by total volume)

Transition Activities Summary Volumes	LLW_I	LLW_III ¹⁾	CH_MLLW	RH_MLLW	CH_TRU(M)	RH_TRU(M)	FY 2001.0 Forecast (m³)	% of Total
Generators								
234-5 Z Plutonium Finishing Plant	6,710	650	180	--	2,200	--	9,750	62%
300 Area Accelerated Closure Project	910	460	130	--	500	30	2,030	13%
324 Building	480	430	170	--	2	60	1,130	7%
Waste Encapsulation & Storage Facility	960	30	10	6	--	--	1,010	6%
K-Basin Transition	630	--	30	--	10	3	880	6%
327 Building	300	90	60	--	10	--	470	3%
Fast Flux Test Facility	70	80	0.26	--	--	--	150	< 1%
200 Area Accelerated Deactivation	110	3	2	--	3	--	120	< 1%
303-K Fuels Fabrication Transition	120	--	--	--	--	--	120	< 1%
T Plant Transition	80	--	--	--	40	--	120	< 1%
309 PRTR Vault Waste	20	--	2	--	--	--	20	< 1%
Total	10,600	1,750	590	6	2,770	90	15,810	100%
Percent	67%	11%	4%	< 1%	18%	< 1%	100%	

1) 6 m³ of RH_LLW_GTCIII are included in the volumes reported for RH_LLW_III (1.28 m³ for each year reported by Waste Encapsulation & Storage Facility from 2017 to 2021).

Note: Due to rounding, totals may not equal sum of individual values. Numbers over 10 m³ are rounded to the nearest 10 m³, numbers less than 10 m³ are rounded to integers, and numbers less than 1 are rounded to nearest 0.01 m³.

Comparison to Previous Baseline(s)

The FY2001.0 forecast for Transition Activities shows a 68% decrease from the FY2000.0 forecast of 49,610 m³ primarily due to the adjusted estimates of LLW_I from the Plutonium Finishing Plant.

The FY2000.0 forecast shows a 72% increase over the FY99.0 forecast due to the increased waste forecast from the Plutonium Finishing Plant, resulting from a Tiger Team Audit.

Comparison to Previous Baseline(s) by Waste Class

Transition Activities Comparison to Previous Forecasts	FY2001.0 Forecast (m³)	FY2000.0 Forecast (m³)	FY1999.0 Forecast (m³)
Waste Class			
LLW_I	10,600	41,520	22,050
LLW_III	1,750	1,090	1,210
CH_MLLW	590	550	1,170
RH_MLLW	6	7	0.26
CH_TRU(M)	2,770	6,250	4,300
RH_TRU(M)	90	180	30
GTCIII	6	6	
Total	15,800	49,610	28,760

Note: Due to rounding, totals may not equal sum of individual values. Numbers over 10 m³ are rounded to the nearest 10 m³, numbers less than 10 m³ are rounded to integers, and numbers less than 1 are rounded to nearest 0.01 m³.

Background

The Transition Activities mission is to manage the deactivation activities of those facilities that are no longer in the operational phase. As stored material and wastes are removed, the facilities will be deactivated and transferred to the EM-40 functional group. The forecast life cycle for waste generated by Transition Activities extends to 2038. The types of waste generated within this functional group can be operational/maintenance waste, deactivation waste, and surveillance & maintenance waste. Generation of surveillance & maintenance waste is expected to be minimal since the planning baseline for each facility assumes that upon completion of deactivation, the facility will be immediately transferred to the EM-40 contractor for D&D.

Forecast Assumptions and Comments

The Transition Activities waste volume forecast assumes no slip in the schedule for some sites to transition to surveillance and maintenance phase. Specifically, the Plutonium Finishing Plant will complete its cleanup projects by 2016.

Other Forecast Data

• Hazardous Waste

- A life cycle total of 220 m³ of hazardous waste has been reported by generators in this functional group.

For questions or comments, please contact Roberta Barcot
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Transition Activities — 200 Area Accelerated Deactivation

200 Area Accelerated Deactivation Report Sections

» <u>Highlights</u>	» <u>Background</u>
» <u>Waste Class Data</u>	» <u>Forecast Assumptions and Comments</u>
» <u>Annual Volumes</u>	» <u>Other 200 Area Accelerated Deactivation Forecast Data</u>
» <u>Comparison to Previous Baseline(s)</u>	»» <u>Detailed Forecast Data</u>

Highlights of LLW, MLLW, and TRU(M) Waste Forecast

- This generator contributes 120 m³, or 1% of Transition Activities' waste forecast.
- The forecast life cycle for the 200 Area Accelerated Deactivation generator ends in 2008.
- LLW_I is the primary waste class forecast with 110 m³ (93%).
- The FY2001.0 forecast shows a 87% decrease from the FY2000.0 forecast due to current revised estimates. Previous forecasts were based on the 1996 Baseline Environmental Management Report (BEMR).

Waste Class Distribution

**200 Area Accelerated Deactivation
Total (excl. HAZ) = 120 m³**

Waste Class Data

The following charts depict the physical waste forms, hazardous constituents, containers, and LDR

waste stream identification distribution expected for each waste class.

LLW Data

Physical Waste Form Distribution

200 Area Accelerated Deactivation
LLW Total = 120 m3

Container Distribution

200 Area Accelerated Deactivation
LLW Total = 120 m3

MLLW Data

Physical Waste Form Distribution

200 Area Accelerated Deactivation
MLLW Total = 2 m3

Hazardous Characteristic Distribution

200 Area Accelerated Deactivation
MLLW Total = 2 m3

Container Distribution

200 Area Accelerated Deactivation
MLLW Total = 2 m3

LDR Waste Stream Identification Distribution

200 Area Accelerated Deactivation
MLLW Total = 2 m3

TRU(M) Waste Data

Physical Waste Form Distribution

200 Area Accelerated Deactivation
TRU(M) Total = 3 m3

Container Distribution

200 Area Accelerated Deactivation
TRU(M) Total = 3 m3

Note: Due to rounding, totals may not equal sum of individual values. Numbers over 10 m³ are rounded to the nearest 10 m³, numbers less than 10 m³ are rounded to integers, and numbers less than 1 are rounded to nearest 0.01 m³.

Annual Volumes

Annual Minimum, Baseline, and Maximum Volumes

Annual LLW Baseline Volumes

Annual MLLW Baseline Volumes

Annual MLLW Baseline By Waste Class
Transition Activities--200 Area Accelerated Deactivation

Annual TRU(M) Waste Baseline Volumes

Annual TRU(M) Baseline By Waste Class
Transition Activities--200 Area Accelerated Deactivation

Comparison to Previous Baseline(s)

The FY2001.0 forecast shows a 87% decrease from the FY2000.0 forecast due to current revised estimates. Previous forecasts were based on the 1996 Baseline Environmental Management Report (BEMR). This is the first forecast developed based on the Multi-Year Work Plan.

The FY2000.0 forecast shows a 1% decrease from the FY99.0 forecast of 930 m³ due to the elimination of the year 1999 volumes.

Comparison to Previous Baseline(s) by Waste Class

200 Area Accelerated Deactivation Comparison to Previous Forecasts	FY2001.0 Forecast (m³)	FY2000.0 Forecast (m³)	FY1999.0 Forecast (m³)
Waste Class			
LLW_I	110	420	440
LLW_III	3	40	40
CH_MLLW	2	120	120
CH_TRU(M)	3	330	330
Total	120	920	930

Note: Due to rounding, totals may not equal sum of individual values. Numbers over 10 m³ are rounded to the nearest 10 m³, numbers less than 10 m³ are rounded to integers, and numbers less than 1 are rounded to nearest 0.01 m³.

Background

This generator includes a number of facilities in the 200 Area and the 400 Area. In general, the facilities can be associated with a major facility within the Transition Activities program (e.g., PFP) but for various reasons are not included in the forecasts for those facilities. The facilities included in this forecast were previously reported as Non-Programmatic and include: 202-A PUREX Non-Transition, 225-B B Plant Non-Transition, 234-5 Z PFP Non-Transition, 400 Area Facilities Non-Transition, and Site Support Non-Transition. In general this generator provides facility surveillance and maintenance, facility characterization and risk mitigation. Facilities will be transferred to EM-40 by 2008.

Forecast Assumptions and Comments

This forecast for 200 Area Accelerated Deactivation was prepared based on the multi-year work plan baseline.

Other Forecast Data

• Hazardous Waste

- A life cycle total of 4 m³ of hazardous waste has been reported by 200 Area Accelerated Deactivation.

For questions or comments, please contact Roberta Barcot
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Transition Activities — 234-5 Z Plutonium Finishing Plant

234-5 Z Plutonium Finishing Plant Report Sections

» Highlights

» Waste Class Data

» Annual Volumes

» Comparison to Previous
Baseline(s)

» Background

» Forecast Assumptions and Comments

» Other 234-5 Z Plutonium Finishing Plant
Forecast Data

»» Detailed Forecast Data

Highlights of LLW, MLLW, and TRU(M) Waste Forecast

- This generator contributes 9,750 m³, or 62% of Transition Activities' waste forecast.
- The forecast life cycle for the 234-5 Z Plutonium Finishing Plant has been extended from 2001 to 2015.
- LLW_I and CH_TRU(M) are the primary waste classes forecast, representing 69% (6,710 m³) and 23% (2,200 m³) of the Plutonium Finishing Plant waste volume. Additional waste classes are shown in the chart below.
- The FY2001.0 forecast shows a decrease of 77% over the FY2000.0 forecast of 41,490 m³ due to revised waste generation estimates based on process knowledge from a similiar facility in Rocky Flats.

Waste Class Distribution

2345-Z Plutonium Finishing Plant
Total (excl. HAZ) = 9,750 m³

Waste Class Data

The expected physical waste forms, hazardous characteristics, container types, and LDR waste stream identification distribution of the Plutonium Finishing Plant's forecasted wastes are described in the following charts.

LLW Data

Physical Waste Form Distribution

2345-Z Plutonium Finishing Plant
LLW Total = 7,370 m3

Container Distribution

2345-Z Plutonium Finishing Plant
LLW Total = 7,370 m3

MLLW Data

Physical Waste Form Distribution

2345-Z Plutonium Finishing Plant
MLLW Total = 180 m3

Hazardous Characteristic Distribution

2345-Z Plutonium Finishing Plant
MLLW Total = 180 m3

Container Distribution

2345-Z Plutonium Finishing Plant
MLLW Total = 180 m3

LDR Waste Stream Identification Distribution

2345-Z Plutonium Finishing Plant
MLLW Total = 180 m3

TRU(M) Waste Data

Physical Waste Form Distribution

2345-Z Plutonium Finishing Plant
TRU(M) Total = 2,200 m³

Hazardous Characteristic Distribution

2345-Z Plutonium Finishing Plant
Total (TRUM only) = 570 m³

Container Distribution

2345-Z Plutonium Finishing Plant
TRU(M) Total = 2,200 m³

Note: Due to rounding, totals may not equal sum of individual values. Numbers over 10 m³ are rounded to the nearest 10 m³, numbers less than 10 m³ are rounded to integers, and numbers less than 1 are rounded to nearest 0.01 m³.

Annual Volumes

Annual Minimum, Baseline, and Maximum Volumes

Annual LLW Baseline Volumes

Annual MLLW Baseline Volumes

Annual TRU(M) Waste Baseline Volumes

Comparison to Previous Baseline(s)

The FY2001.0 forecast shows a decrease of 77% over the FY2000.0 forecast of 41,490 m³ due to revised waste generation estimates based on a process knowledge at a similar facility in Rocky Flats.

The FY2000.0 forecast shows an increase of 99% over the FY99.0 forecast of 20,880 m³. The increase is due to the lengthened lifecycle, and altered estimates of waste generation.

Comparison to Previous Baseline(s) by Waste Class

2345-Z Plutonium Finishing Plant Comparison to Previous Forecasts	FY2001.0 Forecast (m³)	FY2000.0 Forecast (m³)	FY1999.0 Forecast (m³)
Waste Class			
LLW_I	6,710	36,290	17,040
LLW_III	650	20	90
CH_MLLW	180	60	610
CH_TRU(M)	2,200	5,110	3,140
Total	9,750	41,490	26,890

Note: Due to rounding, totals may not equal sum of individual values. Numbers over 10 m³ are rounded to the nearest 10 m³, numbers less than 10 m³ are rounded to integers, and numbers less than 1 are rounded to nearest 0.01 m³.

Background

The Plutonium Finishing Plant's mission is to stabilize and store plutonium bearing products generated from the production of nuclear weapons. The waste is generated through surveillance and maintenance, decontamination, and stabilization activities. Projects included in the forecast are: residue, liquids and solids stabilization; Z-361 tank waste retrieval; facility construction projects; Z-361 tank waste retrieval and three proposed accelerated closure activities.

Forecast Assumptions and Comments

The forecast for FY2001 is based on the average quantities of the last three fiscal years and stabilization project waste projections. The out years include DNFSB 94-1 actions and terminal cleanout. Terminal cleanout includes removal of glove boxes and associated equipment starting in FY01. A total quantity of 3,000 cubic meters of Transuranic plus Transuranic mixed waste was projected in the Vision 2006 plan. The expected rates for terminal cleanout are based on Vision 2006 plan and deactivation knowledge from Rocky Flats. To project waste volumes (except hazardous) a baseline (B) was developed from the three previous FYs. The rates are as follows: 2001- 1 x B; 2002- 2 x B; 2004-2009- 7 x B; 2010 - 4 x B; 2011- 3 x B; 2012 - 1 x B. Waste estimates in fiscal year 01 also include disposal of the Mg(OH)₂ filtrate stream from the solutions project. The wastes will be treated at ATG and returned for disposal in the LLW burial grounds.

Waste volumes in FY01-03 are elevated as a result of solids/liquids and residue project processing. FY01 includes debris generated in processing ash and SS&C residues. Waste volumes in FY01 also include implementing the solutions accelerated closure alternative. FY02 and 03 include debris waste generated as a subset from implementing the MOX and Pu alloy accelerated closure proposals.

This forecast is based on historical generation rates, major project schedules and facility closure planned for 2016. It includes proposed accelerated closure projects. Volumes for D&D activities have also changed due to knowledge gained from similar processes at Rocky Flats.

Other Forecast Data

- **Hazardous Waste**

- A life cycle total of 40 m³ of hazardous waste has been reported by 234-5 Z Plutonium Finishing Plant.

For questions or comments, please contact Roberta Barcot
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Transition Activities — 300 Area Accelerated Closure Project

300 Area Accelerated Closure Project Report Sections

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» <u>Waste Class Data</u>	» <u>Forecast Assumptions and Comments</u>
» <u>Annual Volumes</u>	» <u>Other 300 Area Accelerated Closure Forecast Data</u>
» <u>Comparison to Previous Baseline(s)</u>	»» <u>Detailed Forecast Data</u>

Highlights of LLW, MLLW, and TRU(M) Waste Forecast

- This generator contributes 2,030 m³, or 13% of Transition Activities' waste forecast.
- The forecast life cycle for the 300 Area Accelerated Closure Project generator ends in 2009.
- LLW_I is the primary waste class forecast at 45% (910 m³) of the volume. As shown in the chart below, CH_TRU(M) waste (500 m³), LLW_III (460 m³), and CH_MLLW (130 m³) are also expected in significant quantities.
- The FY2001.0 forecast shows a 49% decrease from the the FY2000.0 forecast of 4,010 m³ due to currently revised estimates. Previous forecasts were based on the 1996 Baseline Environmental Management Report (BEMR). This forecast is based on the 300 Area Accelerated Closure Plan (ACP).

Waste Class Distribution

Waste Class Data

The expected physical waste forms, hazardous characteristics, container types, and LDR waste stream identification distribution of the 300 Area Accelerated Closure Project's forecasted wastes are described in the following charts.

LLW Data

Physical Waste Form Distribution

Container Distribution

MLLW Data

Physical Waste Form Distribution

Hazardous Characteristic Distribution

Container Distribution

LDR Waste Stream Identification Distribution

TRU(M) Waste Data

Physical Waste Form Distribution

Hazardous Characteristic Distribution

Container Distribution

Note: Due to rounding, totals may not equal sum of individual values. Numbers over 10 m³ are rounded to the nearest 10 m³, numbers less than 10 m³ are rounded to integers, and numbers less than 1 are rounded to nearest 0.01 m³.

Annual Volumes

Annual Minimum, Baseline, and Maximum Volumes

Annual LLW Baseline Volumes

Annual MLLW Baseline Volumes

Annual TRU(M) Waste Baseline Volumes

Comparison to Previous Baseline(s)

The FY2001.0 forecast shows a 49% decrease from the the FY2000.0 forecast of 4,010 m³ due to currently revised estimates. Previous forecasts were based on the 1996 Baseline Environmental Management Report (BEMR). This forecast is based on the 300 Area Accelerated Closure Plan (ACP).

The FY2000.0 forecast shows no change from the FY99.0 forecast.

Comparison to Previous Baseline(s) by Waste Class

300 Area Accelerated Closure Project Comparison to Previous Forecasts	FY2001.0 Forecast (m³)	FY2000.0 Forecast (m³)	FY1999.0 Forecast (m³)
Waste Class			
LLW_I	910	2,520	2,520
LLW_III	480	500	500
CH_MLLW	130	220	220
RH_MLLW	--	0.26	0.26
CH_TRU(M)	500	740	740
RH_TRU(M)	30	30	30
Total	2,030	4,010	4,010

Note: Due to rounding, totals may not equal sum of individual values. Numbers over 10 m³ are rounded to the nearest 10 m³, numbers less than 10 m³ are rounded to integers, and numbers less than 1 are rounded to nearest 0.01 m³.

Background

This waste generator was originally a grouping of 32 facilities in the 300 Area that are expected to require deactivation from 2000 through 2006. Four additional facilities, the 325, 326, 329, and 331 buildings, have been added in the FY99.0 forecast and are expected to undergo deactivation from 2030 to 2034. The deactivation of these facilities has only recently been included in the planning baseline of the Transition Activities functional group. The solid waste resulting from deactivation of these facilities had previously been included under "Non Programmatic".

Forecast Assumptions and Comments

Some compaction and size reduction will be performed prior to transfer to Fluor Hanford Waste Management Project, liquids will be absorbed.

Volumes and timing updated based on current information for the 300 Area Accelerated Closure Project (ACP) and based on HNF-6465 Rev 0.

Other Forecast Data

- **Hazardous Waste**

- No hazardous waste has been reported by 300 Area Accelerated Closure Project .

For questions or comments, please contact Roberta Barcot
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Transition Activities — 303-K Fuels Fabrication Transition

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» <u>Annual Volumes</u>	» <u>Other 303-K Fuels Fabrication Transition Forecast Data</u>
» <u>Comparison to Previous Baseline(s)</u>	»» <u>Detailed Forecast Data</u>

Highlights of LLW, MLLW, and TRU(M) Waste Forecast

- This generator contributes 120 m³, or <1% of Transition Activities' waste forecast.
- The forecast life cycle for the Fuels Fabrication Transition generator ends in 2002.
- LLW_I is the only forecast waste.
- The FY2001.0 forecast shows a change in waste class from CH_MLLW to LLW_I and an increase of approximately 120 m³ because a portion of the product material that was expected to be sold will now be disposed as LLW.

Waste Class Distribution

303-K Fuels Fabrication Transition
Total (excl. HAZ) = 120 m3

Waste Class Data

The expected physical waste forms and container types of Fuel Fabrication Transition's forecasted

wastes are described in the following charts.

LLW Data

Physical Waste Form Distribution

Container Distribution

Note: Due to rounding, totals may not equal sum of individual values. Numbers over 10 m³ are rounded to the nearest 10 m³, numbers less than 10 m³ are rounded to integers, and numbers less than 1 are rounded to nearest 0.01 m³.

Annual Volumes

Annual Minimum, Baseline, and Maximum Volumes

Annual LLW Baseline Volumes

Comparison to Previous Baseline(s)

The FY2001.0 forecast shows a change in waste class from CH_MLLW to LLW_I and an increase of approximately 120 m³ because a portion of the product material that was expected to be sold will now be disposed as LLW.

The FY2000.0 forecast shows a >99% decrease from the FY99.0 forecast of 250 m³ because LLW_I is no longer expected to be generated.

Comparison to Previous Baseline(s) by Waste Class

303-K Fuels Fabrication Transition Comparison to Previous Forecasts	FY2001.0 Forecast (m³)	FY2000.0 Forecast (m³)	FY1999.0 Forecast (m³)
Waste Class			
LLW_I	120	--	250
CH_MLLW	--	1	5
Total	120	1	250

Note: Due to rounding, totals may not equal sum of individual values. Numbers over 10 m³ are rounded to the nearest 10 m³, numbers less than 10 m³ are rounded to integers, and numbers less than 1 are rounded to nearest 0.01 m³.

