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HNF-EP-0918
Revision 1

Solid Waste Integrated Forecast Technical (SWIFT) Report: FY1997 to FY2070, Revision 1

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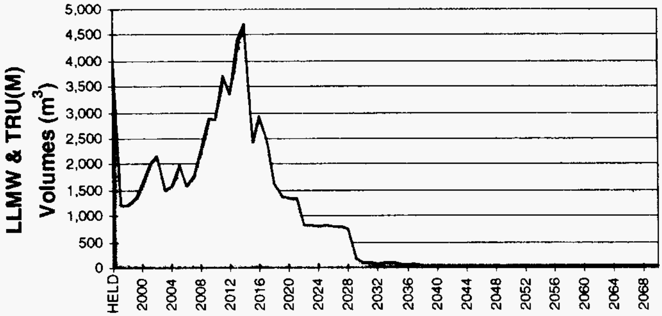

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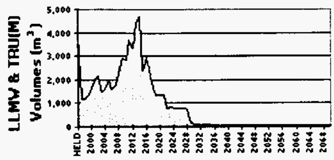

SWIFT **Report: FY1997 to FY2070, rev. 1**

Hanford → (Programs) → (Generators)
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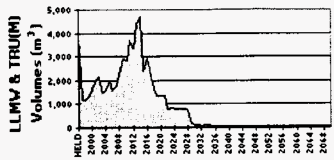

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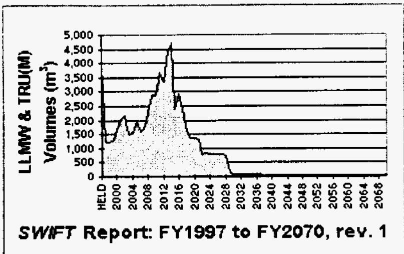

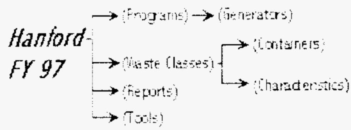

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Solid Waste Integrated Forecast Technical *(SWIFT)* Report: FY1997 to FY2070, Revision 1

Welcome

Welcome to the Hanford homepage on radioactive solid waste forecasting!

This web site provides an up-to-date report on 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 with previous forecasts and with other national data sources.

This web site does not include:

- liquid waste (current or future generation);
- 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)); and
- waste that has been received by the WM Project to date (i.e., inventory waste).

The focus of this web site is on low-level mixed waste (LLMW), and transuranic waste (both non-mixed and mixed) (TRU(M)). Some details on low-level waste and hazardous waste are also provided.

Currently, this web site is reporting data that was requested on 10/14/96 and submitted on 10/25/96. The data represent a life cycle forecast covering all reported activities from FY97 through the end of each program's life cycle. Therefore, these data represent revisions from the previous FY97.0 Data Version, due primarily to revised estimates from PNNL.

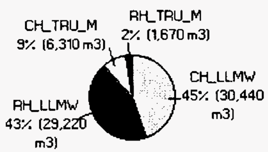
There is some useful information about the structure of this report in the SWIFT Report Web Site Overview.

Contents

Hanford Highlights

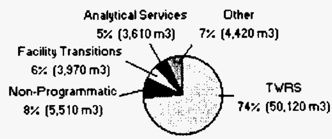
- A total of 67,630 m³ of LLMW and TRU(M) waste is expected at Hanford's WM Project over the life cycle of the site (2070).
- This forecast shows a 50 m³ increase from the FY97.0 forecast of 67,580 m³, due primarily to revisions in waste estimates from PNNL.
- Based on ranges provided by the various programs, this estimate could fluctuate between 37,680 m³ and 108,280 m³.
- The total waste volume is comprised of 59,660 m³ of LLMW and 7,970 m³ of TRU(M) waste.
- TWRS is the major waste-generating program, generating 74% (50,120 m³) of the waste volume.

Waste Class Distribution



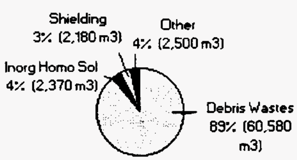
Total = 67,630 m3

Program Distribution



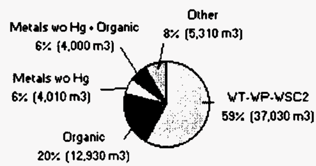
Total = 67,630 m3

Physical Waste Form Distribution



Total = 67,630 m3

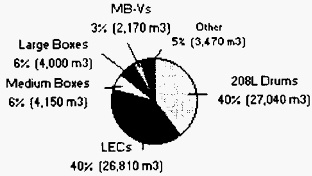
Hazardous Constituent Distribution



Total = 63,290 m3

Note: Includes LLMW and TRUM only

Container Distribution



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.

Annual Waste Class Volumes

(If the full width of the report does not display, either print Landscape or reduce the image to 80 percent.)