Background

The mission for 303-K Fuels Fabrication Transition is to gain knowledge and provide training on the facility deactivation process.

Forecast Assumptions and Comments

The waste is generated from facility clean-up. The Phase II Waste Acid Treatment System (WATS) Resource Conservation and Recovery Act (RCRA) Closure Decontamination and Inspection Plan was used to identify the work scope activities included in the forecast. Process knowledge and lab analysis were also used to develop the forecast.

Other Forecast Data

- **Hazardous Waste**

- No hazardous waste has been reported by 303-K Fuels Fabrication Transition.

For questions or comments, please contact Roberta Barcot
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Transition Activities — 309 PRTR Vault Waste

309 PRTR Vault Waste Report Sections

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» <u>Annual Volumes</u>	» <u>Other 309 PRTR Vault Waste Forecast Data</u>
» <u>Comparison to Previous Baseline(s)</u>	»» <u>Detailed Forecast Data</u>

Highlights of LLW, MLLW, and TRU(M) Waste Forecast

- This generator contributes 20 m³, or <1% of Transition Activities' waste forecast.
- The forecast life cycle for the PRTR Vault Waste generator ends in 2002.
- LLW_I and CH_MLLW are the waste classes forecast, representing 93% (20 m³) and 7% (2 m³) of the PRTR Vault Waste volume.
- The FY2001.0 forecast shows a 13% decrease from the FY2000.0 forecast of 30 m³ due to a change in work scope.

Waste Class Distribution

Waste Class Data

The expected physical waste forms, hazardous characteristics, container types, and LDR waste stream identification of PRTR's forecasted wastes are described in the following charts.

LLW Data

Physical Waste Form Distribution

Container Distribution

MLLW Data

Physical Waste Form Distribution

Hazardous Characteristic Distribution

Container Distribution

LDR Waste Stream Identification Distribution

Note: Due to rounding, totals may not equal sum of individual values. Numbers over 10 m³ are rounded to the nearest 10 m³, numbers less than 10 m³ are rounded to integers, and numbers less than 1 are rounded to nearest 0.01 m³.

Annual Volumes

Annual Minimum, Baseline, and Maximum Volumes

Annual LLW Baseline Volumes

Annual MLLW Baseline Volumes

Comparison to Previous Baseline(s)

The FY2001.0 forecast shows a 13% decrease from the FY2000.0 forecast of 30 m³ due to a change in work scope.

The FY2000.0 forecast shows a 28% increase from the FY99.0 forecast of 20 m³.

Comparison to Previous Baseline(s) by Waste Class

309 PRTR Vault Waste Comparison to Previous Forecasts	FY2001.0 Forecast (m³)	FY2000.0 Forecast (m³)	FY1999.0 Forecast (m³)
Waste Class			
LLW_I	20	30	20
CH_MLLW	2	1	1
Total	20	30	20

Note: Due to rounding, totals may not equal sum of individual values. Numbers over 10 m³ are rounded to the nearest 10 m³, numbers less than 10 m³ are rounded to integers, and numbers less than 1 are rounded to nearest 0.01 m³.

Background

309 PRTR waste is generated in meeting turnover requirements during facility transition to EM-40. More specifically, waste is generated in meeting turnover requirements. Smearable contamination is removed and stabilized. Unattached items in the facility are removed and dispositioned.

Forecast Assumptions and Comments

The assumptions for this forecast are based on the current planning and scheduling of the facility transition to EM-40 and the funding profile described in the MYWP.

Other Forecast Data

• Hazardous Waste

- No hazardous waste has been reported by 309 PRTR Vault Waste.

For questions or comments, please contact Roberta Barcot
(e-mail: Roberta_A_Barcot@rl.gov, voice: (509) 373-4752).

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Transition Activities — 324 Building

324 Building Report Sections

» <u>Highlights</u>	» <u>Background</u>
» <u>Waste Class Data</u>	» <u>Forecast Assumptions and Comments</u>
» <u>Annual Volumes</u>	» <u>Other 324 Building Forecast Data</u>
» <u>Comparison to Previous Baseline(s)</u>	» <u>Detailed Forecast Data</u>

Highlights of LLW, MLLW, and TRU(M) Waste Forecast

- This generator contributes 1,130 m³, or 7% of Transition Activities' waste forecast.
- The forecast life cycle for the 324 Building ends in 2006.
- LLW_I, LLW_III and CH_MLLW are the primary waste classes forecast, representing 42% (480 m³), 38% (430 m³) and 15% (170 m³) of the 324 Building's waste volume, respectively. RH_TRU(M) and CH_TRU(M) waste are also forecast as shown in the chart below.
- The FY2001.0 forecast shows an increase of 88% from the FY2000.0 forecast of 600 m³ due to adjustments to priorities and projects.

Waste Class Distribution

Waste Class Data

The expected physical waste forms, hazardous characteristics, container types, and LDR waste stream identification distribution of the 324 Building's forecasted wastes are described in the following charts.

LLW Data

Physical Waste Form Distribution

Container Distribution

MLLW Data

Physical Waste Form Distribution

Hazardous Characteristic Distribution

Container Distribution

LDR Waste Stream Identification Distribution

TRU(M) Waste Data

Physical Waste Form Distribution

324 Building
TRUM Total = 60 m3

Hazardous Characteristic Distribution

324 Building
Total (TRUM only) = 20 m3

Container Distribution

324 Building
TRUM Total = 60 m3

Note: Due to rounding, totals may not equal sum of individual values. Numbers over 10 m³ are rounded to the nearest 10 m³, numbers less than 10 m³ are rounded to integers, and numbers less than 1 are rounded to nearest 0.01 m³.

Annual Volumes

Annual Minimum, Baseline, and Maximum Volumes

Annual LLW Baseline Volumes

Annual MLLW Baseline Volumes

Annual TRU(M) Waste Baseline Volumes

Comparison to Previous Baseline(s)

The FY2001.0 forecast shows an increase of 88% from the FY2000.0 forecast of 600 m³ due to adjustments to priorities and projects.

The FY2000.0 forecast shows a 38% decrease from the FY99.0 forecast of 930 m³ due to changes in priorities and projects.

Comparison to Previous Baseline(s) by Waste Class

324 Building Comparison to Previous Forecasts	FY2001.0 Forecast (m³)	FY2000.0 Forecast (m³)	FY1999.0 Forecast (m³)
Waste Class			
LLW_I	480	140	510
LLW_III	430	280	290
CH_MLLW	170	30	150
CH_TRU(M)	2	2	20
RH_TRU(M)	60	150	--
Total	1,130	600	980

Note: Due to rounding, totals may not equal sum of individual values. Numbers over 10 m³ are rounded to the nearest 10 m³, numbers less than 10 m³ are rounded to integers, and numbers less than 1 are rounded to nearest 0.01 m³.

Background

The 324 Building supported research operations and is now in transition. Wastes are generated from routine operations and maintenance as well as deactivation of the facility.

Forecast Assumptions and Comments

The 324 Building is in transition and deactivation. All wastes will be generated from routine operations and maintenance activities as well as deactivation of the facility's hot cells and laboratories.

The duration of this forecast is based on DOE-RL directive to complete transition to D&D by 2007.

Other Forecast Data

- **Hazardous Waste**

- A life cycle total of 70 m³ of hazardous waste has been reported by 324 Building.

For questions or comments, please contact Roberta Barcot
(e-mail: Roberta_A_Barcot@rl.gov, voice: (509) 373-4752).

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Transition Activities — 327 Building

327 Building Report Sections

» <u>Highlights</u>	» <u>Background</u>
» <u>Waste Class Data</u>	» <u>Forecast Assumptions and Comments</u>
» <u>Annual Volumes</u>	» <u>Other 327 Building Forecast Data</u>
» <u>Comparison to Previous Baseline(s)</u>	» <u>Detailed Forecast Data</u>

Highlights of LLW, MLLW, and TRU(M) Waste Forecast

- This generator contributes 470 m³, or 3% of Transition Activities' waste forecast.
- The forecast life cycle for the 327 Building generator ends in 2007.
- LLW_I, LLW_III, and CH_MLLW are the primary waste classes forecast, representing 64% (300 m³), 19% (90 m³), and 14% (60 m³) of the 327 Building waste volume, respectively. Additional waste classes are shown in the chart below.
- The FY2001.0 forecast shows a 24% increase from the FY2000.0 forecast of 380 m³ due to an increase in project funding levels.

Waste Class Distribution

Waste Class Data

The expected physical waste forms, hazardous characteristics, container types, and LDR waste stream identification distribution of 327 Building's forecasted wastes are described in the following charts.

LLW Data

Physical Waste Form Distribution

Container Distribution

MLLW Data

Physical Waste Form Distribution

Hazardous Characteristic Distribution

Container Distribution

LDR Waste Stream Identification Distribution

TRU(M) Waste Data

Physical Waste Form Distribution

327 Building
TRU(M) Total = 10 m³

Container Distribution

327 Building
TRU(M) Total = 10 m³

Note: Due to rounding, totals may not equal sum of individual values. Numbers over 10 m³ are rounded to the nearest 10 m³, numbers less than 10 m³ are rounded to integers, and numbers less than 1 are rounded to nearest 0.01 m³.

Annual Volumes

Annual Minimum, Baseline, and Maximum Volumes

Annual LLW Baseline Volumes

Annual MLLW Baseline Volumes

**Annual MLLW Baseline By Waste Class
Transition Activities--327 Building**

Annual TRU(M) Waste Baseline Volumes

**Annual TRU(M) Baseline By Waste Class
Transition Activities--327 Building**

Comparison to Previous Baseline(s)

The FY2001.0 forecast shows a 24% increase from the FY2000.0 forecast of 380 m³ due to an increase in project funding levels.

The FY2000.0 forecast shows a 12% increase from the FY99.0 forecast of 340 m³ due to current revised estimates.

Comparison to Previous Baseline(s) by Waste Class

327 Building Comparison to Previous Forecasts	FY2001.0 Forecast (m³)	FY2000.0 Forecast (m³)	FY1999.0 Forecast (m³)
Waste Class			
LLW_I	300	150	180
LLW_II	90	140	140
CH_MLLW	60	70	20
CH_TRU(M)	10	10	5
Total	470	380	340

Note: Due to rounding, totals may not equal sum of individual values. Numbers over 10 m³ are rounded to the

nearest 10 m³, numbers less than 10 m³ are rounded to integers, and numbers less than 1 are rounded to nearest 0.01 m³.

Background

The 327 Building supported research operations and is now in transition. 327 facility is being cleaned out in preparation for facility transition to EM-40 in 2008. Wastes generated are contaminated equipment and materials being removed, and those contamination control and PPE wastes generated during the work.

Forecast Assumptions and Comments

The great majority of LLW from 327 will be Category I, however some category III may be generated, so is included here at a nominal rate. This includes 1 55 gallon drum and 1 5X5X9 box containing 'legacy' waste that was generated by Pacific Northwest National Laboratory prior to facility transition. Note, at the time of this forecast, FY2001 budget forecasts didn't allow for work generating Category III waste.

TRU wastes issue from hot cell cleanout operations, LLW issues from operations outside the hot cells, and the occasional MLLW package is from chemicals that have been used and/or stored in the operating canyon.

This forecast is based on the current projected budget for FY01, and the basis of estimates (BOEs) for the out years projecting facility closure by 2008. The estimates and schedules used to develop this forecast are flexible, and may change.

Other Forecast Data

- **Hazardous Waste**

- A life cycle total of 9 m³ of hazardous waste has been reported by 327 Building.

For questions or comments, please contact Roberta Barcot
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Transition Activities — Fast Flux Test Facility

Fast Flux Test Facility Report Sections

» <u>Highlights</u>	» <u>Background</u>
» <u>Waste Class Data</u>	» <u>Forecast Assumptions and Comments</u>
» <u>Annual Volumes</u>	» <u>Other Fast Flux Test Facility Forecast Data</u>
» <u>Comparison to Previous Baseline(s)</u>	» <u>Detailed Forecast Data</u>

Highlights of LLW, MLLW, and TRU(M) Waste Forecast

- This generator contributes 150 m³, or <1% of Transition Activities' waste forecast.
- The forecast life cycle for the Fast Flux Test Facility generator ends in 2006.
- LLW_III and LLW_I are the primary waste classes forecast, representing 55% (80 m³) and 45% (70 m³) of the Fast Flux Test Facility waste volume. CH_MLLW (<1%) is also reported.
- The FY2001.0 forecast shows no change from the FY2000.0 forecast of 150 m³.

Waste Class Distribution

Waste Class Data

The expected physical waste forms, hazardous characteristics, container types, and LDR waste stream identification distribution of the Fast Flux Test Facility's forecasted wastes are described in the following charts.

LLW Data

Physical Waste Form Distribution

Fast Flux Test Facility
LLW Total = 150 m³

Container Distribution

Fast Flux Test Facility
LLW Total = 150 m³

MLLW Data

Physical Waste Form Distribution

Fast Flux Test Facility
MLLW Total = 0.26 m³

Hazardous Characteristic Distribution

Fast Flux Test Facility
MLLW Total = 0.26 m³

Container Distribution

Fast Flux Test Facility
MLLW Total = 0.26 m³

LDR Waste Stream Identification Distribution

Fast Flux Test Facility
MLLW Total = 0.26 m³

Note: Due to rounding, totals may not equal sum of individual values. Numbers over 10 m³ are rounded to the nearest 10 m³, numbers less than 10 m³ are rounded to integers, and numbers less than 1 are rounded to nearest 0.01 m³.

Annual Volumes

Annual Minimum, Baseline, and Maximum Volumes

Annual LLW Baseline Volumes

Annual MLLW Baseline Volumes

Comparison to Previous Baseline(s)

The FY2001.0 forecast shows no change from the FY2000.0 forecast of 150 m³.

The FY2000.0 forecast shows a 15% decrease from the FY99.0 forecast of 180 m³ due the elimination of the year 1999 volumes.

Comparison to Previous Baseline(s) by Waste Class

Fast Flux Test Facility Comparison to Previous Forecasts Waste Class	FY2001.0 Forecast (m ³)	FY2000.0 Forecast (m ³)	FY1999.0 Forecast (m ³)
LLW_I	70	70	60
LLW_III	80	80	110
CH_MLLW	0.26	0.26	0.26
Total	150	150	190

Note: Due to rounding, totals may not equal sum of individual values. Numbers over 10 m³ are rounded to the nearest 10 m³, numbers less than 10 m³ are rounded to integers, and numbers less than 1 are rounded to nearest 0.01 m³.

Background

Currently, Fast Flux Test Facility's transition to the Surveillance and Maintenance Phase is being reviewed by the Department of Energy. Almost the entire waste volume forecast from Fast Flux Test Facility is LLW generated during maintenance and decontamination activities, processing and disassembling irradiated reactor core components, and washing the Fast Flux Test Facility fuel assemblies in the IEM cell.

Forecast Assumptions and Comments

The Fast Flux Test Facility will remain shut down and is using the assumption that it will continue on to S&M phase and that it would be reached in the year 2006. Since no decision was made on FFTF's future during the past year the transition to the Surveillance and Maintenance Phase has been pushed out one more year to 2006. This results in an increase of one more year of normal maintenance waste.

Other Forecast Data

• Hazardous Waste

- A life cycle total of 6 m³ of hazardous waste has been reported by Fast Flux Test Facility. However, presently all of the FFTF hazardous waste is being shipped offsite. No change in this procedure is foreseen

For questions or comments, please contact Roberta Barcot
(e-mail: Roberta_A_Barcot@rl.gov, voice: (509) 373-4752).

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Transition Activities — K Basin Transition

K Basin Transition Report Sections

» <u>Highlights</u>	» <u>Background</u>
» <u>Waste Class Data</u>	» <u>Forecast Assumptions and Comments</u>
» <u>Annual Volumes</u>	» <u>Other K Basin Transition Forecast Data</u>
» <u>Comparison to Previous Baseline(s)</u>	» <u>Detailed Forecast Data</u>

Highlights of LLW, MLLW, and TRU(M) Waste Forecast

- This generator contributes 880 m³, or 6% of Transition Activities' waste forecast.
- The forecast life cycle for the K Basin Transition generator is from 2002 to 2006.
- LLW_I is the primary waste class forecast, representing 95% (830 m³) of the K Basin Transition waste volume. Additional waste classes are shown in the chart below.
- The FY2001.0 forecast is the same as the FY2000.0 forecast of 880 m³.

Waste Class Distribution

K-Basin Transition
Total (excl. HAZ) = 880 m³

Waste Class Data

The expected physical waste forms, hazardous characteristics, container types, and LDR waste stream identification distribution of K Basin Transition's forecasted wastes are described in the following charts.

LLW Data

Physical Waste Form Distribution

Container Distribution

MLLW Data

Physical Waste Form Distribution

Hazardous Characteristic Distribution

Container Distribution

LDR Waste Stream Identification Distribution

TRU(M) Waste Data

Physical Waste Form Distribution

Container Distribution

Note: Due to rounding, totals may not equal sum of individual values. Numbers over 10 m³ are rounded to the nearest 10 m³, numbers less than 10 m³ are rounded to integers, and numbers less than 1 are rounded to nearest 0.01 m³.

Annual Volumes

Annual Minimum, Baseline, and Maximum Volumes

Annual LLW Baseline Volumes

Annual MLLW Baseline Volumes

**Annual MLLW Baseline By Waste Class
Transition Activities--K-Basin Transition**

Annual TRU(M) Waste Baseline Volumes

**Annual TRU(M) Baseline By Waste Class
Transition Activities--K-Basin Transition**

Comparison to Previous Baseline(s)

The FY2001.0 forecast is the same as the FY2000.0 and FY99.0 forecast of 880 m³.

Comparison to Previous Baseline(s) by Waste Class

K-Basin Transition Comparison to Previous Forecasts	FY2001.0 Forecast (m³)	FY2000.0 Forecast (m³)	FY1999.0 Forecast (m³)
Waste Class			
LLW_I	830	830	830
CH_MLLW	30	30	30
CH_TRU(M)	10	10	10
RH_TRU(M)	3	3	4
Total	880	880	880

Note: Due to rounding, totals may not equal sum of individual values. Numbers over 10 m³ are rounded to the nearest 10 m³, numbers less than 10 m³ are rounded to integers, and numbers less than 1 are rounded to nearest 0.01 m³.

Background

K Basin Transition represents only the deactivation of the K-Basins and ancillary facilities. The Spent Nuclear Fuel functional group forecasts the operational waste for K-Basins.

Forecast Assumptions and Comments

The volumes for K Basin Transition were originally developed for the FY96 BEMR using modeling tools to estimate volumes and waste forms. The program contact supplied the shipping schedule and container types. Waste handling, hazardous characteristics, and radionuclide concentrations were based on the K-Basin Operations forecast. Timing and volume distributions were developed from expected funding profiles.

TRU(M) waste volumes are based upon KE Basin wall and floor surface area and assumption that only 1/4" of the material will need to be stripped off the surface to lower the residual radiation level below DOE limits.

Other Forecast Data

- **Hazardous Waste**

- No hazardous waste has been reported by K-Basin Transition.

For questions or comments, please contact Roberta Barcot
(e-mail: Roberta_A_Barcot@rl.gov, voice: (509) 373-4752).

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Transition Activities — T Plant Transition

T Plant Transition Report Sections

» <u>Highlights</u>	» <u>Background</u>
» <u>Waste Class Data</u>	» <u>Forecast Assumptions and Comments</u>
» <u>Annual Volumes</u>	» <u>Other T Plant Transition Forecast Data</u>
» <u>Comparison to Previous Baseline(s)</u>	»» <u>Detailed Forecast Data</u>

Highlights of LLW, MLLW, and TRU(M) Waste Forecast

- This generator contributes 120 m³, or <1% of Transition Activities' waste forecast.
- The forecast life cycle for the T Plant Transition starts in 2036 and ends in 2038.
- LLW_I and CH_TRU(M) are the only waste classes forecast, representing 67% (80 m³) and 33% (40 m³) of the T Plant Transition waste volume.
- The FY2001.0 forecast is the same as the FY2000.0 forecast of 120 m³.

Waste Class Distribution

Waste Class Data

The expected physical waste forms, hazardous haracteristics, and container types of T Plant's forecasted wastes are described in the following charts.

LLW Data

Physical Waste Form Distribution

Container Distribution

TRU(M) Data

Physical Waste Form Distribution

Hazardous Characteristic Distribution

Container Distribution

Note: Due to rounding, totals may not equal sum of individual values. Numbers over 10 m³ are rounded to the nearest 10 m³, numbers less than 10 m³ are rounded to integers, and numbers less than 1 are rounded to nearest 0.01 m³.

Annual Volumes

Annual Minimum, Baseline, and Maximum Volumes

Annual LLW Baseline Volumes

Annual TRU(M) Waste Baseline Volumes

Comparison to Previous Baseline(s)

The FY2001.0 forecast is the same as the FY2000.0 and FY99.0 forecasts of 120 m³.

Comparison to Previous Baseline(s) by Waste Class

T Plant Transition Comparison to Previous Forecasts	FY2001.0 Forecast (m³)	FY2000.0 Forecast (m³)	FY1999.0 Forecast (m³)
Waste Class			
LLW_I	80	80	80
CH_TRU(M)	40	40	40
Total	120	120	120

Note: Due to rounding, totals may not equal sum of individual values. Numbers over 10 m³ are rounded to the nearest 10 m³, numbers less than 10 m³ are rounded to integers, and numbers less than 1 are rounded to nearest 0.01 m³.

Background

This waste generator represents T Plant deactivation. The deactivation was previously included under "Non Programmatic", however, the Transition Activities program has since taken responsibility for this forecast.

Forecast Assumptions and Comments

The volumes reported for this generator are from BEMR estimates from FY96. In particular waste volumes and physical waste forms were estimated by BEMR through use of a modeling tool that projected future transitional waste volumes. In addition, hazardous characteristics and radionuclides information were assumed to be similar to that contained in the T Plant Operations forecast.

It should be noted that the T Plant Operations forecast extends beyond the T Plant Transition forecast. This is a result of uncertain closure dates for the T Plant and because the Operations forecast includes the 2706 T facility.

Other Forecast Data

• Hazardous Waste

- A life cycle total of 80 m³ of hazardous waste has been reported by T Plant Transition.

For questions or comments, please contact Roberta Barcot
(e-mail: Roberta_A_Barcot@rl.gov, voice: (509) 373-4752).

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Transition Activities — Waste Encapsulation & Storage Facility

Waste Encapsulation & Storage Facility Report Sections

» <u>Highlights</u>	» <u>Background</u>
» <u>Waste Class Data</u>	» <u>Forecast Assumptions and Comments</u>
» <u>Annual Volumes</u>	» <u>Other Waste Encapsulation & Storage Facility Forecast Data</u>
» <u>Comparison to Previous Baseline(s)</u>	»» <u>Detailed Forecast Data</u>

Highlights of LLW, MLLW, and TRU(M) Waste Forecast

- This generator contributes 1,010 m³, or 6% of Transition Activities' waste forecast.
- The forecast life cycle for the Waste Encapsulation and Storage Facility (WESF) extends to 2021.
- LLW_I is the primary waste class forecast, representing 95%, or 960 m³, of the waste volume.
- The Waste Encapsulation and Storage Facility (WESF) is the only generator expecting to ship GTC_III waste (6 m³).
- The FY2001.0 forecast shows a 3% decrease from the FY2000.0 forecast of 1,040 m³ due to the elimination of the year 2000 volumes.

Waste Class Distribution

Waste Encapsulation & Storage Facility
Total (excl. HAZ) = 1,010 m³

Waste Class Data

The expected physical waste forms, hazardous characteristics, container types, and LDR waste stream identification distribution of the Waste Encapsulation and Storage Facility's forecasted wastes are described in the following charts.

LLW Data

Physical Waste Form Distribution

Container Distribution

MLLW Data

Physical Waste Form Distribution

Hazardous Characteristic Distribution

Container Distribution

LDR Waste Stream Identification Distribution

GTC_III Data

Physical Waste Form Distribution

Container Distribution

Note: Due to rounding, totals may not equal sum of individual values. Numbers over 10 m³ are rounded to the nearest 10 m³, numbers less than 10 m³ are rounded to integers, and numbers less than 1 are rounded to nearest 0.01 m³.

Annual Volumes

Annual Minimum, Baseline, and Maximum Volumes

Annual LLW Baseline Volumes

Annual MLLW Baseline Volumes

Annual MLLW Baseline By Waste Class
Transition Activities--Waste Encapsulation & Storage Facility

Annual GTC_III Baseline Volumes

Annual GTCIII Baseline By Waste Class
Transition Activities--Waste Encapsulation & Storage Facility

Comparison to Previous Baseline(s)

The FY2001.0 forecast shows a 3% decrease from the FY2000.0 forecast of 1,040 m³ due to the elimination of the year 2000 volumes.

The FY2000.0 forecast shows a 494% increase from the FY99.0 forecast of 170 m³ due to the extension of the life-cycle from 2017 to 2021 to include terminal cleanout and stabilization.

Comparison to Previous Baseline(s) by Waste Class

Waste Encapsulation & Storage Facility Comparison to Previous Forecasts	FY2001.0 Forecast (m³)	FY2000.0 Forecast (m³)	FY1999.0 Forecast (m³)
Waste Class			
LLW_I	960	990	130
LLW_III	30	30	30
CH_MLLW	10	10	20
RH_MLLW	6	6	--
GTCIII	6	6	--
Total	1,010	1,040	170

Note: Due to rounding, totals may not equal sum of individual values. Numbers over 10 m³ are rounded to the

nearest 10 m³, numbers less than 10 m³ are rounded to integers, and numbers less than 1 are rounded to nearest 0.01 m³.

Background

The mission of the Waste Encapsulation and Storage Facility is the safe storage of cesium and strontium capsules. Capsules will be stored until 2013 when they will be cut up or shipped to vitrification. Current plans are not to cut up capsules at WESF but at vitrification. If capsules are shipped and not cut up, long range forecast will change. Ramp up for capsule shipment is scheduled for 2011.

Forecast Assumptions and Comments

Waste Encapsulation and Storage Facility will produce LLW, MLLW, and hazardous wastes from ongoing operations.

Plans are to operate at min-safe conditions until 2011 at which time preparations will begin for capsule cut up or shipment to vitrification beginning in 2013.

LLW will be compacted by ATG and then sent to Fluor Hanford Waste Management Project. MLLW will be stabilized prior to shipment.

Other Forecast Data

- **Hazardous Waste**

- A life cycle total of 10 m³ of hazardous waste has been reported by the Waste Encapsulation & Storage Facility.

For questions or comments, please contact Roberta Barcot
(e-mail: Roberta_A_Barcot@rl.gov, voice: (509) 373-4752).

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FY2001.0 Forecast of LLW_I

LLW_I Report Sections

- » Highlights
- » Annual Volumes
- » Summary Table
- » Comparison to Previous Baseline(s)
- » LLW_I Definition

Highlights of LLW_I Forecast

- A total of 89,740 m³ of LLW_I is forecast for shipment to Fluor Hanford Waste Management Project by onsite and offsite generators.
- The LLW_I forecast life cycle is 2001-2046.
- This forecast shows a 5% decrease (4,940 m³) from the FY2000.0 forecast of 94,680 m³. The change largely results from a decrease in the forecast of the Transition Activities (30,920 m³) functional group offsetting the forecast increase of 23,540 m³ for the River Protection Program.
- LLW_I is generated by all functional groups, although River Protection Program and Offsite generate the largest quantities.

Functional Group Distribution

Waste Class Data

The physical waste forms and container distributions for LLW_I are shown in the charts below. The

majority of the waste (83% or 74,030 m³) is expected to be debris. LLW_I will be shipped in a number of different containers including medium boxes (34%), MB-V boxes (25%), small boxes (19%), and 208 liter drums (15%).

Physical Waste Form Distribution

Low-Level Waste Category I
Total = 89,748 m³

Container Distribution

Low-Level Waste Category I
Total = 89,748 m³

Note: Due to rounding, totals may not equal sum of individual values. Numbers over 10 m³ are rounded to the nearest 10 m³, numbers less than 10 m³ are rounded to integers, and numbers less than 1 are rounded to nearest 0.01 m³.

Annual LLW_I Volumes

LLW_I Annual Minimum, Baseline, and Maximum Volumes

Summary Table (volumes in m³)

Forecast by Functional Group Area

(in descending order by group volume)

Low-Level Waste Category I Summary Volumes	FY 2001.0 Forecast (m ³)	% of Total
Functional Groups		
River Protection Program (RPP)	34,240	38%
Offsite	27,320	30%
Transition Activities	10,600	12%
Infrastructure	7,140	8%
Liquid Waste	4,700	5%
Analytical Services	2,450	3%
Solid Waste	2,360	3%
Environmental Restoration	180	< 1%
Spent Nuclear Fuel	500	< 1%
Pacific Northwest National Laboratory (PNNL)	240	< 1%
Total	89,740	100%

Note: Due to rounding, totals may not equal sum of individual values. Numbers over 10 m³ are rounded to the nearest 10 m³, numbers less than 10 m³ are rounded to integers, and numbers less than 1 are rounded to nearest 0.01 m³.

Comparison to Previous Baseline(s)

The FY2001.0 forecast shows a 5% decrease (4,940 m³) from the FY2000.0 forecast of 94,680 m³. The change largely results from a decrease in the forecast of the Transition Activities (30,920 m³) functional group offsetting the forecast increase of 23,540 m³ for the River Protection Program.

The FY2000.0 forecast shows a 4% decrease (4,100 m³) from the FY99.0 forecast of 98,780 m³. The change results from decreases in the forecasts from the River Protection Program and the Landlord (EM-60) functional group.

Comparison to Previous Baseline(s) by Functional Group

(in descending order by functional group volume)

Low-Level Waste Category I Summary Volumes	FY 2001.0 Forecast (m ³)	FY 2000.0 Forecast (m ³)	FY 1999.0 Forecast (m ³)
Functional Groups			
River Protection Program (RPP)	34,240	10,700	30,930
Offsite	27,320	30,140	23,250
Transition Activities	10,600	41,520	22,050
Infrastructure	7,140	190	9,730
Liquid Waste	4,700	4,770	5,100
Analytical Services	2,450	2,720	3,220
Solid Waste	2,360	3,000	2,930
Spent Nuclear Fuel	500	30	90
Pacific Northwest National Laboratory (PNNL)	240	1,190	1,440
Environmental Restoration	180	430	40
Total	89,740	94,680	98,780

Note: Due to rounding, totals may not equal sum of individual values. Numbers over 10 m³ are rounded to the nearest 10 m³, numbers less than 10 m³ are rounded to integers, and numbers less than 1 are rounded to nearest 0.01 m³.

The reasons for the volume changes are explained in each of the functional group and waste generator pages.

Definition

LLW_I contains radioactivity not classified as high-level waste, spent nuclear fuel, or transuranic waste (concentrations of transuranic radionuclides less than or equal to 100nCi/g of the waste matrix). The waste also meets the radionuclide limits for category I waste defined in the Hanford Site Solid Waste Acceptance Criteria.

For questions or comments, please contact Roberta Barcot
(e-mail: Roberta_A_Barcot@rl.gov, voice: (509) 373-4752).

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FY2001.0 Forecast of LLW_III

LLW_III Report Sections

- » Highlights
- » Annual Volumes
- » Summary Table
- » Comparison to Previous Baseline(s)
- » LLW_III Definition

Highlights of LLW_III Forecast

- A total of 7,870 m³ of LLW_III is forecast for shipment to Fluor Hanford Waste Management Project by onsite and offsite generators.
- The LLW_III forecast life cycle is 2001-2046.
- This forecast shows a 34% increase (1,980 m³) from the FY2000.0 forecast of 5,890 m³. The change results primarily from increases in the forecast from the Transition Activities functional group.
- The primary functional group generators of LLW_III are Offsite and Analytical Services. Other generators of LLW_III are shown in the chart below.

Program Distribution

Waste Class Data

The physical waste forms and container distributions for LLW_III are shown in the charts below.

Almost all of the waste is expected to be debris and the majority will be shipped in 208 liter drums and MB-V boxes.

Physical Waste Form Distribution

Container Distribution

Note: Due to rounding, totals may not equal sum of individual values. Numbers over 10 m³ are rounded to the nearest 10 m³, numbers less than 10 m³ are rounded to integers, and numbers less than 1 are rounded to nearest 0.01 m³.

Annual LLW_III Volumes

LLW_III Annual Minimum, Baseline, and Maximum Volumes

Summary Table (volumes in m³)

Forecast by Programmatic Area

(in descending order by program volume)

Low-Level Waste Category III Summary Volumes		
Functional Groups	FY 2001.0 Forecast (m³)	% of Total
Offsite	2,700	34%
Analytical Services	2,110	27%
Transition Activities	1,750	22%
River Protection Program (RPP)	1,220	16%
Pacific Northwest National Laboratory (PNNL)	90	1%
Total	7,870	100%

Note: Due to rounding, totals may not equal sum of individual values. Numbers over 10 m³ are rounded to the nearest 10 m³, numbers less than 10 m³ are rounded to integers, and numbers less than 1 are rounded to nearest 0.01 m³.

Comparison to Previous Baseline(s)

The FY2001.0 forecast shows a 34% increase (1,980 m³) from the FY2000.0 forecast of 5,890 m³. The increase results primarily from increases in the forecast from the Transition Activities (650 m³) and Offsite (480 m³) functional groups.

The FY2000.0 forecast shows a 85% decrease (34,060 m³) from the FY99.0 forecast of 39,950 m³. The decrease results primarily from decreases in the forecast from the River Protection Program. More specifically, the primary decrease results from the discontinued forecasts of the High Level Vitrification Program (16,537 m³) and Low Level Vitrification Program (19,172 m³).

Comparison to Previous Baseline(s) by Program Area

(in descending order by program volume)

Low-Level Waste Category III Summary Volumes	FY 2001.0 Forecast (m ³)	FY 2000.0 Forecast (m ³)	FY 1999.0 Forecast (m ³)
Functional Groups			
Offsite	2,700	2,220	2,540
Analytical Services	2,110	2,240	110
Transition Activities	1,750	1,100	1,210
River Protection Program (RPP)	1,220	--	35,710
Pacific Northwest National Laboratory (PNNL)	90	330	340
Spent Nuclear Fuel	--	9	40
Total	7,870	5,890	39,950

Note: Due to rounding, totals may not equal sum of individual values. Numbers over 10 m³ are rounded to the nearest 10 m³, numbers less than 10 m³ are rounded to integers, and numbers less than 1 are rounded to nearest 0.01 m³.

The reasons for the volume changes are explained in each of the functional group and waste generator pages.

Definition

LLW_III contains radioactivity not classified as high-level waste, spent nuclear fuel, or transuranic waste (concentrations of transuranic radionuclides less than or equal to 100nCi/g of the waste matrix). The waste also exceeds the radionuclide limits for category I waste and meets the category III limits defined in the Hanford Site Solid Waste Acceptance Criteria.

For questions or comments, please contact Roberta Barcot
(e-mail: Roberta_A_Barcot@rl.gov, voice: (509) 373-4752).

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FY2001.0 Forecast of CH_MLLW

CH_MLLW Report Sections

- » [Highlights](#)
- » [Annual Volumes](#)
- » [Summary Table](#)
- » [Comparison to Previous Baseline\(s\)](#)
- » [CH_MLLW Definition](#)

Highlights of CH_MLLW Forecast

- A total of 29,690 m³ of CH_MLLW is forecast for shipment to Fluor Hanford Waste Management Project by onsite and offsite generators.
- The CH_MLLW forecast life cycle is 2001-2046.
- This forecast shows a 89% increase from the FY2000.0 forecast of 15,700 m³ due mainly to a major forecast increase by the [River Protection Program](#).
- The River Protection Program is the main source of CH_MLLW, forecasting 81% or 23,970 m³ of the total waste volume.
- The maximum forecast estimate of 45,658 m³ for CH_MLLW is dramatically higher than the baseline volume. For MLLW, [Rocky Flats](#) (within the Offsite functional group) contributes 4,688 m³ to this estimate but does not currently have permission to send MLLW to Hanford. Therefore, Rocky Flats has included this waste only in the maximum estimate.

Functional Group Distribution

Contact Handled Mixed Low-Level Waste
Total = 29,690 m³

Waste Class Data

The physical waste forms, hazardous characteristics, container distributions and LDR waste stream identification distribution for CH_MLLW are shown in the charts below. The majority of the waste (88% or 26,140 m³) is expected to be debris. The primary hazardous characteristics are expected to be organics and metals combined with organics. Most of the CH_MLLW will be shipped in 208 liter drums and medium boxes while most of the waste is classified as labpacks.

Physical Waste Form Distribution

Contact Handled Mixed Low-Level Waste
Total = 29,690 m³

Hazardous Characteristic Distribution

Contact Handled Mixed Low-Level Waste
Total = 29,690 m³

Container Distribution

Contact Handled Mixed Low-Level Waste
Total = 29,690 m³

LDR Waste Stream Identification Distribution

Contact Handled Mixed Low-Level Waste
Total = 29,690 m³

Note: Due to rounding, totals may not equal sum of individual values. Numbers over 10 m³ are rounded to the nearest 10 m³, numbers less than 10 m³ are rounded to integers, and numbers less than 1 are rounded to nearest 0.01 m³.

Annual CH_MLLW Volumes

The annual volumes for CH_MLLW are fairly constant except for the maximum volumes in 2002 through 2005 due to the possible CH_MLLW shipments from Rocky Flats within the Offsite functional group. This generator expects to generate a volume of MLLW (4,688 m³) but does not currently have permission to send MLLW to Hanford.

CH_MLLW Annual Minimum, Baseline, and Maximum Volumes

**Annual Minimum, Baseline, and Maximum Volumes
Contact Handled Mixed Low-Level Waste**

Summary Table (volumes in m³)

Forecast by Functional Group Area

(in descending order by functional group volume)

Functional Groups	FY 2001.0 Forecast (m³)	% of Total
Contact Handled Mixed Low-Level Waste Summary Volumes		
River Protection Program (RPP)	23,970	81%
Analytical Services	2,380	8%
Liquid Waste	2,210	7%
Transition Activities	590	2%
Solid Waste	230	< 1%
Pacific Northwest National Laboratory (PNNL)	170	< 1%
Environmental Restoration	50	< 1%
Offsite	40	< 1%
Spent Nuclear Fuel	40	< 1%
Infrastructure	10	< 1%
Total	29,690	100%

Note: Due to rounding, totals may not equal sum of individual values. Numbers over 10 m³ are rounded to the nearest 10 m³, numbers less than 10 m³ are rounded to integers, and numbers less than 1 are rounded to nearest 0.01 m³.

Comparison to Previous Baseline(s)

The FY2001.0 forecast shows a 89% increase from the FY2000.0 forecast. This change was due mainly to a major forecast increase by the BNFL Tank Waste Pretreatment and Vitrification project which reports 14,980 m³ of CH_MLLW waste needing treatment which is a net forecast increase 11,850 m³ by this generator.

The FY2000.0 forecast of 15,700 shows a 35% decrease from the FY99.0 forecast. This change was due mainly to a major forecast decrease by the River Protection Program and in particular the High Level Vitrification Project (5,220 m³) and the Low Level Vitrification Project (5,120 m³). These generator's forecast are now being considered by the BNFL Tank Waste Pretreatment and Vitrification project which reports 1,380 m³ of CH_MLLW waste needing treatment. Thus, a net forecast decrease of 8,960 m³ is realized by these generators.

Comparison to Previous Baseline(s) by Functional Group Area

(in descending order by functional group volume)

Contact Handled Mixed Low-Level Waste Summary Volumes	FY 2001.0 Forecast (m³)	FY 2000.0 Forecast (m³)	FY 1999.0 Forecast (m³)
Functional Groups			
River Protection Program (RPP)	23,970	9,250	17,930
Analytical Services	2,380	2,750	1,550
Liquid Waste	2,210	2,590	2,420
Transition Activities	590	550	1,170
Solid Waste	230	130	330
Pacific Northwest National Laboratory (PNNL)	170	330	380
Environmental Restoration	50	50	50
Offsite	40	30	150
Spent Nuclear Fuel	40	6	7
Infrastructure	10	10	120
Total	29,690	15,700	24,110

Note: Due to rounding, totals may not equal sum of individual values. Numbers over 10 m³ are rounded to the nearest 10 m³, numbers less than 10 m³ are rounded to integers, and numbers less than 1 are rounded to nearest 0.01 m³.

The reasons for the volume changes are explained in each of the functional group and waste generator pages.

Definition

Contact-handled mixed-low-level waste (CH_MLLW) has a dose rate equal to or less than 200 mrem/h and contains radioactivity not classified as spent nuclear fuel or transuranic waste (concentrations of transuranic radionuclides less than or equal to 100nCi/g of the waste matrix.) The waste is also defined as dangerous (hazardous) waste in the Washington Administrative Code (WAC) 173-303.