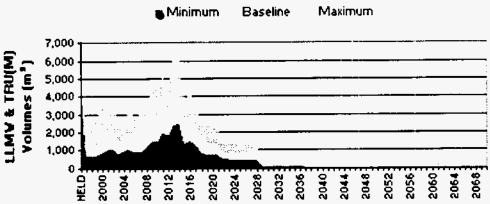
LLMW & TRU(M) Waste Summary: Waste Class	HELD	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007-2070	*Total*
CH_LLMW	4,000	540	450	480	660	610	680	720	690	580	520	20,490	***30,440***
RH_LLMW	0	150	140	200	220	780	840	270	770	1,280	970	23,610	***29,220***
CH_TRU(M)	0	450	510	640	730	450	460	310	90	110	80	2,460	***6,310***
RH_TRU(M)	0	80	110	20	20	170	180	180	20	20	20	850	***1,670***
Subtotal	***4,000***	***1,220***	***1,220***	***1,340***	***1,630***	***2,020***	***2,160***	***1,490***	***1,570***	***2,000***	***1,580***	***47,410***	***67,630***
LLW	220	6,050	5,030	4,600	6,330	5,650	6,740	5,370	5,020	2,880	2,830	101,810	***152,540***
HAZ	0	50	40	50	40	40	40	40	40	40	40	2,320	***2,770***
Total	***4,220***	***7,320***	***6,290***	***5,990***	***8,000***	***7,720***	***8,950***	***6,910***	***6,630***	***4,920***	***4,450***	***151,550***	***222,950***

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.

The majority of waste is forecast for the period 1997 through 2030, during which time many generators expect to complete their waste-generating activities. The general increase in waste from 2008 to the peak in 2014 is largely a result of tank retrieval and cleanout activities within the TWRS program.

The large amount of HELD waste (shown at the left side of the chart) arises from the Stored Equipment generator. This represents waste that exists, but for which no shipping schedule has been developed.

Minimum and maximum estimates for the waste track fairly consistently with the baseline waste estimates. For 2014 - the peak year in baseline waste generation, the baseline estimate is 4,720 m³, with a maximum estimate of 6,800 m³ and a minimum estimate of 2,510 m³.



Summary Table (LLMW and TRU(M) waste volumes in m³)

LLMW & TRU(M) Summary: Program	CH_LLMW	RH_LLMW	CH_TRU(M)	RH_TRU(M)	Subtotal	PCT
TWRS	18,260	29,040	1,360	1,450	50,120	74%
Non-Programmatic	4,190	0	1,320	0	5,510	8%
Facility Transitions	770	70	3,110	10	3,970	6%
Analytical Services	3,600	0	20	0	3,610	5%
Liquid Effluent	2,540	0	0	0	2,540	4%
PNNL	490	50	240	110	900	1%
Solid Waste	310	60	0	30	400	1%
EM-40	10	0	230	0	240	< 1%
Offsite	200	5	2	0	210	< 1%
Spent Nuclear Fuel	5	0	20	60	80	< 1%
RCRA Monitoring	60	0	0	0	60	< 1%
Total	***30,440***	***29,220***	***6,310***	***1,670***	***67,630***	99%
PCT	45%	43%	9%	2%	100%	

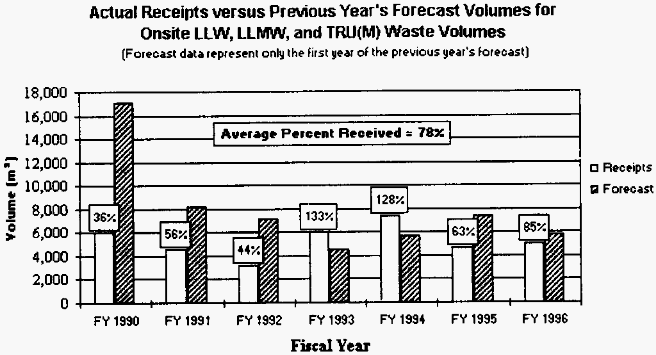
Sum of totals may not add due to rounding: numbers over 10 m³ are rounded to the nearest 10 m³, numbers less than 10 m³ are rounded to integers, non-zero numbers less than 1 are rounded to 1.

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 four years the average has been approximately 100%.

- 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.



Comparison to Previous Baseline(s)

This forecast of 67,630 m^3 shows a 50 m^3 increase from the 97.0 forecast of 67,580 m^3, as shown in the following table:

LLMW & TRU(M) Comparison: **Waste Class**	**FY97.1 Forecast (m^3)**	**FY97.0 Forecast (m^3)**	**FY96 Forecast (m^3)**
CH_LLMW	30,440	30,410	73,040
RH_LLMW	29,220	29,220	4,040
CH_TRU(M)	6,310	6,270	9,830
RH_TRU(M)	1,670	1,700	13,350
LLMW_GTCIII	0	0	640
Subtotal	***67,630***	***67,580***	***100,900***
LLW	152,540	152,380	353,160
LLW_GTCIII	0	0	350
HAZ	2,770	2,770	33,830
Total	***222,950***	***222,740***	***488,240***

Sum of totals may not add due to rounding: numbers over 10 m^3 are rounded to the nearest 10 m^3, numbers less than 10 m^3 are rounded to integers, non-zero numbers less than 1 are rounded to 1.

The increase arises from the PNNL program estimate due to a revision to the programmatic baseline for the transition of PNNL Building 327. The revision is based on better planning since a defined path forward is now available.