For questions or comments, please contact Roberta Barcot
(e-mail: Roberta_A_Barcot@rl.gov, voice: (509) 373-4752).

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FY2001.0 Forecast of RH_MLLW

RH_MLLW Report Sections

- » Highlights
- » Annual Volumes
- » Summary Table
- » Comparison to Previous Baseline(s)
- » RH_MLLW Definition

Highlights of RH_MLLW Forecast

- A total of 30,990 m³ of RH_MLLW is forecast for shipment to Fluor Hanford Waste Management Project by onsite generators.
- The RH_MLLW forecast life cycle is 2001-2032.
- This forecast shows a small decrease (350 m³) from the FY2000.0 forecast of 30,640 m³ due primarily to changes in the River Protection Program (RPP).
- Nearly all RH_MLLW is forecast by the River Protection Program.

Functional Group Distribution

Waste Class Data

The physical waste forms, hazardous characteristics, container distributions, and LDR waste stream identification for RH_MLLW are shown in the charts below. The majority of RH_MLLW is expected to be shielding (53% or 16,280m³) and debris (40% or 12,500m³). The primary hazardous

characteristics are expected to be metals combined with organics. Most of the RH_MLLW will be shipped in long equipment containers (LECs) and is MLLW_01 (LDR compliant).

Physical Waste Form Distribution

Remote Handled Mixed Low-Level Waste
Total = 30,990 m³

Hazardous Characteristic Distribution

Remote Handled Mixed Low-Level Waste
Total = 30,990 m³

Container Distribution

Remote Handled Mixed Low-Level Waste
Total = 30,990 m³

LDR Waste Stream Identification Distribution

Remote Handled Mixed Low-Level Waste
Total = 30,990 m³

Note: Due to rounding, totals may not equal sum of individual values. Numbers over 10 m³ are rounded to the nearest 10 m³, numbers less than 10 m³ are rounded to integers, and numbers less than 1 are rounded to nearest 0.01 m³.

Annual RH_MLLW Volumes

RH_MLLW Annual Minimum, Baseline, and Maximum Volumes

Annual Minimum, Baseline, and Maximum Volumes
Remote Handled Mixed Low-Level Waste

Summary Table (volumes in m³)

Forecast by Functional Group Area

(in descending order by functional group volume)

Remote Handled Mixed Low-Level Waste Summary Volumes	FY 2001.0 Forecast (m ³)	% of Total
Functional Groups		
River Protection Program (RPP)	30,980	100%
Transition Activities	6	< 1%
Total	30,986	100%

Note: Due to rounding, totals may not equal sum of individual values. Numbers over 10 m³ are rounded to the nearest 10 m³, numbers less than 10 m³ are rounded to integers, and numbers less than 1 are rounded to nearest 0.01 m³.

Comparison to Previous Baseline(s)

The FY2001.0 forecast shows a relatively small increase (350 m³) from the FY2000.0 forecast of 30,640 m³ due to changes in the River Protection Program (RPP).

Comparison to Previous Baseline(s) by Functional Group Area

(in descending order by functional group volume)

Remote Handled Mixed Low-Level Waste Summary Volumes	FY 2001.0 Forecast (m ³)	FY 2000.0 Forecast (m ³)	FY 1999.0 Forecast (m ³)
Functional Groups			
River Protection Program (RPP)	30,980	30,610	28,730
Transition Activities	6	7	0.26
Pacific Northwest National Laboratory (PNNL)	--	20	10
Solid Waste	--	7	1
Total	30,986	30,644	28,741

Note: Due to rounding, totals may not equal sum of individual values. Numbers over 10 m³ are rounded to the nearest 10 m³, numbers less than 10 m³ are rounded to integers, and numbers less than 1 are rounded to nearest 0.01 m³.

The reasons for the volume changes are explained in each of the functional group and waste generator pages.

Definition

Remote-handled mixed low-level waste (RH_MLLW) has a dose rate greater than 200 mrem/h and contains radioactivity not classified as high-level waste, spent nuclear fuel, or transuranic waste (concentrations of transuranic radionuclides less than or equal to 100nCi/g of the waste matrix). The waste is also defined as dangerous (hazardous) waste in the Washington Administrative Code (WAC) 173-303.

For questions or comments, please contact Roberta Barcot
(e-mail: Roberta_A_Barcot@rl.gov, voice: (509) 373-4752).

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FY2001.0 Forecast of CH_TRU(M) Waste

CH_TRU(M) Waste Report Sections

- » Highlights
- » Annual Volumes
- » Summary Table
- » Comparison to Previous Baseline(s)
- » CH_TRU(M) Waste Definition

Highlights of CH_TRU(M) Waste Forecast

- A total of 15,900 m³ of CH_TRU(M) waste is forecast for shipment to Fluor Hanford Waste Management Project by onsite and offsite generators.
- The CH_TRU(M) waste forecast life cycle is 2001-2041.
- This forecast shows a 90% increase from the FY2000.0 forecast of 8,380 m³ due mainly to the 2345-Z Plutonium Finishing Plant within the Transition Activities functional group.
- The Environmental Restoration and Transition Activities functional groups forecast 71%, and 17% of the CH_TRU(M) waste, respectively.

Functional Group Distribution

Waste Class Data

The physical waste forms, hazardous characteristics, and container distributions for CH_TRU(M) waste are shown in the charts below. The majority of the waste (90% or 14,320 m³) is expected to be debris.

The primary hazardous characteristics are expected to be organics and metals combined with organics. Most of the CH_TRU(M) will be shipped in standard waste boxes (SWBs) and 208 liter drums.

Physical Waste Form Distribution

Hazardous Characteristic Distribution

Container Distribution

Note: Due to rounding, totals may not equal sum of individual values. Numbers over 10 m³ are rounded to the nearest 10 m³, numbers less than 10 m³ are rounded to integers, and numbers less than 1 are rounded to nearest 0.01 m³.

Annual CH_TRU(M) Waste Volumes

CH_TRU(M) Waste Annual Minimum, Baseline, and Maximum Volumes

Summary Table (volumes in m³)

Forecast by Functional Group Area

(in descending order by functional group volume)

Contact Handled Transuranic & Transuranic Mixed Waste Summary Volumes	FY 2001.0 Forecast (m ³)	% of Total
Functional Groups		
Environmental Restoration	11,340	71%
Transition Activities	2,770	17%
River Protection Program (RPP)	1,480	9%
Spent Nuclear Fuel	280	2%
Pacific Northwest National Laboratory (PNNL)	30	< 1%
Offsite	5	< 1%
Total	15,900	100%

Note: Due to rounding, totals may not equal sum of individual values. Numbers over 10 m³ are rounded to the nearest 10 m³, numbers less than 10 m³ are rounded to integers, and numbers less than 1 are rounded to nearest 0.01 m³.

Comparison to Previous Baseline(s)

The FY2001.0 forecast shows a 90% increase in volumes of CH_TRU(M) waste to be shipped when compared to that of FY2000.0. Environmental Restoration accounts for 9,930 m³ of this increase which is a 704% increase for this functional group. Transition Activities shows a forecast decrease 3,480 m³ (56%) and River Protection Program shows an increase of 990 m³ (202%).

In contrast the FY2000.0 and FY99.0 forecasts showed a 15% increase from the previous years forecast due mainly to the 2345-Z Plutonium Finishing Plant within the Transition Activities functional group.

Comparison to Previous Baseline(s) by Functional Group

(in descending order by functional group volume)

Contact Handled Transuranic & Transuranic Mixed Waste Summary Volumes	FY 2001.0 Forecast (m ³)	FY 2000.0 Forecast (m ³)	FY 1999.0 Forecast (m ³)
Functional Groups			
Environmental Restoration	11,340	1,410	1,490
Transition Activities	2,770	6,250	4,300
River Protection Program (RPP)	1,480	490	1,380
Spent Nuclear Fuel	280	210	140
Pacific Northwest National Laboratory (PNNL)	30	10	10
Offsite	5	--	--
Total	15,900	8,380	7,300

Note: Due to rounding, totals may not equal sum of individual values. Numbers over 10 m³ are rounded to the nearest 10 m³, numbers less than 10 m³ are rounded to integers, and numbers less than 1 are rounded to nearest 0.01 m³.

The reasons for the volume changes are explained in each of the functional group and waste generator pages.

Definition

Contact-handled transuranic and transuranic mixed (CH_TRU(M)) waste has a dose rate equal to or less than 200 mrem/h at contact with the waste container. At the time of assay, this waste contains more than 100nCi/g of alpha-emitting isotopes with atomic numbers

greater than 92 and half-lives greater than 20 years. TRU(M) waste is TRU waste that is also dangerous (hazardous) waste as defined in the Washington Administrative Code (WAC) 173-303.

For questions or comments, please contact Roberta Barcot
(e-mail: Roberta_A_Barcot@rl.gov, voice: (509) 373-4752).

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FY2001.0 Forecast of RH_TRU(M) Waste

RH_TRU(M) Waste Report Sections

- » Highlights
- » Annual Volumes
- » Summary Table
- » Comparison to Previous Baseline(s)
- » RH_TRU(M) Waste Definition

Highlights of RH_TRU(M) Waste Forecast

- A total of 890 m³ of RH_TRU(M) waste is forecast for shipment to Fluor Hanford Waste Management Project by onsite generators.
- Offsite generators forecast total shipments of 40 m³ of RH_TRU(M) waste to Fluor Hanford Waste Management Project.
- The RH_TRU(M) waste forecast life cycle is 2001-2042.
- This forecast shows a 40% decrease in forecast volumes for this waste type from the FY2000.0 forecast. The Spent Nuclear Fuel forecast decreased by 540 m³ while River Protection Program (RPP), Transitions Activities and Pacific Northwest National Laboratory decreased by 100 m³, 90 m³, and 40 m³, respectively.
- The River Protection Program and the Spent Nuclear Fuel functional group forecast the majority of the RH_TRU(M) waste.

Functional Group Distribution

Remote Handled Transuranic & Transuranic Mixed Waste
Total = 920 m³

Waste Class Data

The physical waste forms, hazardous characteristics, and container distributions for RH_TRU(M) waste are shown in the charts below. The majority of the waste (59% or 550m³) is expected to be debris waste and 29% (270 m³) is expected to be shielding. The primary hazardous characteristics are expected to be combinations of metals and organic. RH_TRU(M) waste will primarily be shipped in long equipment containers (LECs) and 208 liter drums.

Physical Waste Form Distribution

Remote Handled Transuranic & Transuranic Mixed Waste
Total = 920 m³

Hazardous Characteristic Distribution

Remote Handled Transuranic & Transuranic Mixed Waste
Total (RH_TRU(M) only) = 590 m³

Container Distribution

Remote Handled Transuranic & Transuranic Mixed Waste
Total = 920 m³

Note: Due to rounding, totals may not equal sum of individual values. Numbers over 10 m³ are rounded to the nearest 10 m³, numbers less than 10 m³ are rounded to integers, and numbers less than 1 are rounded to nearest 0.01 m³.

Annual RH_TRU(M) Waste Volumes

RH_TRU(M) Waste Annual Minimum, Baseline, and Maximum Volumes

**Annual Minimum, Baseline, and Maximum Volumes
Remote Handled Transuranic & Transuranic Mixed Waste**

Summary Table (volumes in m³)

Forecast by Functional Group Area

(in descending order by functional group volume)

Remote Handled Transuranic & Transuranic Mixed Waste Summary Volumes	FY 2001.0 Forecast (m³)	% of Total
Functional Groups		
River Protection Program (RPP)	570	61%
Spent Nuclear Fuel	120	13%
Environmental Restoration	100	11%
Transition Activities	90	10%
Offsite	40	4%
Pacific Northwest National Laboratory (PNNL)	10	2%
Total	920	100%

Note: Due to rounding, totals may not equal sum of individual values. Numbers over 10 m³ are rounded to the nearest 10 m³, numbers less than 10 m³ are rounded to integers, and numbers less than 1 are rounded to nearest 0.01 m³.

Comparison to Previous Baseline(s)

The FY2001.0 forecast shows a 40% decrease in forecast volumes for this waste type from the FY2000.0 forecast. The Spent Nuclear Fuel forecast decreased by 540 m³ while River Protection Program (RPP), Transitions Activities and Pacific Northwest National Laboratory decreased by 100 m³, 90 m³, and 40 m³, respectively.

The FY2000.0 forecast shows 7% decrease in forecast volumes for RH_TRU(M) waste from the FY99.0 forecast. The River Protection Program (RPP) forecasted 880 m³ less while the Spent Nuclear Fuel functional group and the Transition Activities functional group increased by 620 m³ and 150 m³, respectively.

Comparison to Previous Baseline(s) by Functional Group Area

(in descending order by functional group volume)

Remote Handled Transuranic & Transuranic Mixed Waste Summary Volumes	FY 2001.0 Forecast (m ³)	FY 2000.0 Forecast (m ³)	FY 1999.0 Forecast (m ³)
Functional Groups			
River Protection Program (RPP)	570	670	1,550
Spent Nuclear Fuel	120	660	40
Environmental Restoration	100	--	--
Transition Activities	90	180	30
Offsite	40	--	--
Pacific Northwest National Laboratory (PNNL)	10	50	50
Solid Waste	--	--	0.51
Total	920	1,560	1,680

Note: Due to rounding, totals may not equal sum of individual values. Numbers over 10 m³ are rounded to the nearest 10 m³, numbers less than 10 m³ are rounded to integers, and numbers less than 1 are rounded to nearest 0.01 m³.

The reasons for the volume changes are explained in each of the functional group and waste generator pages.

Definition

Remote-handled transuranic and transuranic mixed (RH_TRU(M)) waste has a dose rate greater than 200 mrem/h at contact with the waste container. At the time of assay, this waste contains more than 100nCi/g of alpha-emitting isotopes with atomic numbers greater than 92 half-lives greater than 20 years. TRU(M) waste is TRU waste that is also dangerous (hazardous) waste as defined in the Washington Administrative Code (WAC) 173-303.

For questions or comments, please contact Roberta Barcot
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FY2001.0 Forecast of GTC III Waste

GTC III Report Sections

- » [Highlights](#)
- » [Comparison to Previous Baseline\(s\)](#)
- » [Summary Table](#)
- » [GTC III Definitions](#)

Highlights of GTC III Waste Forecast

- A total of 6 m³ of GTC III waste is forecast for shipment to Fluor Hanford Waste Management Project by onsite and offsite generators.
- GTC III waste is forecasted from 2017 to 2021.
- The same volume of GTC III waste was forecast for FY2000.0.
- The Transition Activities program is the only functional group forecasting GTC III waste.

Functional Group Distribution

Waste Class Data

The physical waste forms, hazardous characteristics, and container distributions for GTC III are shown in the charts below. All of the waste is expected to be debris and will be shipped in 208 liter drums. None of the waste is expected to be mixed; therefore, hazardous characteristics are not applicable.

Physical Waste Form Distribution

Hazardous Characteristic Distribution

None of the GTC III waste is forecast as mixed waste; therefore hazardous characteristics are not applicable.

Container Distribution

Note: Due to rounding, totals may not equal sum of individual values. Numbers over 10 m³ are rounded to the nearest 10 m³, numbers less than 10 m³ are rounded to integers, and numbers less than 1 are rounded to nearest 0.01 m³.

Annual GTC III Waste Volumes

GTC III waste is only forecast from 2017 to 2021 corresponding to the terminal cleanout and stabilization of the Waste Encapsulation and Storage Facility.

GTC III Waste Annual Minimum, Baseline, and Maximum Volumes

Summary Table (volumes in m³)

Forecast by Functional Group Area

(in descending order by functional group volume)

Greater-than-Category III Waste Summary Volumes	FY 2001.0 Forecast (m ³)	% of Total
Functional Groups		
Transition Activities	6	100%
Total	6	100%

Note: Due to rounding, totals may not equal sum of individual values. Numbers over 10 m³ are rounded to the nearest 10 m³, numbers less than 10 m³ are rounded to integers, and numbers less than 1 are rounded to nearest 0.01 m³.

Comparison to Previous Baseline(s)

No changes in the forecast volumes occurred for GTC III between the FY2001.0 and FY2000.0 forecasts.

The forecast of GTC III waste was first projected in FY2000.0, that is, none was forecast in the FY99.0 forecasts. The GTC III waste in the FY2000.0 forecast results from the inclusion of terminal cleanout and stabilization wastes by the Waste Encapsulation and Storage Facility.

Comparison to Previous Baseline(s) by Functional Group Area

(in descending order by functional group volume)

Greater-than-Category III Waste Summary Volumes	FY 2001.0 Forecast (m ³)	FY 2000.0 Forecast (m ³)	FY 1999.0 Forecast (m ³)
Functional Groups			
Transition Activities	6	6	--
Total	6	6	--

Note: Due to rounding, totals may not equal sum of individual values. Numbers over 10 m³ are rounded to the nearest 10 m³, numbers less than 10 m³ are rounded to integers, and numbers less than 1 are rounded to nearest 0.01 m³.

The reasons for the volume changes are explained in each of the functional group and waste generator pages.

Definition

LLW greater-than-class III (GTCIII) meets the definition for LLW and is determined to be GTCIII when the sum of the fractions of the radionuclides' Class III concentration limits are greater than one, as defined in the Hanford Site Solid Waste Acceptance Criteria, WHC-EP-0063 Rev. 5, June 1998.

MLLW greater-than-class III (GTCIII) has radiation levels as defined for LLW greater-than-class-III, and is also defined as dangerous (hazardous) waste in WAC 173-303.

For questions or comments, please contact Roberta Barcot
(e-mail: Roberta_A_Barcot@rl.gov, voice: (509) 373-4752).

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FY2001.0 Forecast of Hazardous Waste

Hazardous Waste Report Sections

- » Highlights
- » Annual Volumes
- » Summary Table
- » Comparison to Previous Baseline(s)
- » Hazardous Waste Definition

Highlights of Hazardous Waste Forecast

- A total of 1,760 m³ of Hazardous waste is forecast to be generated at the Hanford site.
- The Hazardous waste forecast life cycle is 2001-2046.
- This forecast shows a 17% decrease from the FY2000.0 forecast of 2,110 m³. The decrease can largely be accounted for by the decrease of volume forecast by Transition Activities (570 m³).
- The Analytical Services functional group and River Protection Program forecast the majority of the Hazardous waste.

Program Distribution

Waste Class Data

The physical waste forms, hazardous characteristics, and container distributions for Hazardous waste are shown in the charts below. The majority of the waste is expected to be debris (47%) and lab packs (30%). The primary hazardous characteristics are expected to be organics, metals, ignitables, and

corrosive combined with state regulated. Hazardous waste will be shipped primarily in 208 liter drums.

Physical Waste Form Distribution

Hazardous Characteristic Distribution

Container Distribution

Note: Due to rounding, totals may not equal sum of individual values. Numbers over 10 m³ are rounded to the nearest 10 m³, numbers less than 10 m³ are rounded to integers, and numbers less than 1 are rounded to nearest 0.01 m³.

Annual Hazardous Volumes

Hazardous Waste Annual Minimum, Baseline, and Maximum Volumes

Summary Table (volumes in m³)

Forecast by Functional Group Area

(in descending order by functional group volume)

Hazardous Waste Summary Volumes	FY 2001.0 Forecast (m ³)	% of Total
Functional Groups		
Analytical Services	900	51%
River Protection Program (RPP)	440	25%
Transition Activities	220	13%
Liquid Waste	170	10%
Solid Waste	30	2%
Total	1,760	100%

Note: Due to rounding, totals may not equal sum of individual values. Numbers over 10 m³ are rounded to the nearest 10 m³, numbers less than 10 m³ are rounded to integers, and numbers less than 1 are rounded to nearest 0.01 m³.

Comparison to Previous Baseline(s)

The FY2001.0 forecast shows a 17% decrease from the FY2000.0 forecast of 2,110 m³. The decrease can largely be accounted for by the decrease of volume forecast by Transition Activities (570 m³).

The FY2000.0 forecast shows a 41% decrease from the FY99.0 forecast of 3,570 m³. The decrease can largely be accounted for by the discontinued forecasting of the High Level Vitrification Project (872 m³) and Low Level Vitrification Project (1,280 m³) within the River Protection Program.

Comparison to Previous Baseline(s) by Functional Group Area

(in descending order by functional group volume)

Hazardous Waste Summary Volumes	FY 2001.0 Forecast (m ³)	FY 2000.0 Forecast (m ³)	FY 1999.0 Forecast (m ³)
Functional Groups			
Analytical Services	900	910	150
River Protection Program (RPP)	440	230	2,370
Transition Activities	220	790	750
Liquid Waste	170	140	140
Solid Waste	30	20	10
Spent Nuclear Fuel	--	20	30
Environmental Restoration	--	--	110
Total	1,760	2,110	3,570

Note: Due to rounding, totals may not equal sum of individual values. Numbers over 10 m³ are rounded to the nearest 10 m³, numbers less than 10 m³ are rounded to integers, and numbers less than 1 are rounded to nearest 0.01 m³.

Definition

Hazardous waste is dangerous (hazardous) waste as defined in the Washington Administrative Code (WAC) 173-303.

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(e-mail: Roberta_A_Barcot@rl.gov, voice: (509) 373-4752).

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Navigation Options in SWIFT FY2001

This website is built with two styles of navigation. The first is the "tree" style. The second we'll call the "Table of Contents" style. The "tree" style actually displays two frames each of which displays a separate web page. The left frame is the "tree" navigation tool that behaves much like the left frame of the Window 95 Explorer window. You simply expand and contract the tree (by mouse clicking folder icons) to display or hide a hierarchy of links to document pages. Actual pages that you can link to are identified by a document icon or an associated arrow icon. Selecting either of these will display a separate web page of information in the right frame. If you want to print, save, or bookmark the document displayed in the right frame then it is important to first mouse click anywhere on the right frame before printing, saving, or bookmarking. An alternative to this style of navigation is available by going to the bottom of any page displayed in the right frame and selecting the "Table of Contents" button. This will display a single web page with the fully expanded list of links to all report pages. All links are to a single page per Netscape window so you can ignore dealing with frames.

You know you are in the "tree" style of navigation if you see a vertical divider bar on your page and to the left of it you see a box at the top with the text "SWIFT FY2001 Report Contents". If you want to see more/less of the "tree" you can increase/decrease the width of the "tree" by centering your mouse over the divider bar and dragging it either direction.

Bookmarking

If working in the "tree" style of navigating you find yourself someplace where you think you'll want to return, again click in the right frame, then click on **Bookmarks** in the Menu bar. Click on **Add Bookmark**. In most browsers you can also right mouse click in the frame you want bookmarked then click on **Add Bookmark**. Now to return to that site later, just go to **Bookmarks**, and click on the bookmark you want. If you want to get back to the SWIFT FY2001 homepage and navigate using the "tree" style then go to the bottom of any page and select "SWIFT FY2001 home page". Or alternatively, select the "Table of Contents" link button to navigate without concern for frames and "tree" style navigation.

SWIFT Report – Navigation Options

For questions or comments, please contact Roberta Barcot
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Welcome

Waste Classes

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- RH_MLLW
- CH_TRU(M) Waste
- RH_TRU(M) Waste
- GTC III Waste
- LLWI
- LLWIII
- HAZ Waste

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- Site Map
- Glossary
- Help
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- Data Requests
- Feedback Form

Environmental Groups

- Analytical Services
- Environmental Restoration
- Infrastructure
- Liquid Waste
- Offsite
- PNNL
- RPP
- Solid Waste
- SNF
- Transition Activities

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The authors gratefully acknowledge the assistance of the many individuals within the generating community who provided forecast data and other information to support this report. Their dedication to quality forecasts and their willingness to support the forecast process is much appreciated.

For questions or comments, please contact Roberta Barcot
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SWIFT Report -- Special Data Request Form

Please use this form to request special-purpose solid waste forecast data reports.

Part A. Requestor Data

Please provide all requested information so we may properly process your request.

Your name:	<input type="text"/>
Your E-mail address:	<input type="text"/>
Your Company/Facility:	<input type="text"/>
Your phone number:	<input type="text"/>
Date needed:	<input type="text"/>

Purpose: <i>Optional - use this space to provide any additional information which might help us ensure that you are sent the correct data</i>	<input type="text"/>
---	----------------------

Part B. Data Boundaries

Please define the data boundaries for the data you are seeking

Forecast Period: <i>Specify the years you are requesting data for.</i>	<div style="border: 1px solid black; height: 20px; width: 100%;"></div> <i>Specify individual fiscal years (e.g. FY2002, FY2005) a range of years (e.g. FY2001-FY2005) or the entire forecast range (FY2001-FY2046).</i>
Handling Type: <i>Choose all that apply.</i>	☐ Remote-handled (RH) ☐ Contact-handled (CH)
Waste Class: <i>Choose all that apply.</i>	☐ Transuranic waste ☐ Transuranic mixed waste ☐ Low-level waste ☐ Mixed low-level waste ☐ Hazardous waste
Waste Category: <i>Choose all that apply.</i>	☐ Category I ☐ Category III ☐ Greater than Category III
Data Needed: <i>Choose all that apply.</i>	☐ Summary ☐ Detailed data (includes narrative) ☐ Both

Part C. Waste Sources (Functional Groups/Generators)

Please specify the waste sources to be included, by functional group. Note that the default is "all functional groups/all generators."

All Functional Groups/All Generators
Analytical Services -- All Analytical Services
Analytical Services - 222-S Analytical Laboratory
Analytical Services - 6266 Waste Sampling and Characterization Facility
Environmental Restoration-Surplus Facilities
Transition Activities -- All Transition Activities
Transition Activities - 200 Area Accelerated Deactivation
Transition Activities - 234-5 Z Plutonium Finishing Plant
Transition Activities - 300 Area Accelerated Closure Project
Transition Activities - 303-K Fuels Fabrication Transition

Submit request **Clear and reset**

**For questions or comments, please contact Roberta Barcot
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SWIFT Report — Feedback form

The purpose of the SWIFT Report Web Site is to provide staff and contractors with up-to-date and easy-to-use information on the LLW, MLLW, and Transuranic(Mixed) solid waste expected to be managed by Fluor Hanford from onsite and offsite generators.

We would like to know how well the site currently meets your needs and what we could do to improve it to better meet your needs.

User Data

Your name:	<input type="text"/>
Your e-mail address:	<input type="text"/>
Your company/facility:	<input type="text"/>
Your phone number:	<input type="text"/>

- How detailed are your *SWIFT* Report data requests?
☐ (1=not detailed · 7=extremely detailed)
- In the past, how much time have you spent using these data?
☐ (1=A great deal · 7=Very little)
- How has the availability of this web site changed the amount of time you need to spend accessing forecast information for your job?
☐ (1=Substantially decreased time · 7=Substantially increased time · 8=No change)
- In general, how well does this web site meets your needs for forecast information?
☐ (1=Meets all needs · 7=Does not meet all needs)
- May we contact you to discuss your comments?
☐ Yes ☐ No

Knowing How to Use the SWIFT Report Web Site

- How well does the information explaining how to use this web site meet your needs?
☐ (1=Meets all needs · 7=Does not meet all needs · 8=NA)
- Comments?

Finding Your Way on the SWIFT Report Web Site

- How easy is it to determine what information is available in the report?
☐ (1=Very easy · 7=Very difficult)
- How easy is it for you find the information you need?
☐ (1=Very easy · 7=Very difficult)
- How do you get to the page you want to view?

(Check all that apply)

- ☐ The links on the Home Page
- ☐ The links at the "treeview" frame
- ☐ The links on the Table of Contents
- ☐ The links on the Site Map

- ☐ Comments?

Understanding the Material in the *SWIFT Report Web Site*

- Do any of the following present a problem for you in reading and understanding the charts/tables?

(Check all that apply)

- ☐ Chart headings
- ☐ Chart labels and indices
- ☐ Type of chart (pie chart versus bar chart)
- ☐ Colors and coding of chart information

- ☐ Comments?

Using the Information Provided in the SWIFT Report Web Site

General Information

- How would you rate the timeliness of the forecast data for meeting your job needs?
☐ (1=Meets all needs · 7=Does not meet all needs)
- In general, how well do the following sections in the forecast pages meet your needs?
(1=Meets all needs · 7=Does not meet all needs)

☐ Contents	☐ Glossary
☐ Home Page	☐ Web-Site Map
☐ Report Sections links	☐ <i>SWIFT</i> Help
☐ Highlights text	☐ Reports
☐ Highlights pie charts	
☐ Other Forecast Data (i.e. HAZ waste)	☐ Identified but Unforecasted Activities
☐ Detailed Forecast Data (Annual Totals)	☐ Forecast Background
☐ Annual Waste Class Volumes	☐ Forecast Assumptions and Comments
☐ Summary Table	
☐ Forecast Accuracy	
☐ Comparison to Previous Baseline(s)	
☐ Comparison to National Data Calls	

• Comments?

☐ Other comments...

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Thanks for your feedback!

Thank you for taking the time to complete our user survey! Your completed evaluation has been sent to the web site development team for their review. Your comments will be used to assist in the continual improvement of this site.

For questions or comments, please contact Roberta Barcot
(e-mail: Roberta_A_Barcot@rl.gov, voice: (509) 373-4752).

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Glossary

» Abbreviations

» Waste Class Naming Conventions

» LDR Waste Stream IDs

» Characteristics Definitions

» Container Definitions

Abbreviations

A | B | C | D | E | F | G | H | I | J | K | L | M | N | O | P | Q | R | S | T | U | V | W | X | Y | Z |

- B -

BEMR	Baseline Environmental Management Report
BHI	Bechtel Hanford, Inc.
BNFL	British Nuclear Fuels Limited, Inc.
BWHC	Babcock & Wilcox Hanford Company

- C -

CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act
CDR	Conceptual Design Report
CH	Contact-Handled
CHG	CH2M HILL Hanford Group, Inc.
CTT	Commercial Thermal Treatment
CWC	Central Waste Complex

- D -

D&D	Decontamination and Decommissioning
DOE	U.S. Department of Energy
DOE-ORP	DOE Office of River Protection
DOE-RL	DOE Richland Office
DST	Double-Shell Tank

- E -

EM	DOE Office of Environmental Management
EM-40	Environmental Restoration Program

ER	Environmental Restoration (also refers to the Environmental Restoration program)
ERC	Environmental Restoration Contractor
ERDF	Environmental Restoration Disposal Facility
ETEC	Energy Technology Engineering Center
ETF	Effluent Treatment Facility
- F -	
FFTF	Fast Flux Test Facility
FH	Fluor Hanford
FMEF	Fuels Material and Examination Facility
FY	Fiscal Year
- G -	
GTCIII	Greater than Category III
- H -	
HAZ	Hazardous Waste
HC	Hazardous Characteristic
HELD	Waste forecasted to be shipped to Hanford Waste Management for which a shipping schedule cannot be estimated
HEPA	High Efficiency Particulate Air (filter)
Hg	Mercury
HLVP	High-Level Vitrification Project
HLW	High-Level Waste
- I -	
IX	Ion Exchange
- L -	
LBL	Lawrence Berkeley Laboratory
LEC	Long-Length Equipment Container
LEHR	Laboratory for Energy-Related Health Research
LERF	Liquid Effluent Retention Facility
LLBG	Low-Level Burial Ground
LLE	Long-Length Contaminated Equipment
LLVP	Low-Level Vitrification Project
LLW	Low-Level Waste
LWPF	Liquid Waste Processing Facilities
- M -	
M&I	Management and Integration
MB-	Metal Box
MLLW	Mixed Low-Level Waste
mrem	Millirem
MUSTs	Miscellaneous Underground Storage Tanks
MYPP	Multi-Year Program Plan
MYWP	Multi-Year Work Plan

- N -

nCi Nanocurie
 NA Not Available

- P -

PCB Polychlorinated Biphenyl
 PFP Plutonium Finishing Plant
 PHMC Project Hanford Management Contract
 PNNL Pacific Northwest National Laboratory
 PPE Personal Protective Equipment
 PRTR Plutonium Recycle Test Reactor
 PUREX Plutonium Uranium Extraction Facility
 PWF Physical Waste Form

- R -

R&D Research and Development
 RCRA Resource Conservation and Recovery Act
 RH Remote-Handled
 RPP River Protection Program

- S -

SNF Spent Nuclear Fuel (also refers to the Spent Nuclear Fuel program)
 SST Single-Shell Tank
 STP Site Treatment Plan; Stabilization Treatment Program
 SWB Standard Waste Box
 SWF Solid Waste Forecast
 SWIFT Solid Waste Integrated Forecast Technical Report
 SWITS Solid Waste Inventory Tracking System

- T -

TC&S Terminal Cleanout and Stabilization
 TEDF Treated Effluent Disposal Facility
 TFTR Tokamak Fusion Test Reactor
 TRU(M) Transuranic Waste (both non-mixed and mixed)
 TRUSAF TRU Storage and Assay Facility
 TSD Treatment, Storage, and Disposal
 TWRS Tank Waste Remediation System

- W -

w with (i.e., w Hg means *with Mercury*)
 WAC Washington Administrative Code
 WATS Waste Acid Treatment System
 WESF Waste Encapsulation and Storage Facility
 WHC Westinghouse Hanford Company
 WIPP Waste Isolation Pilot Plant
 WM Waste Management Project

wo	Without (i.e., wo Hg means <i>without Mercury</i>)
WRAP	Waste Receiving and Processing Facility
WSCF	Waste Sampling and Characterization Facility
WT-WP-WSC2	Washington State Regulated Hazardous Constituents

Waste Class Naming Conventions

For this report, solid waste has been divided into seven classes excluding HAZ. These classes are briefly described in the following table. These definitions are applicable specifically to forecast waste and are based on WHC-EP-0063 rev. 5.

Table 1 Waste Category Definitions

	LLW_I	LLW_III	CH_MLLW	RH_MLLW	CH_TRU(M)	RH_TRU(M)	GTCIII
Dose rate	Varies	Varies	≤ 200 mrem/h	> 200 mrem/h	≤ 200 mrem/h	> 200 mrem/h	Varies
Dangerous per WAC 173-303	No	No	Yes	Yes	Yes (TRU(M)) No (TRU)	Yes (TRU(M)) No (TRU)	Yes (MLLW) No (LLW)
> 100 nCi/g(b) alpha-emitting isotopes (atomic numbers > 92 & half-lives > 20 years)	No	No	No	No	Yes	Yes	No

($< \dots$ less than $> \dots$ greater than $= \dots$ equal)

Low-level waste category I (LLW_I)

This waste may be comprised of either contact- or remote-handled waste considered low-activity waste with very low concentrations of long-lived radionuclides and is not considered dangerous (hazardous) waste as defined in WAC 173-303.

Low-level waste category III (LLW_III)

This waste may be comprised of either contact- or remote-handled waste considered moderate- to high-activity waste with low to moderate concentrations of long-lived radionuclides, in stabilized form that minimizes subsistence for a period of 1000 years and is not considered dangerous (hazardous) waste as defined in WAC 173-303.

Contact-handled mixed low-level waste (CH_MLLW)

This waste has a dose rate equal to or less than 200 mrem/h and contains radioactivity not classified as spent nuclear fuel or transuranic waste (concentrations of transuranic radionuclides less than or equal to 100 nCi/g of the waste matrix). The waste is also defined as dangerous (hazardous) waste in the Washington Administrative Code (WAC) 173-303.

Remote-handled mixed low-level waste (RH_MLLW)

This waste has a dose rate greater than 200 mrem/h and meets the definition for LLW. This waste is also defined as dangerous (hazardous) waste in WAC 173-303.

Contact-handled transuranic or transuranic mixed waste (CH_TRU(M))

This radioactive waste has a dose rate equal to or less than 200 mrem/h at contact with the waste container. At the time of assay, this waste contains more than 100 nCi/g of alpha-emitting isotopes with atomic numbers greater than 92 and half-lives greater than 20 years. TRUM waste is TRU waste that is also dangerous (hazardous) waste as defined in WAC 173-303.

Remote-handled transuranic or transuranic mixed waste (RH_TRU(M))

This waste has a dose rate greater than 200 mrem/h at contact with the waste container. At the time of assay, this waste contains more than 100 nCi/g of alpha-emitting isotopes with atomic numbers greater than 92 and half-lives greater than 20 years. TRUM waste is TRU waste that is also dangerous (hazardous) waste as defined in WAC 173-303.

Greater-than-Class III (GTCIII)

This waste meets the definition for LLW and may also be defined as dangerous (hazardous) waste in WAC 173-303. Greater-than-Class III (GTCIII) designation is determined when the sum of the fractions of the radionuclides' Class III concentration limits are greater than one, as defined in the *Hanford Site Solid Waste Acceptance Criteria* WHC-EP-0063 Rev. 5.

Hazardous waste (HAZ)

Waste defined under the Washington Administrative Code 173-303.

Contact-handled (CH) and **remote-handled (RH)** waste are considered distinct categories, based on the inherent characteristics of the waste. However, in a few instances, generators have reported RH waste that is shielded to CH levels as CH waste.

In addition to the above waste categories, another key definition concerns **Held waste**. Held waste is waste forecasted to be shipped to Hanford Waste Management for which a shipping schedule cannot be estimated.

Characteristics Definitions

Physical Waste Forms (PWFs)

The primary physical waste forms of most waste volumes can be delineated in the following categories, based on the DOE Waste Treatability Group Guidance Document (DOE/LLW-217 Revision 0):

Debris Wastes: Wastes that meet the U.S. Environmental Protection Agency (EPA) criteria for "debris." Debris materials are divided into four groups as either metal (inorganic), inorganic non-metal, combustible (organic), or mixtures of materials (heterogeneous). If the waste is dominated by one type of material it should be classified as that material; otherwise it is classified as heterogeneous.

Inorganic Solids: Material that has an inorganic matrix or content and does not meet the

criteria for debris.

Organic Solids: Material that has an organic matrix or content (i.e. material that includes chemical compounds based on carbon, hydrogen, and oxygen), and does not meet the criteria for debris.

Shielding: Three types of shielding include steel, lead, and concrete. It is assumed that, if shielding is required, the shielding material is handled as solid waste. A fourth type of shielding is also included: void space, which is space within a container that is not occupied by waste.

Soils/Gravel: Soil or gravel contaminated with hazardous and/or radioactive materials.

Labpacks: Various quantities of compatible waste within the same Department of Transportation hazard class, packaged in vessels such as cans or bottles.

Special Wastes: waste containing one or more of the following: elemental mercury, elemental lead, beryllium waste, batteries, reactive metals, explosives/propellants, and aerosols/compressed gases.

Final Form: waste that has been treated and/or stabilized for direct disposal.

Hazardous Characteristics (HCs)

Hazardous characteristics as defined by the Resource Conservation and Recovery Act (RCRA) are an important characteristic of the waste that will be generated. These hazardous characteristics can be grouped into eight main categories that may be individual or mixed. Several hazardous characteristics might be present in a particular waste form and require definition by waste volume percentages as mixed hazardous characteristics (e.g., if a 208 liter drum contains both ignitables and corrosives then the package is 100% ignitables and corrosives). The relevant hazardous characteristics groups are:

Ignitables (RCRA code: D001): Waste that can cause a fire through friction, absorption of moisture, or spontaneous chemical action.

Corrosives (RCRA code: D002): Any liquid or solid that causes destruction of human skin tissue or that has a severe corrosion rate on steel.

Reactive (RCRA code: D003): Typically sodium metal or alkali metal alloys, but can also be particulate fines of aluminum, uranium, zirconium, or other pyrophoric materials, and may be mixed with stabilizing materials.

Toxic Metals (RCRA codes: D004-D011): Toxic metals that exceed RCRA concentrations.

Mercury (RCRA codes: D009, P065, P092, and U151): Mercury contamination in excess of 260 parts per million.

Toxic Organics (RCRA codes: D018-D043): Toxic organic compounds.

WA State regulated (Washington State codes: WT, WP, WSC2): Waste that is defined as hazardous only under Washington State regulations.

PCBs: Polychlorinated biphenyl-contaminated materials (designated in 40 CFR 761 or WAC 173-303-071) where PCB concentration is further divided into two categories: less than 50 parts per million (ppm), and greater than or equal to 50 ppm.

Container Group Definitions

For the 2001 forecast, 11 different container types have been reported for solid waste shipment to Waste Management during its life cycle. Note that these differ slightly from previous years' forecasts. The following is a brief description of these containers:

Drums

114 liter drum: This is a small standard drum equivalent to 30 U.S. gallons with external volumes ranging from 0.137 m³ to 0.145 m³ (4.8-5.1 ft³).

208 liter drum: This is a standard-size drum equal to 55 U.S. gallons with external volumes ranging from 0.242 m³ to 0.257 m³ (8.5-9.1 ft³).

322 liter drum: Often used as an overpack for 208 liter drums this is a large standard-size drum equivalent to 85 U.S. gallons. It has an external volume of 0.382 m³ (13.5 ft³).

Other drums: This category represents various container sizes used less often than the standard drums. Examples are 57 liter drums, 76 liter drums, and 416 liter drums.

Boxes

Extra-large box: This shipping container is defined by an external volume greater than or equal to 28.3 m³ (1,000 ft³). Boxes of this size are too big to be accepted under the Site Treatment Plan (STP) or Commercial Thermal Treatment (CTT) contracts.