The largest source of reduction between FY97.0 and FY96 Forecasts arises from the TWRS program estimate, although almost all programs reported estimate reductions.

The reduction in the TWRS forecast estimate primarily stems from a revision to the programmatic baseline for the disposition of the long-length equipment. The new baseline assumes that only long-length equipment retrieved prior to 2003 will be managed by the Waste Management Project prior to disposal at the WIPP; the remaining long-length equipment will be disposed onsite in a similar manner as the underground tanks. Decontamination is expected to occur so that most of the equipment will not be considered transuranic waste.

Summary of Forecast Changes: Waste Generator	Waste Class	FY97.1 Forecast (m³)	FY97.0 Forecast (m³)	FY97.1 Increase (Decrease)
Offsite				
Battelle Columbus Laboratory	CH_LLMW_I	8	6	2
	CH_LLW_I	442	442	0
	CH_LLW_III	590	590	0
Paducah Energy Systems	CH_LLMW_I	23	0	23
	CH_LLW_I	68	68	0
Portsmouth Energy Systems	CH_LLW_I		314	(314)
	CH_LLW_III	314		314
Facility Transitions				
324 Building (PNNL)	CH_LLMW_III	20	20	0
	CH_TRUM	4	4	0
	RH_TRU	7	5	2
	RH_TRUM	5	5	0
	CH_LLW_I	127	127	0
	CH_LLW_III	403	403	0
	RH_LLW_III	160	160	0
327 Building (PNNL)	CH_LLMW_I	2	1	1
	CH_LLMW_III	1		1
	CH_TRU	56	2	53
	CH_TRUM	1		1
	RH_TRU		17	(17)
	RH_TRUM		15	(15)
	CH_LLW_I	199	213	(14)
	CH_LLW_III	22		22
	RH_LLW_III	3		3
303K Fuels Fabrication Transition	RH_LLMW_I	70	66	4
	CH_LLW_I	399	256	143

Comparison to National Data Calls

The Waste Management Program'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 different due to the specific data requirements of the particular national data call. The following table displays the "differences" in data reported to several national data calls in fiscal year 1996.

The FY97.0 Solid Waste Forecast (SWF) data is consistent with the 9/96 Multi-Year Work Plan (MYWP) primarily because these two data calls were integrated this year to eliminate duplicative efforts on the part of waste generators. However, 97.1 is the most current baseline, revised in 10/96 to reflect new programmatic assumptions.

The Baseline Inventory Report (BIR), Rev.3 of 4/96 reports only TRU(M) waste to the Waste Isolation Pilot Plant; therefore, LLW and LLMW 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 TWRS' program RH_TRU waste.

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

Finally, all reports based on FY95 and FY96 estimates fail to include the most recent programmatic assumptions, and therefore differ from the FY97 Solid Waste Forecast and the 9/96 MYWP.

	SWF FY97.1	SWF FY97.0	MYWP 9/96	BIR, Rev 3 4/96	SWF FY96	BEMR 1/96	MYPP 9/95
LLW	**152,540**	152,380	152,380	NA	353,510	359,730	1,516,850
LLMW	**59,660**	59,630	59,630	NA	77,720	104,790	131,670
CH_TRU(M)	**6,310**	6,260	6,260	9,640	9,830	10,330	9,830
RH_TRU(M)	**1,670**	1,700	1,700	3,470	13,350	15,900	13,350

Identified But Unforecasted 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 waste that will be generated; but for which forecast data is not included in the current report.

GTC III waste from PNNL:

This waste currently exists, however, a defined path forward for the waste is undetermined. PNNL did not include this waste of approximately 530 m^3 in their forecast since management by the Waste Management Project may not be the selected option for disposition.

Post-2001 LLMW and LLW from RCRA Monitoring:

Due to transition of program responsibility, waste generated by RCRA Monitoring after 2001 has not been included in the current forecast. However, since monitoring of Hanford's groundwater will continue during the life cycle of the site (through 2070), it is certain that this waste will be generated and will require management over the full life cycle of the site.

RH_TRU(M) Waste from Surplus Facilities:

Approximately 360 m^3 of RH_TRU(M) waste is known to exist in the 618 Burial Grounds; however, this waste has not been forecasted by Surplus Facilities because only sites that have been characterized are included in their forecast. Although the 618 Burial Grounds have not been adequately characterized for inclusion in the forecast, this waste does exist and will be managed by the Waste Management Project.

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. Therefore, D&D waste from facilities such as the High Level Vitrification Plant, the PUREX tunnels, and the tank farms are not included in this baseline despite the fact that this waste will be generated in the future.

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

The focus of this web site is on low-level mixed waste (LLMW) and transuranic waste - both non-mixed and mixed - (TRU(M)). However some details on low-level waste (LLW) and hazardous waste are also included. It should be noted that hazardous waste is only included for those generators who plan to have the WM Project manage their waste. Other sources of hazardous waste are not included.