Large box: The size of this container is defined as greater or equal to 15 m³ and less than 28.3 m³ in external volume (530-1,000 ft³). This size is too large to be accepted under the Site Treatment Plan (STP) or Commercial Thermal Treatment (CTT) contracts.

MB-V: Made of either metal or plywood, this box is also referred to as a 4x4x8. Its external dimensions are 1.22 m wide by 1.33 m high by 2.43 m long (4 x 4 x 8 ft).

Medium box: Any size box with an external volume greater than or equal to 3.95 m³ and less than 15 m³ (139-530 ft³) classifies as a medium box. All medium boxes can be handled under the Site Treatment Plan (STP) or Commercial Thermal Treatment (CTT) contracts.

Small box: A small box has an external volume less than 3.95 m³ (128 ft³). This group now includes MB-IV boxes.

Standard waste box (SWB): This container is used only for TRU(M) waste and is constructed of carbon steel for the Waste Isolation Pilot Plant (WIPP).

Miscellaneous

Long-length equipment container (LEC): These containers vary in size but are used only for equipment retrieved from the Hanford Tank Farms. The waste in these containers will be almost all RH_MLLW.

LDR Waste Stream IDs

LDR Waste Stream IDs can generally be thought of as groupings of Waste Specification Records (WSRds) which are used to specify the treatment and disposition path forward for a given container of waste. Although WSRds can be assigned for all wastes, they are most useful in regards to MLLW. For this report, the individual WSRds have been grouped into the following LDR Waste Stream IDs.

MLLW-01: waste that complies with all land disposal restrictions of 40 CFR 268 and WAC 173-303-140. This waste is expected to be received ready for direct disposal.

MLLW-02: inorganic solids requiring non-thermal treatment prior to disposal.

MLLW-03: organic solids requiring thermal treatment prior to disposal.

MLLW-04 (Non-OC): debris waste that is primarily inorganic or non-carbonaceous and will require non-thermal treatment.

MLLW-04 (OC): debris waste that contains combined concentrations of greater than 10 weight percent organic/carbonaceous constituents as defined by WAC 173-303-140.that will require thermal treatment. This waste will require thermal treatment prior to disposal.

MLLW-05: elemental lead wastes requiring non-thermal treatment.

MLLW-06: wastes requiring treatment for mercury. This may be elemental mercury or concentrations of mercury over 260 parts per million

MLLW-07: remote-handled waste requiring treatment prior to disposal.

The table below provides a crosswalk between the LDR Waste Stream IDs and the individual WSRds. The LDR Waste Stream titles are also identified in this table.

<u>LDR Waste Stream ID</u>	<u>LDR Waste Stream Title</u>	<u>Corresponding WSRds</u>
MLLW-01	LDR Compliant MLLW	930-03 Federal and State LDR compliant waste that does not require stabilization
		931-01 Federal and State LDR compliant waste that requires stabilization
MLLW-02	Inorganic Solids	405-01 Oxidizer liquids (thermal treatment)
		420-01 Acidic liquids (non-thermal treatment)
		421-01 Caustic liquids (non-thermal treatment)
		422-01 Other liquids (non-thermal treatment)
		428-01 Oxidizer liquids (non-thermal treatment)
		521-00 Oxidizer solids (non-thermal treatment)
		523-02 Acidic solids (non-thermal treatment)
		524-01 Caustic solids (non-thermal treatment)
		525-00 Other solids (non-thermal treatment)
		802-02 Lead acid batteries LDR subcategory
		812-01 Mercury compounds
		820-01 Water reactive metals and compounds
		821-00 Beryllium powder
		822-00 Other water reactive compounds
		830-03 Cadmium containing batteries LDR subcategory
		900-03 Inorganic EHW State only waste
		902-03 State only inorganic solid acid waste

MLLW-03	Organic Solids	400-03 Flammable liquids
		401-01 Combustible liquids
		402-01 Acidic liquids (thermal treatment)
		403-01 Caustic liquids (thermal treatment)
		404-01 Other liquids (thermal treatment)
		500-01 Flammable solids
		501-02 Oxidizer solids (thermal treatment)
		503-02 Acidic solids (thermal treatment)
		504-01 Caustic solids (thermal treatment)
		505-03 Other solids (thermal treatment)
		921-02 State only organic solid acid waste
		922-02 State only organic solid caustic waste
		923-00 State only organic solid waste
MLLW-04 (Non-OC)	Debris Waste (Non-Organic/Carbonaceous)	645-01 Acidic inorganic debris
		646-01 Caustic inorganic debris
		647-01 Other inorganic debris
MLLW-04 (OC)	Debris Waste (Organic/Carbonaceous)	625-01 Acidic organic debris
		626-01 Caustic organic debris
		627-02 Other organic debris
MLLW-05	Elemental Lead	800-01 Radioactive lead solids LDR subcategory
MLLW-06	Elemental Mercury	810-01 Elemental mercury LDR subcategory
MLLW-07	RH_MLLW Requiring Treatment 84A-00	

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Help Contents

This section provides some general information about how the site is organized and how to use Netscape, as well as important details about how some calculations were performed.

Overview

- [SWIFT Report Web Site Overview](#)
- [Forecasting Process](#)

How to ...

- [Using Netscape](#)
- [Netscape Bookmarks](#)

Data issues

- [Increase/Decrease Percentages](#)
- [Rounding](#)
- [Min/max Ranges](#)
- [Waste Class Naming Conventions](#)
- [Waste Categories](#)
- [Container Specifications](#)
- [Waste Specification Records](#)
- [Physical Waste Forms](#)
- [Generator Life Cycle Phases](#)
- [Hazardous Constituents](#)

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SWIFT Report Web Site Overview

This site has 3 levels of information about forecast LLW, MLLW and TRU(M) solid waste to be managed at the Central Waste Complex (CWC). The first level addresses data from a program and generator perspective, the second level addresses data from the perspective of the different waste classes represented, the third level provides generalized report options.

The Site Map shows more details about this organization.

The general format for each section is:

- Header (Logo and time stamp)
- Contents
- Highlights
- Comparison to previous baseline(s)
- Background
- Forecast assumptions and comments
- Other forecast
- Tool bars
- Footer

The **Header** has three pieces of useful information:

- *SWIFT* logo
- Time stamp-a display of the currency of the site, the version of the data included in the site, and the date of the data collection and analysis

The **Report contents section** provides 1) an overview of what's at the current location and 2) links to specific information in the location. Items with one 'fletch' symbol (») are jumps within the current page; items with two 'fletch' symbols (»») load other *SWIFT* Report pages.

The **Highlights section** is a brief, bulleted, overview of key LLW, MLLW and TRU(M) waste issues and typically includes the forecast life cycle, current forecast volumes, and comparison to previous baseline.

The **Comparison to previous baseline(s)** section provides expanded discussion of changes from previous forecasts of LLW, MLLW and TRU(M) waste.

The **Background** section describes the mission of the program or generator and may also provide details about how that mission is being met.

The **Forecast assumptions and comments** section describes the key programmatic assumptions on which the forecast is based. These may include the life cycle end date, assumptions about budgets, treatment, or other issues that affect the amount and types of expected wastes.

The **Other forecast data** section discusses HAZ waste in the current forecast.

Program areas include a **Summary Table** of the totals for LLW, MLLW and TRU(M) waste reported by each of the generators in their program, and bar chart showing **Annual Waste Class Volume** for each forecast year.

Generator areas have a link to **Detailed Forecast Data** in the **Contents** section at the top of the page. A word-to-the-wise: Tables with data for long life cycles can take quite a while to load (as much as a minute or two).

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Help: The Forecasting Process

The forecasting process can be partitioned into the following steps:

- *Determine programmatic assumptions* – The waste generator needs to understand budgetary, regulatory, and technical factors that affect current and future waste generation trends at their facility. Developing clear assumptions based on this information will ensure consistent accurate forecasts.
- *Collect forecast data* – Once the assumptions are clear, the waste generator collects data using those assumptions.
- *Set up a forecast file* – At this step, the waste generator begins to enter information into *SWIFT FY2001*, the electronic collection tool. Basic information on the generator(s) are reported, such as specifying the life cycle, specifying the waste classes, and defining any nonstandard containers or "combined" hazardous characteristics that will be forecast.
- *Enter data* – Once the generator(s) and waste classes have been specified, the waste generator specifies:
 - (1) the containers in which the waste will be stored and the projected volume of waste,
 - (2) the waste specification records of the waste class / container combinations,
 - (2) the physical form of the waste,
 - (3) the hazardous characteristics in the waste (if applicable), and
 - (4) the radionuclides in the waste (if applicable).

Notes for the waste generator to document information necessary to understand the forecast data are available.

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Help: Using Netscape

This page will help you navigate your way through this website and through the World Wide Web in general.

Navigating around a website or around the Web is very simple. At the top of the screen is the familiar Menu bar, some buttons, a **Location** bar, and then more buttons. Let's start in the middle, with **Location**: Web site addresses start with http, followed by colons, slashes, double slashes, and periods (or "dot"). If you want to go to a particular site, you simply highlight the location address (by clicking and dragging over it with the cursor), then type in the new site (or paste it in if you've copied it from somewhere), and "Enter". Sometimes when you're trying to get to a new website you'll get a terse message saying it can't be found, or it's too busy for you. Try again. If it still says the same thing wait a while before retrying. If it's still down, perhaps the site you're aiming at is having server problems. In that case, there's nothing you can do but try again later.

*When you see text in some other color (often blue), that means that text is a link to another, related site. If you slide your mouse cursor arrow over that text, it will turn into a hand. Just click once. In this web site you'll find a set of buttons at the bottom of every "page" you visit with links to the homepage, an alternative table of contents and the Hanford homepage. Just position your cursor over the name of one you want to visit, and--when the cursor turns into the hand--click. [Linked text is often underlined as a Netscape default. If you wish to get rid of the underline, you can go to **Options General Preferences**, and click on **Appearance**. At the bottom of this dialog box you'll see **Link Styles**. You can deselect underline (or select it if it's off).]*

This website is built with two styles of navigation. The first is the "tree" style. The second we'll call the "table of contents" style. The "tree" style actually displays two frames in a single web page. The left frame is the "tree" that behaves much like the left frame in the Window 95 Explorer window. You simply expand and contract the tree by mouse clicking folders to display or hide a hierarchy of links to document pages. Actual pages that you can link to are identified by a document icon or an associated arrow icon. Selecting either of these will display a separate web page of information in the right frame. If you want to print or save the document you see in the right frame then first mouse click anywhere on the right frame before printing or saving. If you don't like this style of navigation then you can go to the bottom of any page displayed in the right frame and select the "Table of Contents" button. It will allow you to navigate and display only one page per browser window and you can ignore any dealings with frames.

What If I Get Lost?

Sometimes as you surf the Web, you click on links until you have no idea where you are. If

you just want to get back home, there's a **Home** button above the Locations bar. If you pass a spot, and want to get back to it, click on **Back**. To then return in a forward direction click on **Forward**.

How Can I Save and Print?

If you want to make a copy of a page select **File**, and **Save As** and do it as you would in the Windows operating system. Alternatively, click the right mouse button and choose **Save As**.

If you want to print, you should take note of the type of page you're looking at. Many web pages are made up of two or more frames that display separate pages of a website. Unfortunately, this isn't always obvious to the viewer so the easiest thing to do is to always mouse click in the general area that you want printed. Doing this will ensure that the page(s) you want to print "have the focus". Then you can go to **File** and **Print**, and it will print the whole "frame set" for you. But what if you just want to print one page? While viewing in Netscape you can't tell where one page ends and another begins. Here's the best way I've found to print a specific page in a long Netscape document:

1. Mouse click in the general area (or, if its obvious, the frame you're interested in)
2. Go to **File**
3. Go to **Print Preview**
4. *After* the document loads, click on **Next Page** to scroll through and find which pages you wish to print.
5. Click on **Print**
6. Deselect **All** and select **Pages**
7. Type in numbers at **From:** and **To:** (for instance, *From: 3 To: 3*)
8. Make any Setup changes you need to
9. Click on **Print**

Bookmarking

When you find yourself someplace where you think you'll want to return, again click in the frame of interest, then click on **Bookmarks** in the Menu bar. Click on **Add Bookmark**. In most instances you can also right mouse click in the frame you want bookmarked then click on **Add Bookmark**. Now to return to that site later, just go to **Bookmarks**, and click on the one you want. In this site, if you want to get back to the homepage and navigate using the "tree" style than go to the bottom of any page and select "SWIFT FY2001 home page". Select the "Table of Contents" link button to navigate without concern for frames and "tree" styles. To read more about [bookmarks](#) click [here](#).

For questions or comments, please contact [Roberta Barcot](#)
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Help: Netscape — Bookmarks

What's a Bookmark?

When you're in Netscape, one of the menu items at the top of the screen is **Bookmarks**. When you're visiting the Would Wide Web (WWW), and come to a site you know you'll want to visit again, making a bookmark is how you can do so.

Frames and Bookmarks

This website is built with two styles of navigation. The first is the "tree" style. The second we'll call the "table of contents" style. The "tree" style actually displays two frames in a single web page. The left frame is the "tree" that behaves just like the left frame in the Window 95 Explorer window. You simply expand and contract the tree (by mouse clicking folders or +/- symbols) to display or hide a hierarchy of links to document pages. Actual pages that you can link to are identified by a document icon or an associated arrow icon. Selecting either of these will display a separate web page of information in the right frame. If you want to print, save, or bookmark the document you see in the right frame then first mouse click anywhere on the right frame before printing, saving, or bookmarking. This will ensure the document of interest has "the focus" when you print, save, or bookmark.

How To

When you get to a site you like, click on **Bookmarks**. Then click on **Add Bookmark**. Then at any other time, you can click on **Bookmarks**, click on the name of the site, and it will take you there! For any SWIFT FY2001 page, if you want to get back to the homepage and navigate using the "tree" style then go to the bottom of any page and select "SWIFT FY2001 home page". Select the "Table of Contents" link button to navigate without concern for frames and "tree" styles.

If you establish very many bookmarks you may want to organize or catalogue them into categories, with headers. To do so, click on **Window**, and **Bookmarks**. Click on one of your bookmarks. Now click on **Item**, and select **New Folder**. This is actually a folder for a group of bookmarks. In the dialog box, where it says "Name", it says New Folder. Type in the name you want. Click OK. You can now click on it and drag it up or down. Now click on the bookmarks you want to be in this folder, and drag them "into" it. Close the

Bookmarks Window.

Now when you want to find a bookmark, click on **Bookmarks**, and you'll just see a list of the folders. Click on the proper one, and a list of that folder's bookmarks appear.

Handy Tip: When you make a bookmark, Netscape uses whatever is on the title bar for the name it gives the bookmark. Sometimes these titles are quite long and can be unwieldy when you click on Bookmark to find one to open. To rename the assigned name to something more concise and meaningful, go to **Window**, then **Bookmarks**. Click once on the offending bookmark title, click on **Item**, and click on **Properties....** In the **Name** section, just delete part of the name, or give it a whole new descriptive name. Be sure not to accidentally do this in the location section!

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Help: Increase/Decrease Percentages

The magnitude of changes in forecast data are described in terms of their percentage increase or decrease from the baseline. In this instance, the baseline is the FY2000 Forecast. The formula is:

$$\text{Change} = 100 * (\text{FY2001 volume} - \text{Baseline volume}) / \text{Baseline volume}$$

A positive (> 0) reflects an increase in the particular waste class forecast; a negative change reflects a decrease.

For example:

Baseline forecast of MLLW: 340 m³

FY2001 forecast of MLLW: 500 m³

Change = $100 * (500 - 340) / 340$ or + 47% ... a 47% increase, which seems reasonable.

If the FY2001 forecast of MLLW is 200 m³, the change is:

Change = $100 * (200 - 340) / 340$ or -41.1 ... a 41% decrease.

If the FY2000 forecast of MLLW is 20 m³, the change is:

Change = $100 * (20 - 340) / 340$ or -94.1 ... a 94% decrease.

This can be disconcerting if the changes are major:

Baseline forecast of MLLW: 2 m³

FY2001 forecast of MLLW: 4,000 m³

Change = $100 * (4000 - 2) / 2$ = + 199,900 ... a 199,900% increase.

But switching the situation doesn't yield what most of us expect:

Baseline forecast of MLLW: 4,000 m³

FY2001 forecast of MLLW: 2 m³

Change = $100 * (2 - 4000) / 4000$ or -99.95 ... or nearly 100% decrease

SWIFT Report – Percentages

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Help: Rounding

Generators provide a great deal of highly detailed data, which are then rolled into summary data that can be meaningful for planning and performing comparisons. The following formula was used for rounding:

Detailed Data / Annual Totals

Data > 1 m³ Detailed generator data are rounded to the nearest cubic meter of waste, except where data <1 m³ was forecast.

Data > 0 and < 1 m³ Data between 0 and 1 are shown as <1 m³; totals are calculated by summing the actual values and then rounding.

Summary Generator and Program Data

Summary data are always calculated by summing the detailed values and then rounding. Comparison numbers (i.e., percent increases, percent decreases, minimum ranges, maximum ranges) are always made on the unrounded numbers. Summary values between 0 and 1 are shown to the nearest 0.01 m³; summary values between 1 and 9 are shown rounded to the nearest integer; and summary values greater than 10 m³ are rounded to the nearest 10 m³.

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Help: Min/Max Ranges

Because of the uncertainties inherent in long-term forecasts, SWIFT FY2001 requires the waste generator to specify a range for the volume estimate by providing minimum and maximum percents. The table below shows how these percents are calculated. Ranges apply only to the total volume for a forecast year and are entered in the minimum and maximum rows without the percent sign.

Range calculation examples

If you think you will ship...		then enter...	because...
min	18 m ³	90%	18 is 90% of 20
best estimate	20 m ³	20 m ³	
max	25 m ³	125%	25 is 125% of 20
min	20 m ³	100%	20 is 100% of 20
best estimate	20 m ³	20 m ³	
max	25 m ³	125%	25 is 125% of 20

The use of waste reduction techniques prior to shipping waste to Hanford's Treatment, Storage, and Disposal (TSD) Facility is highly recommended. The volumes reported in the SWIFT FY2001 forecast should reflect the projected shipment volumes after these reduction techniques are used.

Many generators provided different minimum and maximum ranges for each waste class in the forecast. The *minimum* and *maximum* ranges reported in this forecast are actually weighted averages for LLW, MLLW and TRU(M) waste, using the following formulas:

Minimum % = $100 * (\text{Sum of minimum LLW, MLLW and TRU(M) volumes}) / (\text{Sum of LLW, MLLW and TRU(M) volumes})$

Maximum % = $100 * (\text{Sum of maximum LLW, MLLW and TRU(M) volumes}) / (\text{Sum of LLW, MLLW and TRU(M) volumes})$

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Help: Waste Class Naming Conventions

Solid waste can be characterized into seven classes excluding HAZ. These classes are briefly described in the following Table. These definitions are applicable specifically to forecast waste and are based on WHC-EP-0063.4.

Table 1.1: Waste Category Definitions

	CH MLLW	RH MLLW	CH TRU(M)	RH TRU(M)	MLLW GTCH	LLW_I	LLW_I
Dose rate	<= 200 mrem/h	> 200 mrem/h	<= 200 mrem/h	> 200 mrem/h	Varies	Varies	Varies
Dangerous per WAC 173-303	Yes	Yes	Yes (TRU(M)) No (TRU)	Yes (TRU(M)) No (TRU)	Yes	No	No
> 100 nCi/g(b) alpha-emitting isotopes (atomic numbers > 92 & half-lives > 20 years)	No	No	Yes	Yes	No	No	No

(< ... less than > ... greater than = ... equal)

Contact-handled mixed low-level waste (CH_MLLW)

This waste has a dose rate equal to or less than 200 mrem/h and contains radioactivity not classified as spent nuclear fuel or transuranic waste (concentrations of transuranic radionuclides less than or equal to 100 nCi/g of the waste matrix). The waste is also defined as dangerous (hazardous) waste in the Washington Administrative Code (WAC) 173-303.

Remote-handled mixed low-level waste (RH_MLLW)

This waste has a dose rate greater than 200 mrem/h and meets the definition for LLW. This waste is also defined as dangerous (hazardous) waste in WAC

173-303.

Contact-handled transuranic or transuranic mixed waste (CH_TRU(M))

This radioactive waste has a dose rate equal to or less than 200 mrem/h at contact with the waste container. At the time of assay, this waste contains more than 100 nCi/g of alpha-emitting isotopes with atomic numbers greater than 92 and half-lives greater than 20 years. TRUM waste is TRU waste that is also dangerous (hazardous) waste as defined in WAC 173-303.