This document is intended to be used as a reference for short- and long-term planning of Rust Federal Services of Hanford (RFSH) WM 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

- **Low Level Waste**
  - A total of 152,540 m^3 of LLW is expected to be shipped to the Central Waste Complex over the life cycle of the site (2070).
  - This forecast shows a 57% decrease from the FY96 forecast of 353,160 m^3 due primarily to reductions in estimates from the Offsite, PNNL, and RCRA programs.
  - This forecast also is a 160 m^3 increase from the FY97.0 forecast of 152,380 m^3 due to adjustments in the forecast for 303K Fuels Fabrication Transition waste generator.

- **Hazardous Waste**
  - A total of 2,770 m^3 of hazardous waste is expected to be shipped to the Central Waste Complex over the life cycle of the site (2070). This does NOT include hazardous waste that is shipped directly offsite by generators.

PROGRAMS:
Analytical Services · EM-40 · Facility Transitions · Landlord · Liquid Effluent · NP · Offsite · PNNL · RCRA · Solid Waste · SNF · TWRS

CHARACTERISTICS:
CH_LLMW · RH_LLMW · CH_TRU(M) · RH_TRU(M) · GTC III · LLW · HAZ

CONTAINERS:
CH_LLMW · RH_LLMW · CH_TRU(M) · RH_TRU(M) · GTC III · LLW · HAZ

WASTE CLASSES:
CH_LLMW · RH_LLMW · CH_TRU(M) · RH_TRU(M) · GTC III · LLW · HAZ

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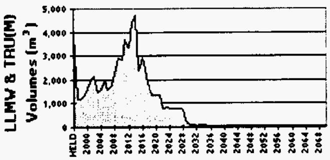

SWIFT Report: FY1997 to FY2070, rev. 1

Hanford → *Analytical Services* → (Generators)
→ (Waste Classes) → (Containers)
→ (Characteristics)
→ (Reports)
→ (Tools)

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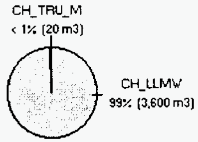
Analytical Services

Contents

Highlights

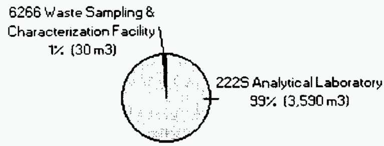
- The forecast life cycle for Analytical Services ends in 2070.
- The life cycle total of LLMW and TRU(M) waste for Analytical Services is 3,610 m^3, or 5% of the Hanford total.
- This forecast shows a 51% increase from the FY96 forecast of 2,390 m^3, due mainly to the increase of CH_LLMW from the 222-S Analytical Laboratories.
- CH_LLMW is the primary waste class generated, representing 99% (3,600 m^3) of the waste.
- Nearly all (98%) of the waste is projected to be contained in 208 liter drums.
- The physical waste forms for this program are mostly debris: metal, organic, inorganic, plastic/rubber, and heterogeneous. Homogeneous organic waste (20% by volume) and organic lab packs are the only other forms (1%).
- All of the waste from this program will contain hazardous constituents. Nearly all of the waste (93%) contains a mixture of metals without mercury, organics, and state regulated waste. The remaining volume is composed of metals with mercury (3%), PCBs (3%), and other hazardous constituents (1%).

Waste Class Distribution



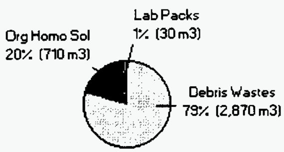
Total = 3,610 m3

Generator Distribution



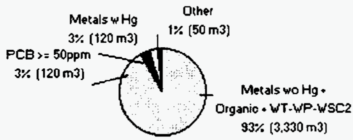
Total = 3,610 m3

Physical Waste Form Distribution



Total = 3,610 m3

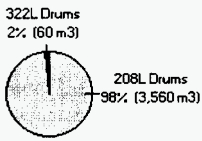
Hazardous Constituent Distribution



Total = 3,610 m3

Note: includes LLMW and TRUM only

Container Distribution



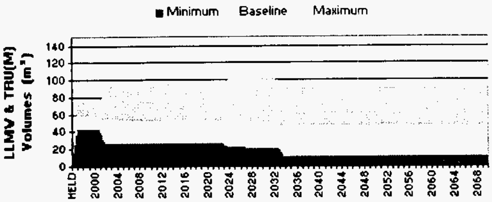
Total = 3,610 m3

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.

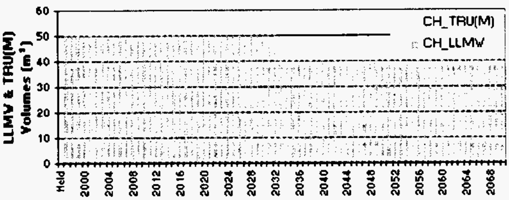
Annual Waste Class Volumes

Analytical Services waste will be generated from 1997 to the end of life cycle in 2070. The annual generation of waste is constant at about 50 m³ per year between 1997 and 2032, and at about 40 m³ per year between 2033 and 2070.

Annual Baseline Volumes



Annual Baseline by Waste Class



Summary Table (Volumes in m³)

Analytical Services Summary: Generator	CH_LLMW	CH_TRU(M)	*Subtotal*	PCT
222S Analytical Laboratory	3,570	20	3,590	99%
6266 Waste Sampling/Characterization Facility	30	0	30	1%
Total	**3,600**	**20**	**3,610**	100%
PCT	99%	1%	*100%*	

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.

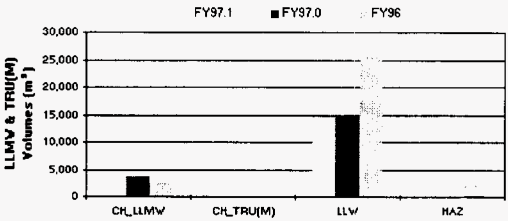
Comparison to Previous Baseline(s)

The 97.1 LLMW and TRU(M) waste forecast for 222 S Analytical Services of 3,610 m³ shows a 51% increase from the FY96 forecast of 2,390 m³. The main reason for this increase is the 56% increase in CH_LLMW from the Analytical Laboratories due to an increase in tank farm analysis.

Comparison to Previous Baseline(s) by Waste Class

The 1996 physical waste form forecast included inorganic waste and soil/gravel (5% of the volume total) that are not forecast for 1997.

Hazardous constituents for the current forecast shows 93% of the volume as metals without mercury, organic, and state regulated wastes mixed together. The 1996 forecast showed these wastes separately: 37% by volume was organic, 27% was state regulated, and metals without mercury was 18%. In addition, corrosive constituents are not forecast for 1997, whereas 20 cubic meters were expected last year.



Analytical Services Comparison: **Waste Class**	**FY97.1 Forecast (m^3)**	**FY97.0 Forecast (m^3)**	**FY96 Forecast (m^3)**
CH_LLMW	3,600	3,600	2,370
CH_TRU(M)	20	20	20
Subtotal	**3,610**	**3,610**	**2,390**
LLW	14,640	14,640	25,710
HAZ	120	120	2,280
Total	**18,370**	**18,370**	**30,370**

Sum of totals may not add due to rounding: numbers over 10 m^3 are rounded to the nearest 10 m^3, numbers less than 10 m^3 are rounded to integers, non-zero numbers less than 1 are rounded to 1.

Background

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

There are 2 generators included in the Analytical Services program: the 222-S Laboratory (RFSH_ANALYT_LAB) and the 6266 Waste Sampling and Characterization Facility (RFSH_WSCF).

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. Main forms of waste include metal, organic, and plastic/rubber debris.

Forecast Assumptions and Comments

This forecast was prepared with the assumption that the laboratory will remain active until 2070. Estimates are based on current operation history and expected generation rates. The minimum and maximum range for this waste is 38% and 189% of the baseline.

Other Forecast Data

- **Low Level Waste**
  - A total of 14,640 m^3 of LLW is expected from Analytical Services until 2070.

- This forecast shows a decrease of 43% in LLW from the FY96 forecast of 25,710 m^3, primarily due to the level of funding and mission changes within the Analytical Laboratory.
- Of the LLW sent by this program, 75% by volume will be in MB-V boxes. 208 liter drums will handle 24%, and 1% will be in 322 liter drums.
- The physical forms of the LLW are primarily various kinds of debris; 8% by volume will be soil/gravel.

- **Hazardous Waste**

  - 120 m^3 of hazardous waste is expected to be sent to the CWC.

GENERATORS:
222S Analytical Laboratory · 6266 Waste Sampling & Characterization Facility

PROGRAMS:
Analytical Services · EM-40 · Facility Transitions · Landlord · Liquid Effluent · NP · Offsite · PNNL · RCRA · Solid Waste · SNF · TWRS

CHARACTERISTICS:
CH_LLMW · RH_LLMW · CH_TRU(M) · RH_TRU(M) · GTC III · LLW · HAZ

CONTAINERS:
CH_LLMW · RH_LLMW · CH_TRU(M) · RH_TRU(M) · GTC III · LLW · HAZ

WASTE CLASSES:
CH_LLMW · RH_LLMW · CH_TRU(M) · RH_TRU(M) · GTC III · LLW · HAZ

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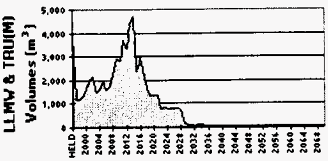


SWIFT Report: FY1997 to FY2070, rev. 1

Hanford → Analytical Services → *222S Analytical Laboratory*
→ (Waste Classes) → (Containers)
→ (Characteristics)
→ (Reports)
→ (Tools)

Site Rev. date: *12/31/96*

Data version: *97.1*

Data currency: *10/25/96*

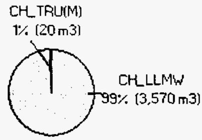
Analytical Services — 222S Analytical Laboratory

Contents

Highlights

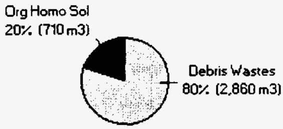
- The forecast life cycle for 222-S Laboratory (RFSH_ANALYT_LAB) ends in 2070.
- The 222-S Laboratory contributes 3,590 m³ of LLMW and TRU(M) waste.
- This forecast shows a 55% increase from the FY96 forecast of 2,320 m³, due mainly to the increase of CH_LLMW.
- CH_LLMW is the primary waste class generated, representing 99% (3,570 m³) of the waste.
- Almost 98% of this generator's LLMW and TRU(M) waste will be in 208 liter drums, and the rest will use 322 liter drums.
- The physical forms of this mixed and TRU(M) waste are various kinds of debris. Only 20% by volume is a different form: organic solids.
- A mixture of metals without mercury, organics, and state regulated waste account for nearly all (94%) of the LLMW and TRU(M) waste. Also, metals with mercury and PCBs each account for 3%.