Remote-handled transuranic or transuranic mixed waste (RH_TRU(M))

This waste has a dose rate greater than 200 mrem/h at contact with the waste container. At the time of assay, this waste contains more than 100 nCi/g of alpha-emitting isotopes with atomic numbers greater than 92 and half-lives greater than 20 years. TRUM waste is TRU waste that is also dangerous (hazardous) waste as defined in WAC 173-303.

Mixed low-level waste greater than Class III (MLLW_GTCIII)

This waste meets the definition for LLW and is also defined as dangerous (hazardous) waste in WAC 173-303. Greater-than-Class III (GTCIII) designation is determined when the sum of the fractions of the radionuclides' Class III concentration limits are greater than one, as defined in the *Hanford Site Solid Waste Acceptance Criteria*, WHC-EP-0063 Rev. 4, November 1993.

Contact-handled (CH) and remote-handled (RH) waste are considered distinct categories, based on the inherent characteristics of the waste. However, in a few instances, generators have reported RH waste that is shielded to CH levels as CH waste.

Low-level waste category I (LLW_I)

This waste may be comprised of either contact- or remote-handled waste considered low-activity waste with very low concentrations of long-lived radionuclides.

Low-level waste category III (LLW_III)

This waste may be comprised of either contact- or remote-handled waste considered moderate- to high-activity waste with low to moderate concentrations of long-lived radionuclides, in stabilized form that minimizes subsistence for a period of 1000 years.

In addition to the above waste categories, another key definition concerns **Held waste**. Held waste is existing generated waste with no current shipping schedule.

SWIFT Report – Waste Class Naming Conventions

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Help: Determining the Waste Category

As shown in the table, LLW and MLLW can be categorized as Category I, Category III, or greater-than-Category III, depending on the radionuclides it contains.

1. If the waste includes only one radionuclide, then use Table 2 to determine its category.
2. If the waste contains a mixture of radionuclides, then use the sum of fractions rule to determine the category:
 - Divide each radionuclide's concentration by the Category I limits.
 - Add the resulting values.
 - Divide each radionuclide's concentration by the Category III limits.
 - Add the resulting values.
 - Use the following table to determine the category:

Table 1:

Category I sum	Category III sum	waste category
<1	—	Category I
>1	<1	Category III
—	>1	greater-than-Category III

Table 2:

Radionuclide concentration limits

symbol	radionuclide	Category I limit Ci/m ³	Category III limit Ci/m ³
³ H	TRITIUM	5.0 E6	n/a
¹⁴ C	CARBON14	4.0 E-2	9.1 E0
¹⁴ C	CARBON14 (activated metal)	4.0 E-1	9.1 E1
³² P	PHOSPHORUS32	n/a*	n/a*
³⁵ S	SULFUR35	n/a*	n/a*
³⁸ Cl	CHLORINE36	4.0 E-4	8.3 E-2
⁶⁰ Co	COBALT60	7.7 E1	n/a
⁷⁹ Se	SELENIUM79	3.8 E-1	8.3 E1
⁹⁰ Sr	STRONTIUM90	4.3 E-3	1.5 E4
⁹⁹ Tc	TECHNETIUM99	5.6 E-3	1.2 E0
¹²⁹ I	IODINE129	2.9 E-3	5.9 E-1
¹³¹ I	IODINE131	n/a*	n/a*
¹³⁷ Cs	CESIUM137	6.3 E-3	1.3 E4
²¹⁰ Pb	LEAD210	1.0 E-2	5.6 E5
²²⁶ Ra	RADIUM226	1.4 E-4	3.6 E-2
²³³ U	URANIUM233	7.7 E-3	lower of 1.1 E0 or 100 nCi/gm
²³⁴ U	URANIUM234	9.1 E-3	2.1 E0
²³⁵ U	URANIUM235	3.2 E-3	5.9 E-1
²³⁷ Np	NEPTUNIUM237	1.9 E-4	lower of 4.0 E-2 or 100 nCi/gm
²³⁸ Pu	PLUTONIUM238	9.1 E-3	lower of 4.5 E1 or 100 nCi/gm
²³⁸ U	URANIUM238	6.3 E-3	1.4 E0
²³⁹ Pu	PLUTONIUM239	3.6 E-3	lower of 7.7 E-1 or 100 nCi/gm
²⁴⁰ Pu	PLUTONIUM240	3.6 E-3	lower of 7.7 E-1 or 100 nCi/gm
²⁴¹ Pu	PLUTONIUM241	7.7 E-2	3.1 E1
²⁴¹ Am	AMERICIUM241	2.6 E-3	lower of 1.1 E0 or 100 nCi/gm
²⁴³ Am	AMERICIUM243	1.3 E-3	lower of 2.8 E1 or 100 nCi/gm

* half-life is less than 5 years

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Help: Container Specifications

The following tables were provided to the waste generator for calculating external volumes of waste.

Standard drums

designation*	diameter (m)	external height (m)	volume (m ³)	internal volume (m ³)
30 Liter 1A2	0.378	0.378	0.042	0.036
61 Liter 1A2	0.378	0.683	0.077	0.063
114 Liter 1A1	0.487	0.733	0.137	0.121
114 Liter 1A2	0.500	0.740	0.145	0.120
208 Liter 1A1	0.595	0.873	0.242	0.220
208 Liter 1A2	0.608	0.886	0.257	0.220
322 Liter 1A2	0.701	0.991	0.382	0.329
416 Liter 1A2	0.807	1.080	0.552	0.472
208 Liter lead-lined	0.608	0.886	0.257	0.021
208 Liter concrete-lined	0.608	0.886	0.257	0.058

* 1A1 is tight head; 1A2 is standard open head

Standard boxes

name		external			internal	
		length (m)	width (m)	height (m)	volume (m ³)	volume (m ³)
MB-I*	2 x 2 x 6	1.82	0.61	0.67	0.74	0.65
MB-II*	3 x 3 x 6	1.82	0.92	1.00	1.67	1.46
MB-III*	2 x 4 x 8	1.82	1.22	0.67	1.48	1.73
MB-IV*	3.3 x 4.3 x 6.3	1.95	1.32	1.11	2.87	2.51
MB-V*	4 x 4 x 8	2.43	1.22	1.33	3.95	3.46
MB-VI*	5 x 5 x 9	2.83	1.53	1.67	7.20	6.30
H-2-42701	4 x 4 x 8 wood	2.44	1.22	1.36	4.05	3.29
CPC's B-25	4 x 4 x 6	1.85	1.19	1.32	2.92	2.55
SWB		1.80	1.38	0.94	2.09	1.80
Sea Land*	4 x 8 x 20	6.10	2.50	1.20	18.30	16.01

* Containers with an asterisk are not design specific. Therefore, internal and external dimensions are provided only for general guidance. MB stands for metal box.

Cylindrical LECs

designation	alias	external		
		diameter (m)	length (m)	volume (m ³)
LEC-1	26" D X 52' LG	0.66	15.85	5.43
LEC-2	26" D X 70' LG	0.66	21.34	7.31
LEC-3	36" D X 52' LG	0.91	15.85	10.41
LEC-4	36" D X 70' LG	0.91	21.34	14.01
LEC-5	54" D X 70' LG	1.37	21.34	31.53
LEC-6	63" D X 52' LG	1.60	15.85	31.88
LEC-7	63" D X 70' LG	1.60	21.34	42.91
LEC-8	67" D X 70' LG	1.70	21.34	48.53
LEC-9	83" D X 48' LG	2.11	14.63	51.07

Square LECs

designation	alias	external		
		length (m)	width & height (m)	volume (m ³)
LEC-10	26" SQ X 52'	15.85	0.66	6.91
LEC-11	26" SQ X 70'	21.34	0.66	9.31
LEC-12	36" SQ X 52'	15.85	0.91	13.25
LEC-13	36" SQ X 70'	21.34	0.91	17.84
LEC-14	54" SQ X 70'	21.34	1.37	40.14
LEC-15	63" SQ X 52'	15.85	1.60	40.59
LEC-16	63" SQ X 70'	21.34	1.60	54.63
LEC-17	67" SQ X 70'	21.34	1.70	61.79
LEC-18	83" SQ X 48'	14.63	2.11	65.02

Other containers

designation	diameter (m)	length (m)	external		volume (m ³)	internal volume (m ³)
			width (m)	height (m)		
Ion exchange module		2.18	1.77	2.27	8.76	8.76
Ion exchange column	0.46	1.76			0.29	0.21
Cartridge	1.54			1.52	3.60	
Disposable solid waste cask	2.15			4.36	15.77	0.93
Hittman liner	1.34			1.48	2.09	1.63
Enduropak	0.89			1.25	0.78	0.55
Concrete plug		1.83	1.83	1.83	6.12	
Concrete vault		1.30	1.30	1.27	2.13	
Compactor TK		2.74	2.13	2.13	12.49	
FI-10-1	0.61	1.83			0.53	
FSV-1 liner	0.45	4.80			0.75	
HIC dewatering	1.22	1.83			2.14	
HN-200 liner	1.33	1.57			2.17	
Shielding bloc		6.10	2.44	0.61	9.06	

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Help: Waste Specification Record

The following categories and definitions were provided to the waste generators for determining the proper assignments of waste specification records (WSRs) to waste class/container combinations. The primary use of WSRs is in assigning treatment pathways for MLLW. Therefore, WSR information is included only for MLLW in this report. In addition, the specific WSRs specified by the generators were grouped into LDR Waste Stream IDs. For more information on the LDR Waste Stream IDs and a cross walk between them and the WSRs see the LDR Waste Stream IDs section of the Glossary

100 Series - Low-level waste disposal (not hazardous, dangerous or TSCA PCB waste). This series is used for low-level waste that can be disposed in the unlined portions of the Low-Level Burial Grounds. The distinguishing factor between the WSRs in this series is whether the waste requires additional stabilization to meet the Category 3 and/or mobile radionuclide requirements of HNF-EP-0063 Section 3.4.1.

- 100-02 Direct disposable low-level waste
- 120-02 Low-level waste requiring stabilization

200 Series - Transuranic and transuranic mixed waste. This series is used for transuranic waste that will be certified for and disposed at the Waste Isolation Pilot Plant.

- 200-06 Non-mixed transuranic waste
- 201-03 Mixed transuranic waste
- 202-03 Mixed transuranic waste, TRUCON Code 112
- 203-02 Caustic solid transuranic waste
- 204-02 Acidic solid transuranic waste
- 205-02 Acidic solid transuranic waste, TRUCON Codes 113 and 121
- 206-02 Mixed transuranic waste, TRUCON Codes 113 and 121
- 207-01 Mixed transuranic waste, TRUCON Code 117

400 Series - Mixed waste overpacked and lab packed liquids. This series is used for liquid mixed waste packaged as overpacked liquids or in lab pack form.

- 400-03 Flammable liquids
- 401-01 Combustible liquids
- 402-01 Acidic liquids (thermal treatment)
- 403-01 Caustic liquids (thermal treatment)
- 404-01 Other liquids (thermal treatment)
- 405-01 Oxidizer liquids (thermal treatment)
- 420-01 Acidic liquids (non-thermal treatment)
- 421-01 Caustic liquids (non-thermal treatment)

- 422-01 Other liquids (non-thermal treatment)
- 428-01 Oxidizer liquids (non-thermal treatment)

500 Series - Mixed waste solids, sorbed liquids and soils. This series is used for non-debris solid mixed waste, including sorbed liquids and soil.

- 500-01 Flammable solids
- 501-02 Oxidizer solids (thermal treatment)
- 503-02 Acidic solids (thermal treatment)
- 504-01 Caustic solids (thermal treatment)
- 505-03 Other solids (thermal treatment)
- 521-00 Oxidizer solids (non-thermal treatment)
- 523-02 Acidic solids (non-thermal treatment)
- 524-01 Caustic solids (non-thermal treatment)
- 525-00 Other solids (non-thermal treatment)

600 Series - Mixed debris waste. This series is used for hazardous debris as defined in 40 CFR Part 268.

- 625-01 Acidic organic debris
- 626-01 Caustic organic debris
- 627-02 Other organic debris
- 645-01 Acidic inorganic debris
- 646-01 Caustic inorganic debris
- 647-01 Other inorganic debris

800 Series - Mixed waste with specific treatment standards. This series identifies mixed waste streams that have specified technology requirements for treatment under 40 CFR 268.40.

- 800-01 Radioactive lead solids LDR subcategory
- 802-02 Lead acid batteries LDR subcategory
- 810-01 Elemental mercury LDR subcategory
- 812-01 Mercury compounds
- 820-01 Water reactive metals and compounds
- 821-00 Beryllium powder
- 822-00 Other water reactive compounds
- 830-03 Cadmium containing batteries LDR subcategory

900 Series - Washington State only mixed waste and mixed waste that meets applicable treatment standards. This series identifies mixed waste streams that do not require treatment to meet the LDR treatment standards of 40 CFR 268. These WSRs include Washington State-only mixed wastes that could require treatment to meet WAC 173-303-140 and mixed waste that meets all applicable treatment standards of 40 CFR 268 and/or WAC 173-303-140.

- 900-03 Inorganic EHW State only waste
- 902-03 State only inorganic solid acid waste
- 921-02 State only organic solid acid waste
- 922-02 State only organic solid caustic waste
- 923-00 State only organic solid waste
- 930-03 Federal and State LDR compliant waste that does not require stabilization
- 931-01 Federal and State LDR compliant waste that requires stabilization

The following terms define the meaning of principal decision points in the WSRd

Assignment Matrix. Where a regulation is cited, the regulation itself identifies the precise criteria used for making the decision.

Acid: an aqueous liquid that is designated with waste code D002 because it has a pH less than or equal to 2 (WAC-173-303-090(6)); and a non-aqueous liquid that has strong acid properties.

Aerosol: small, household type compressed gas container containing unused chemical products (e.g. spray paints, oven cleaners etc.)

Beryllium dust: waste that is assigned waste code P015 as specified by WAC 173-303-081.

Cadmium battery: waste that meets the definition of the "cadmium containing batteries subcategory" of 40 CFR 268.40.

Caustic: an aqueous liquid that is designated with waste code D002 because it has a pH greater than or equal to 12.5 (WAC-173-303-090(6)); and a non-aqueous liquid that has strong caustic (basic) properties.

Contact handled: waste that has a package surface dose rate that does not exceed 200 millirem per hour and a 30 cm dose rate that does not exceed 100 millirem per hour.

Combustible liquid: a liquid that has a flash point between 38 degrees C and 60 degrees C when tested as specified by WAC 173-303-090(5).

Elemental mercury: waste that meets the definition of the "elemental mercury contaminated with radioactive materials subcategory" of 40 CFR 268.40.

Extremely hazardous waste: extremely hazardous waste as defined by WAC 173-303-040.

Flammable liquid: a liquid that has a flash point less than 38 degrees C when tested as specified by WAC 173-303-090 (5).

Hazardous debris: waste that meets the definition of debris of 40 CFR 268.2(g).

Ignitable non-liquid: non-liquid waste that is designated with waste code D001 in accordance with WAC 173-303-090(5)(a)(ii).

Ignitable oxidizer: waste that is designated with waste code D001 because it is an oxidizer as defined in WAC 173-303-090(5).

LDR compliant: waste that complies with all land disposal restrictions of 40 CFR 268 and WAC 173-303-140.

Lead acid battery: waste that meets the definition of the "lead acid batteries subcategory" of 40 CFR 268.40.

Mercury greater than 260 ppm: - waste designated with waste codes P065, P092, U151 and D009 waste that meets the definition of "high mercury - organic subcategory" or "high mercury - inorganic subcategory" of 40 CFR 268.40.

Organic/carbonaceous: waste that contains combined concentrations of

greater than 10 weight percent organic/carbonaceous constituents as defined by WAC 173-303-140(3)(c).

Radioactive lead solids: waste that meets the definition of the "radioactive lead solids subcategory" of 40 CFR 268.40.

Reactive (cyanide and sulfide): waste that is designated with waste code D003 because of cyanide or sulfide content (WAC 173-303-090(7)).

Regulated: any of the following:

- waste that is designated as a dangerous or extremely hazardous waste (WAC 173-303-070 through 100;

- waste that has been treated to remove waste codes D001 through D043 but requires additional treatment for underlying hazardous constituents; and

- waste that contains PCBs regulated by 40 CFR 761.

Solid acid: a solid that is designated with waste code WSC2 due to a pH less than or equal to 2 when tested as specified in WAC 173-303-090(6).

Solid caustic: a solid that is designated with waste code WSC2 due to a pH greater than or equal to 12.5 when tested as specified in WAC 173-303-090(6).

Stabilization required: waste that must be placed in a high integrity container or processed to a stable waste form to meet the Category 3 waste and mobile radionuclide requirements of HNF-EP-0063, Section 3.4.1.

Thermal treatment required: waste that must be treated by a thermal treatment process. This includes the following: waste designated with a P or U waste code (organic U and P constituents only), F waste code (WAC 173-303-081 and 082); waste that is designated with waste codes D012 through D043 (WAC 173-303-090); waste that must be treated for organic underlying hazardous constituents (40 CFR 268.48); PCB waste that is regulated under 40 CFR 761 or WAC-173-303; liquid waste that contains greater than 1% total organic carbon; and waste that contains combined concentrations of greater than 10 weight percent organic/carbonaceous constituents as defined by WAC 173-303-140(3)(c).

Toxicity characteristic (TC): waste that is designated with waste codes D004 through D043 (WAC 173-303-090).

TRU: waste that exceeds 100 nCi/g TRU radionuclides (HNF-EP-0063 definitions).

Water reactive: waste that is designated with waste code D003 because it reacts violently with water (WAC 173-303-090(7)).

For additional information go to the Solid Waste Acceptance Program website: URL: <http://www.hanford.gov/wastemgt/wac/wsrddlist.htm>

SWIFT Report – Waste Specification Record

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Help: Physical Waste Forms

The following categories and definitions were provided to the waste generator for determining the proper assignments of physical waste forms to waste class / container combinations.

PWF Group	PWF	PWF Name
Shielding	Shld: Concrete	Shielding: Concrete
	Shld: Lead	Shielding: Lead
	Shld: Steel	Shielding: Steel
	Shld: Void	Void Space
Inorganic Homogeneous Solids	In Particulate	Inorganic Particulates
	In Abs Liq/Slg	Inorganic Absorbed Liq/Sludge
	In Paint Waste	Inorganic Paint Waste
	In Salt Waste	Inorganic Salt Waste
Organic Homogeneous Solids	Org Particulat	Organic Particulates
	Org Abs Liq/Sl	Organic Absorbed Liq/Sludge
	Org Absorbents	Organic Absorbents
Soil/Gravel	Soil Soil/Grav	Soil Soil/Gravel

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Debris Wastes	D: Inorganic	Debris: Inorganic
	D: Metal-Activ	Debris: Metal Activated
	D: Concrete	Debris: Concrete
	D: Metal-Cont	Debris: Metal Contaminated
	D: Inorg N-Mtl	Debris: Inorganic NonMetal
	D: Organic	Debris: Organic
	D: Plastic/Rub	Debris: Plastic/Rubber
Lab Packs	D: Heterogen	Debris: Heterogeneous
	LabPacks-Organ	Lab Packs-Organic
	LabPacks-Aqu	Lab Packs-Aqueous
Special Wastes	Mercury	Elemental Mercury
	Lead	Elemental Lead
	Beryllium	Beryllium Waste
	Batteries	Batteries
	Reactive Metal	Reactive Metals
	Expl/Prop	Explosives/Propellants
	Aero/CompGas	Aerosols/Compressed Gas
Final Form	Final Form	Final Form (Disposal Ready)

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Help: Generator Life Cycles

Most waste generators within the major Hanford programs undergo four life-cycle phases.

As illustrated in Figure 1.1, the four life cycle phases are important in that each phase may determine the program that is responsible for the waste generator. For example, if a facility within Liquid Effluent transitions into a deactivation mode, then responsibility for the facility would generally be transferred from Liquid Effluent to the Transition Activities program.

Figure 1.1: Waste Generator Life-Cycle Phases

Operational

This phase is defined as that period of time in which a waste generator's activities are targeted toward a certain plan, project, end-product, or service. Often the type of operational activity can allow a waste generator to be categorized into a specific program area.

Transition (deactivation)

This phase is distinguished by specific deactivation activities to eventually turn over the facility to the D&D program. Facilities in the deactivation phase are generally the responsibility of the Transition Activities functional group.

Surveillance & Maintenance

This phase is defined as that period of time between the completion of transition

(deactivation) and the commencement of D&D. Programmatic responsibility for waste generated in this phase is currently the responsibility of the Environmental Restoration program.