Waste Class Distribution



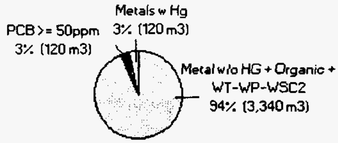
Total = 3,590 m3

Physical Waste Form Distribution



Total = 3,590 m3

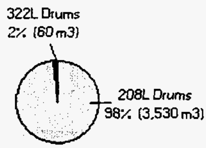
Hazardous Constituent Distribution



Total = 3,590 m3

Note: includes LLMW and TRUM only

Container Distribution

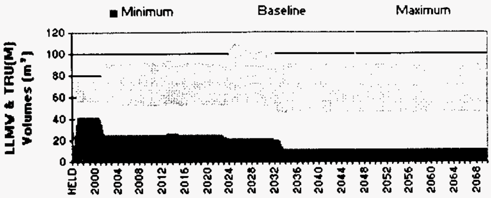


Total = 3,590 m3

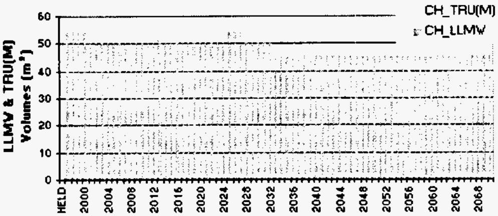
Sum of totals may not add due to rounding: numbers over 10 m^3 are rounded to the nearest 10 m^3, numbers less than 10 m^3 are rounded to integers, non-zero numbers less than 1 are rounded to 1.

Annual Volumes

Annual Baseline Volumes



Annual Baseline by Waste Class



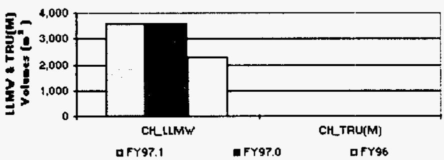
Comparison to Previous Baseline(s)

The FY97.1 LLMW and TRU(M) forecast for 222-S Laboratory of 3,590 m³ shows a 55% increase from the FY96 forecast of 2,320 m³, due to an increase in tank farm analysis.

The 1996 physical waste form forecast included inorganic waste and soil/gravel (5% of the volume total) that are not forecast for 1997.

Hazardous constituents for the current forecast shows 94% of the volume as metals without mercury, organics, and state regulated wastes mixed together. The 1996 forecast showed these wastes separately: 39% by volume was organic, 28% was state regulated, and metals without mercury was 19%. In addition, corrosive constituents are not forecast for 1997, whereas 20 cubic meters were expected last year.

Comparison to Previous Baseline(s) by Waste Class



222S Analytical Laboratory Comparison: Waste Class	FY97.1 Forecast (m^3)	FY97.0 Forecast (m^3)	FY96 Forecast (m^3)
CH_LLMW	3,570	3,570	2,290
CH_TRU(M)	20	20	20
Subtotal	***3,590***	***3,590***	***2,320***
LLW	14,590	14,590	25,560
HAZ	0	0	1,980
Total	***18,170***	***18,170***	***29,850***

Sum of totals may not add due to rounding: numbers over 10 m^3 are rounded to the nearest 10 m^3, numbers less than 10 m^3 are rounded to integers, non-zero numbers less than 1 are rounded to 1.

Background

The mission of 222-S Laboratory is to support all Hanford clean-up activities. Approximately 60 to 70% of the laboratory workload is in support of tank farms; hence, the laboratory carries the same waste codes as 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

This forecast was prepared with the assumption that the laboratory will remain active until 2070. Estimates are based on current operation history and expected generation rates. The minimum and maximum range for this waste is 38% and 189% of the baseline.

Other Forecast Data

- **Low Level Waste**
  - A total of 14,590 m^3 of LLW is expected from 222-S Laboratory until 2070.
  - This forecast shows a decrease of 43% from the FY96 forecast of 25,560 m^3, primarily due to the level of funding and mission changes within the laboratory.
  - 76% of the LLW will be sent using MB-V boxes, 23% using 208 liter drums, and 1% using 322 liter drums.
  - The physical forms of the LLW are various kinds of debris. Only 8% by volume is a different form: soil and soil/gravel.
- **Hazardous Waste**
  - No hazardous waste is expected from 222-S Laboratory for management by the CWC.

GENERATORS: *222S Analytical Laboratory* · 6266 Waste Sampling/Characterization Facility
PROGRAMS: Analytical Services · EM-40 · Facility Transitions · Landlord · Liquid Effluent · NP · Offsite · PNNL · RCRA · Solid Waste · SNF · TWRS

CHARACTERISTICS:	CONTAINERS:
CH_LLMW · RH_LLMW · CH_TRU(M) · RH_TRU(M) · GTC III · LLW · HAZ	CH_LLMW · RH_LLMW · CH_TRU(M) · RH_TRU(M) · GTC III · LLW · HAZ

WASTE CLASSES: CH_LLMW · RH_LLMW · CH_TRU(M) · RH_TRU(M) · GTC III · LLW · HAZ
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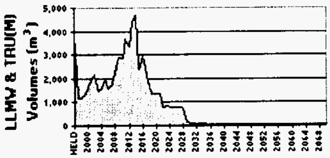


SWIFT Report: FY1997 to FY2070, rev. 1

Hanford → Analytical Services → *6266 Waste Sampling & Characterization Facility*

→ (Waste Classes) → (Containers) → (Characteristics)

→ (Reports)

→ (Tools)

Site Rev. date: 12/31/96

Data version: 97.1

Data currency: 10/25/96

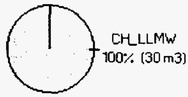
Analytical Services — 6266 Waste Sampling & Characterization Facility

Contents

Highlights

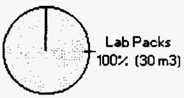
- The forecast life cycle for the Waste Sampling and Characterization Facility (RFSH_WSCF) ends in 2025.
- This facility contributes 30 m³ (1%) of Analytical Services' LLMW forecast.
- This forecast shows a 63% decrease from the FY96 forecast of 80 m³, due mostly to more careful considerations for reduction and consolidation of the waste.
- 100% of the expected containers will be 208 liter drums.
- The physical waste form for this generator's LLMW is 100% organic lab packs.
- Organic, state regulated waste make up 80% of the LLMW, and the other 20% is ignitable, organic, state regulated waste mixed together.

Waste Class Distribution



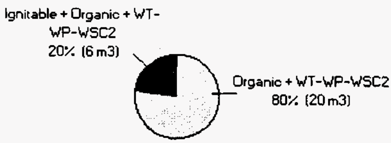
Total = 30 m3

Physical Waste Form Distribution



Total = 30 m3

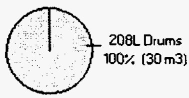
Hazardous Constituent Distribution



Total = 30 m3

Note: Includes LLMW and TRUM only

Container Distribution

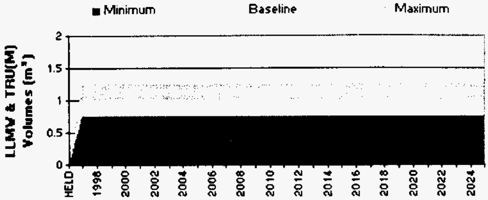


Total = 30 m3

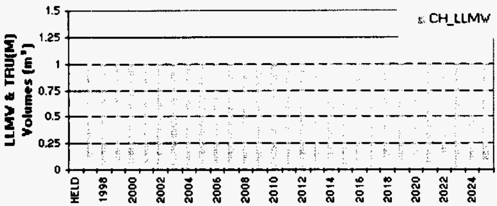
Sum of totals may not add due to rounding: numbers over 10 m³ are rounded to the nearest 10 m³, numbers less than 10 m³ are rounded to integers, non-zero numbers less than 1 are rounded to 1.

Annual Volumes

Annual Baseline Volumes

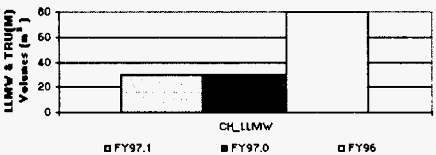


Annual Baseline by Waste Class



Comparison to Previous Baseline(s)

The FY97.1 forecast of 30 m³ for the Waste Sampling and Characterization Facility is a 63% decrease from the FY96 forecast of 80 m³. This estimate is based on more careful considerations for reduction and consolidation of the waste and using current operation history and expected generation rates.



6266 Waste Sampling & Characterization Facility Comparison: Waste Class	FY97.1 Forecast (m³)	FY97.0 Forecast (m³)	FY96 Forecast (m³)
CH_LLMW	30	30	80
Subtotal	***30***	***30***	***80***
LLW	60	60	150
HAZ	120	120	300
Total	***280***	***280***	***520***

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.

Background

The mission of the 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, and will include items such as liquid grab samples, air filters, purified water samples, and samples from wells. The waste is generated from processes/excess sample, reagents/chemicals, filters and laboratory support equipment.

Waste consists of organic chemicals, or supplies used in support of analytical testing.

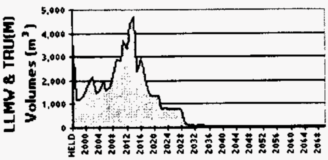
Forecast Assumptions and Comments

This forecast was prepared with the assumption of more careful considerations for reduction and consolidation of the waste and using current operation history and expected generation rates. The minimum and maximum range for this waste is 75% and 125% of the baseline.