Decontamination and decommissioning (D&D)

This phase is defined as that period in which the facility and affected environment is completely remediated after deactivation has occurred. Facilities in this phase are the responsibility of the Environmental Restoration (ER) program.

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Standard hazardous characteristic types

<u>initial: name</u>	<u>definition</u>
A: Ignitable	causes fire through friction, absorption of moisture, or spontaneous chemical reaction
B: corrosive	causes destruction of human skin or has a severe corrosive rate on steel
C: reactive	typically a sodium or alkali metal alloy, but can also be particulate fines of aluminum, uranium, zirconium, or other pyrophoric metals; may be mixed with stabilizing metals
D: Metals	toxic metals that are not contaminated with mercury
E: Mercury >= 260ppm	toxic metals that are specifically contaminated with mercury
F: organic	toxic organic compounds
G: WT, WP, WSC2	state regulated toxic, persistent, and corrosive compounds, respectively.
H: PCB < 50 ppm	polychlorinated biphenyl-contaminated compounds (as designated in 40 CFR 761 or WAC 173-303-071) with a PCB concentration of less than 50 parts per million
J: PCB ≥ 50 ppm	polychlorinated biphenyl-contaminated materials (as designated in 40 CFR 761 or WAC 173-303-071) with a PCB concentration of greater than or equal to 50 parts per million

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Report - Forecast Comparison, FY2000.1 to FY2000.0 Forecast

For best results, print this report Landscape (11x8.5)

Forecast Comparison, FY2000.0 to FY2000.0 Forecast (FY2000.0 - FY2000.0)										
Facility Group	Forecast Generator	Total	LLV Subtotal	LLV_J	LLV_M	MLV Waste Subtotal	CLL MLV	MLV Subtotal	CLL TRUM	TRUM Subtotal
Forecast Total										
		15,827.5	(-2,883.3)	(-4,335.5)	1,300.7	21,638.4	(-4,537.7)	14,339.1	7,823.7	7,239.2
		1,733.8	(-388.2)	(-271.8)	(128.5)	(-399.8)	(-1,130.0)	(-369.3)	-	-
	222-S Analytical Laboratory	(-208.1)	(-212.5)	(-86.0)	(-126.5)	(-75.5)	(-4,454.0)	(-75.5)	-	-
	6268 Waste Sampling & Characterization Facility	(-479.9)	(-185.6)	(-185.6)	-	(-234.3)	(-572.1)	(-234.3)	-	-
Surplus Facilities										
		3,788.	(-242.1)	(-242.1)	-	18,831.	(-1022.)	(-8.1)	9,828.8	10,831.1
	DynCorp	6,967.4	6,966.9	6,966.9	-	.4	(-232.)	.4	-	-
200 Area Liquid Waste Processing Facilities										
		(-339.2)	30.8	30.8	-	(-370.8)	(-4,880.3)	(-370.8)	-	-
	300 Area Liquid Effluent Facilities	(-112.8)	(-101.6)	(-101.0)	-	(-11.3)	(-104.3)	(-11.8)	-	-
Ames Laboratory-Ames, Iowa										
		2.1	2.1	1.8	.3	-	-	-	-	-
	Argonne National Laboratory-East	(-753.9)	(-753.9)	(-727.2)	(-26.7)	-	-	-	-	-
	Bates Accelerator-Massachusetts	-	-	-	-	-	-	-	-	-
	Battelle Columbus Laboratories	(-133.8)	(-158.6)	(-90.5)	(-68.1)	18.8	(-11.8)	-	16.8	16.8
	Bettis Atomic Power Laboratory	306.9	306.7	(-350.4)	657.1	(-9.8)	(-1.3)	(-0.8)	-	-
	Bettis Atomic Power Shipyard	-	-	-	-	-	-	-	-	-
	Brookhaven National Laboratory	(-484.9)	(-404.9)	(-404.9)	-	-	-	-	-	-
	Energy Technology Engineering Center	14.4	-	-	-	14.4	-	-	2.8	11.6
	Fermi National Accelerator Laboratory	(-59.5)	(-59.5)	(-63.5)	-	-	-	-	-	-
	Knolls Atomic Power Laboratory	1.3	-	-	-	1.3	(-31.1)	1.3	-	-
	Knolls Atomic Power Shipyard	(-88.6)	(-88.6)	-	(-90.6)	-	-	-	-	-

Facility	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	2051	2052	2053	2054	2055	2056	2057	2058	2059	2060	2061	2062	2063	2064	2065	2066	2067	2068	2069	2070	2071	2072	2073	2074	2075	2076	2077	2078	2079	2080	2081	2082	2083	2084	2085	2086	2087	2088	2089	2090	2091	2092	2093	2094	2095	2096	2097	2098	2099	2100	2101	2102	2103	2104	2105	2106	2107	2108	2109	2110	2111	2112	2113	2114	2115	2116	2117	2118	2119	2120	2121	2122	2123	2124	2125	2126	2127	2128	2129	2130	2131	2132	2133	2134	2135	2136	2137	2138	2139	2140	2141	2142	2143	2144	2145	2146	2147	2148	2149	2150	2151	2152	2153	2154	2155	2156	2157	2158	2159	2160	2161	2162	2163	2164	2165	2166	2167	2168	2169	2170	2171	2172	2173	2174	2175	2176	2177	2178	2179	2180	2181	2182	2183	2184	2185	2186	2187	2188	2189	2190	2191	2192	2193	2194	2195	2196	2197	2198	2199	2200	2201	2202	2203	2204	2205	2206	2207	2208	2209	2210	2211	2212	2213	2214	2215	2216	2217	2218	2219	2220	2221	2222	2223	2224	2225	2226	2227	2228	2229	2230	2231	2232	2233	2234	2235	2236	2237	2238	2239	2240	2241	2242	2243	2244	2245	2246	2247	2248	2249	2250	2251	2252	2253	2254	2255	2256	2257	2258	2259	2260	2261	2262	2263	2264	2265	2266	2267	2268	2269	2270	2271	2272	2273	2274	2275	2276	2277	2278	2279	2280	2281	2282	2283	2284	2285	2286	2287	2288	2289	2290	2291	2292	2293	2294	2295	2296	2297	2298	2299	2300	2301	2302	2303	2304	2305	2306	2307	2308	2309	2310	2311	2312	2313	2314	2315	2316	2317	2318	2319	2320	2321	2322	2323	2324	2325	2326	2327	2328	2329	2330	2331	2332	2333	2334	2335	2336	2337	2338	2339	2340	2341	2342	2343	2344	2345	2346	2347	2348	2349	2350	2351	2352	2353	2354	2355	2356	2357	2358	2359	2360	2361	2362	2363	2364	2365	2366	2367	2368	2369	2370	2371	2372	2373	2374	2375	2376	2377	2378	2379	2380	2381	2382	2383	2384	2385	2386	2387	2388	2389	2390	2391	2392	2393	2394	2395	2396	2397	2398	2399	2400	2401	2402	2403	2404	2405	2406	2407	2408	2409	2410	2411	2412	2413	2414	2415	2416	2417	2418	2419	2420	2421	2422	2423	2424	2425	2426	2427	2428	2429	2430	2431	2432	2433	2434	2435	2436	2437	2438	2439	2440	2441	2442	2443	2444	2445	2446	2447	2448	2449	2450	2451	2452	2453	2454	2455	2456	2457	2458	2459	2460	2461	2462	2463	2464	2465	2466	2467	2468	2469	2470	2471	2472	2473	2474	2475	2476	2477	2478	2479	2480	2481	2482	2483	2484	2485	2486	2487	2488	2489	2490	2491	2492	2493	2494	2495	2496	2497	2498	2499	2500	2501	2502	2503	2504	2505	2506	2507	2508	2509	2510	2511	2512	2513	2514	2515	2516	2517	2518	2519	2520	2521	2522	2523	2524	2525	2526	2527	2528	2529	2530	2531	2532	2533	2534	2535	2536	2537	2538	2539	2540	2541	2542	2543	2544	2545	2546	2547	2548	2549	2550	2551	2552	2553	2554	2555	2556	2557	2558	2559	2560	2561	2562	2563	2564	2565	2566	2567	2568	2569	2570	2571	2572	2573	2574	2575	2576	2577	2578	2579	2580	2581	2582	2583	2584	2585	2586	2587	2588	2589	2590	2591	2592	2593	2594	2595	2596	2597	2598	2599	2600	2601	2602	2603	2604	2605	2606	2607	2608	2609	2610	2611	2612	2613	2614	2615	2616	2617	2618	2619	2620	2621	2622	2623	2624	2625	2626	2627	2628	2629	2630	2631	2632	2633	2634	2635	2636	2637	2638	2639	2640	2641	2642	2643	2644	2645	2646	2647	2648	2649	2650	2651	2652	2653	2654	2655	2656	2657	2658	2659	2660	2661	2662	2663	2664	2665	2666	2667	2668	2669	2670	2671	2672	2673	2674	2675	2676	2677	2678	2679	2680	2681	2682	2683	2684	2685	2686	2687	2688	2689	2690	2691	2692	2693	2694	2695	2696	2697	2698	2699	2700	2701	2702	2703	2704	2705	2706	2707	2708	2709	2710	2711	2712	2713	2714	2715	2716	2717	2718	2719	2720	2721	2722	2723	2724	2725	2726	2727	2728	2729	2730	2731	2732	2733	2734	2735	2736	2737	2738	2739	2740	2741	2742	2743	2744	2745	2746	2747	2748	2749	2750	2751	2752	2753	2754	2755	2756	2757	2758	2759	2760	2761	2762	2763	2764	2765	2766	2767	2768	2769	2770	2771	2772	2773	2774	2775	2776	2777	2778	2779	2780	2781	2782	2783	2784	2785	2786	2787	2788	2789	2790	2791	2792	2793	2794	2795	2796	2797	2798	2799	2800	2801	2802	2803	2804	2805	2806	2807	2808	2809	2810	2811	2812	2813	2814	2815	2816	2817	2818	2819	2820	2821	2822	2823	2824	2825	2826	2827	2828	2829	2830	2831	2832	2833	2834	2835	2836	2837	2838	2839	2840	2841	2842	2843	2844	2845	2846	2847	2848	2849	2850	2851	2852	2853	2854	2855	2856	2857	2858	2859	2860	2861	2862	2863	2864	2865	2866	2867	2868	2869	2870	2871	2872	2873	2874	2875	2876	2877	2878	2879	2880	2881	2882	2883	2884	2885	2886	2887	2888	2889	2890	2891	2892	2893	2894	2895	2896	2897	2898	2899	2900	2901	2902	2903	2904	2905	2906	2907	2908	2909	2910	2911	2912	2913	2914	2915	2916	2917	2918	2919	2920	2921	2922	2923	2924	2925	2926	2927	2928	2929	2930	2931	2932	2933	2934	2935	2936	2937	2938	2939	2940	2941	2942	2943	2944	2945	2946	2947	2948	2949	2950	2951	2952	2953	2954	2955	2956	2957	2958	2959	2960	2961	2962	2963	2964	2965	2966	2967	2968	2969	2970	2971	2972	2973	2974	2975	2976	2977	2978	2979	2980	2981	2982	2983	2984	2985	2986	2987	2988	2989	2990	2991	2992	2993	2994	2995	2996	2997	2998	2999	3000
Pacific Northwest National Laboratory	[-1,490.4]	[-1,196.5]	[-550.0]	[-241.6]	[-293.9]	[-19.7]	[-188.6]	[-32.2]	[-15.3]																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																													</																																																																																																																																																																																																																																																																																																																																																																																																												

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Report - Solid Waste Generators by Total Volume

For best results, print this report Landscape (11x8.5)

Sum of totals may not add due to rounding: numbers over 10 m³ are rounded to the nearest 10 m³, numbers less than 10 m³ are rounded to integers, non-zero numbers less than 1 are rounded to 1.

FY2001.8 Forecast Ranked by Waste Generator Volume (m3)										
Functional Group	Generator	Total	% of Total	LLV_1	LLV_M	CIL MLLV	RIL MLLV	CIL TRUM	RIL TRUM	End of Life Cycle
Forecast Data		179,111		83,736	7,874	23,886	30,388	10,300	925	2046
River Protection Program (RPP)	SST/DST Tank Farm Operations	41,193	23.5%	28,040		13,016	137	492	492	2028
River Protection Program (RPP)	SST Long Length Equipment	23,991	13.4%				22,518			2028
River Protection Program (RPP)	BNFL Tank Waste Pretreatment and Verification	14,983	8.3%	5,500	1,224	7,266	919		75	2017
Environmental Restoration	Surplus Facilities	11,574	6.7%	183		51		11,338	102	2042
Offsite	Argonne National Laboratory-East	10,262	5.9%	9,421	861					2046
Transition Activities	2345-Z Plutonium Finishing Plant	9,749	5.5%	6,714	652	183		2,199		2015
Offsite	Brookhaven National Laboratory	8,986	4.9%	8,588						2046
Infrastructure	DynCorp	7,154	4.1%	7,143		12				2046
Analytical Services	222-S Analytical Laboratory	5,449	3.7%	2,190	2,109	2,189				2035
Liquid Waste	300 Area Liquid Effluent Facilities	4,638	2.6%	4,592		46				2030
River Protection Program (RPP)	Waste Feed Delivery System (8 tanks)	4,132	2.4%			379	2,766	987		2028
River Protection Program (RPP)	DST Retrieval Phase II (10 tanks)	3,832	1.7%			1,352	1,580			2028
River Protection Program (RPP)	W-211 DST Retrieval Systems (10 tanks)	2,889	1.5%			233	2,357			2028
Offsite	Princeton Plasma Physics Lab	2,373	1.4%	2,373						2046
Liquid Waste	200 Area Liquid Waste Processing Facilities	2,254	1.3%	104		2,160				2046
Solid Waste	221-T2708-TT Plant Operations	2,069	1.2%	1,835		225				2035
Transition Activities	300 Area Accelerated Closure Project	2,631	1.2%	912	464	126		501	27	2009
River Protection Program (RPP)	SST Retrieval (149 tanks)	1,883	1.1%	603		892	387			2028
Offsite	Fermi National Accelerator Laboratory	1,761	<1	1,701						2027
Offsite	Parks Township	1,569	<1	1,560						2001
Offsite	Energy Technology Engineering Center (ETEC)	1,527	<1	1,512				3	12	2006
Transition Activities	324 Building	1,136	<1	478	430	166		2	58	2006
Offsite	Battelle Columbus Laboratories	1,197	<1	412	673	6			17	2005
Offsite	Bettis Atomic Power Laboratory	1,814	<1		1,013					2008
Transition Activities	Waste Encapsulation & Storage Facility	1,812	<1	959	32	14	6			2021
Spent Nuclear Fuel	100-K K-Basin Operations	942	<1	504		44		278	116	2040
Transition Activities	K-Basin Transition	899	<1	833		29		14	3	2006

Office	Stanford Linear Accelerator Center V-314 Tank Farm Restoration Pacific Northwest National Laboratory	837	<1	837		368	221	30	14	2046
River Protection Program (RPP)		695	<1	99						2005
Pacific Northwest National Laboratory (PNNL)		539	<1	239	89	165				2010
Analytical Services	6266 Waste Sampling & Characterization Facility									
	Yadose Zone Well Drilling	496	<1	298		189				2046
River Protection Program (RPP)	327 Building	478	<1			470				2019
Transition Activities		468	<1	302	91	64		12		2007
Offsite	Knoles Atomic Power-Shipyards	312	<1	262	59					2006
Solid Waste	218 E/W Low Level Burial Grounds	308	<1	308						2046
Offsite	Portsmouth Energy Systems	292	<1	292						2006
Offsite	Lawrence Berkeley Laboratory	246	<1	246						2030
Solid Waste	2336-W Waste Receiving and Processing Facility	225	<1	217	82	8				2032
Transition Activities	Fast Flux Test Facility	159	<1	68						2006
Transition Activities	200 Area Accelerated Deactivation	122	<1	113	3	2		3		2008
Transition Activities	303-K Fuels Fabrication Transition	128	<1	120						2002
Transition Activities	T Plant Transition	128	<1	80				40		2038
Offsite	Ames Laboratory-Ames, Iowa	117	<1	117						2046
Offsite	Paduah Energy Systems	99	<1		90	2				2010
Transition Activities	309 PRTR Vault Waste	24	<1	22						2002
Offsite	Knoles Atomic Power-Laboratory	16	<1			16				2007
Offsite	Bates Accelerator-Massachusetts	11	<1	11						2046
Offsite	Puget Sound Naval Shipyards	18	<1			10				2001
Offsite	Siemens Power Corp.	9	<1						9	2001
Offsite	Pearl Harbor Naval Shipyards	3	<1			3				2002
Offsite	Missouri University Research Reactor	2	<1					2		2001
Offsite	Bettis Atomic Power-Shipyards	1	<1	1						2012
Offsite	Portsmouth Naval Shipyards	1	<1			1				2002
Offsite	Rocky Flats		<1							2005
Offsite	University of California, Davis (LEHR)		<1							2003

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Report - Solid Waste Generators by Functional Group and Total Volume

Sum of totals may not add due to rounding: numbers over 10 m³ are rounded to the nearest 10 m³, numbers less than 10 m³ are rounded to integers, non-zero numbers less than 1 are rounded to 1.

FY2001.3 Forecast Volumes by Functional Group and Generator (m3)										
Functional Group	Forecast Generator	Total	LLV Subtotal	LLV_I	LLV_M	TRU(M) Waste Subtotal	CH_MLLV	CH_MLLV	MLLV Subtotal	TRU(M) Subtotal
222-S Analytical Laboratory	6266 Waste Sampling & Characterization Facility	496	236	236	210	2,109	2,189	2,189	2,189	
							189	189	189	
Surplus Facilities		11,674	183	183		11,491	51	11,338	102	11,440
	DynCorp	7,154	7,143	7,143		12	12			
200 Area Liquid Waste Processing Facilities		2,284	184	104		2,189	2,180	2,180	2,180	
	300 Area Liquid Effluent Facilities	4,538	4,532	4,532		46	46	46	46	
Ames Laboratory-Ames, Iowa		117	117	117						
	Argonne National Laboratory-East	18,282	18,282	9,421	861					
	Bates Accelerator-Massachusetts	11	11	11						
	Battelle Columbus Laboratories	1,187	1,885	412	673	23	6	6	17	17
	Bettis Atomic Power-Laboratory	1,814	1,813		1,013					
	Bettis Atomic Power-Shippards	1	1	1						
	Brookhaven National Laboratory	8,586	8,586	8,586						
	Energy Technology Engineering Center	1,527	1,512	1,512		14			3	12
	Fermi National Accelerator Laboratory	1,781	1,781	1,701		16	16			14
	Knolls Atomic Power-Laboratory	16							16	

														Total
Pacific Northwest National Laboratory														45
BNFL Tank Waste Pretreatment and Verification														75
DST Retrieval Phase II (10 tanks)	14,983	6,724	5,500	1,224	8,259	7,286	919	8,186						75
SST Long Length Equipment	3,632				3,632	1,352	1,690	3,632						
SST Retrieval (149 tanks)	23,581				23,581		22,518	22,518	492	492				943
SST/DST Tank Farm Operations	1,893	603	603		1,279	692	387	1,279						
Vadose Zone Well Drilling	41,193	28,848	28,040		13,153	13,016	137	13,153						
V-211 DST Retrieval Systems (10 tanks)	478				478	470		478						
V-314 Tank Farm Restoration	2,589				2,589	233	2,357	2,589						
Waste Feed Defect System (8 tanks)	686	98	88		587	368	221	587						
	4,132				4,132	379	2,766	3,146	987					987
218 EN/ Low Level Burial Grounds														
221-T/2708-T T Plant Operations	388	388	308											
2338-V Waste Receiving and Processing Facility	2,868	1,836	1,836		226	226		226						
	226	217	217		8	8		8						
100-K-K-Bash Operations														334
200 Area Accelerated Decommission	122	116	113	3	5	2		2		3				3
2345-Z Plutonium Finishing Plant	9,748	7,368	6,714	652	2,382	183		183	2,199					2,199
300 Area Accelerated Closure Project	2,831	1,376	912	464	888	128		128	501	27				528
303-K Fuels Fabrication Transition	128	128	120											
308 PRTR Vault Waste	24	22	22		2	2		2						
324 Building	1,136	968	478	430	226	166		166	2	58				68
327 Building	489	393	302	91	76	64		64	12					12
Fast Flux Test Facility	150	149	88	82										
K-Bash Transition	888	833	833		47	29		29						
T Plant Transition	128	88	80		48			48		3	17			17
Waste Encapsulation & Storage Facility	1,812	351	353	32	28	14	6	28		40	48			48

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