Other Forecast Data

- **Low Level Waste**
  - A total of 60 m^3 of LLW is expected from Waste Sampling and Characterization Facility until 2070.
  - This forecast shows a decrease of 60% from the FY96 forecast of 150 m^3.
  - All of the LLW is to be shipped in 208 liter drums.
  - The physical forms of this LLW are various kinds of debris similar to the mixed waste: plastic/rubber, inorganic, and metal.

- **Hazardous Waste**
  - A total of 120 m^3 of hazardous waste was reported by Waste Sampling and Characterization Facility for management by the CWC.



SWIFT Report: FY1997 to FY2070, rev. 1

Hanford → EM-40 Environmental Restoration → (Generators)
→ (Waste Classes) → (Containers) → (Characteristics)
→ (Reports)
→ (Tools)

Site Rev. date: *12/31/96*

Data version: *97.1*

Data currency: *10/25/96*

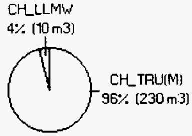
EM-40 Environmental Restoration (ER)

Contents

Highlights

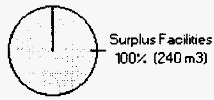
- The solid waste forecast life cycle for Surplus Facilities (BHI_SURPLS_FAC), and thus the Environmental Restoration program, ends in 2001; however, the program will continue operating after 2001.
- The life cycle total of LLMW and TRU(M) waste for ER is 240 m³, or <1% of the Hanford total.
- This forecast shows an 88% decrease from the FY96 forecast of 1,980 m³, due to revised estimates of the number and types of ER projects occurring, as well as changes in the final destinations of some waste.
- CH_TRU(M) waste is the primary waste class generated, representing 96%, or 230 m³, of the Environmental Restoration waste volume.
- All of the waste in this program is generated by Surplus Facilities.
- 100% of this volume will be sent in 208 liter drums.
- Debris constitutes nearly all of this waste's physical form (94%), but 4% is organic solids.
- 99% of the LLMW and TRU(M) waste hazardous constituents are to be metals without mercury. Ignitable and organic waste compose the other 1% of the volume.

Waste Class Distribution



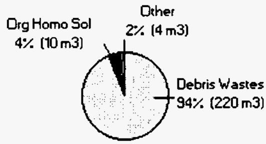
Total = 240 m3

Generator Distributions



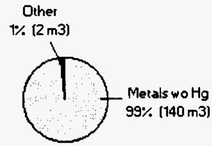
Total = 240 m3

Physical Waste Form Distribution



Total = 240 m3

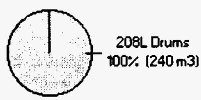
Hazardous Constituent Distribution



Total = 140 m3

Note: Includes LLMW and TRUM only

Container Distribution



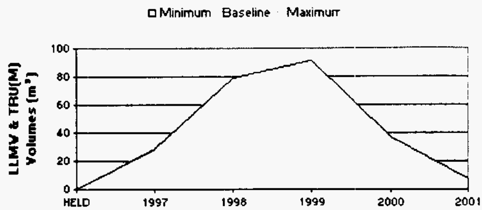
Total = 240 m3

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.

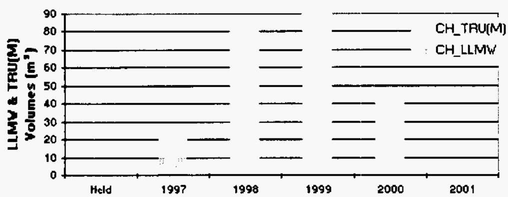
Annual Waste Class Volumes

Surplus Facilities waste will be generated from 1997 to the end of life-cycle in 2001. The major amount of waste will be shipped in 1998 and 1999.

Annual Baseline Volumes



Annual Baseline by Waste Class



Summary Table (Volumes in m³)

EM-40 (Environmental Restoration) Summary: Generator	CH_LLMW	CH_TRU(M)	*Subtotal*	PCT
Surplus Facilities	10	230	*240*	100%
Total	**10**	**230**	**240**	
PCT	4%	96%	*100%*	

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.

Comparison to Previous Baseline(s)

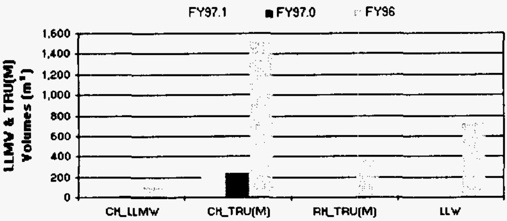
The FY97.1 forecast for Surplus Facilities of 240 m³ shows an 88% decrease from the FY96 forecast of 1,980 m³. This reduction is due to a big change in the amount of waste forecast for ERDF. Some projects considered in the previous forecasts have been eliminated or consolidated with other projects; projects which had previously forecast for a later life cycle have already started.

The TRU(M) waste is reduced 88% between the FY96 and FY97.1 forecasts, from 1,880 m³ of RH_TRU(M) and CH_TRU(M) in FY96 to just 230 m³ CH_TRU(M) in FY97. One reason for this reduction is that past forecasts were based on estimating facility size without clear knowledge of the waste mixture. The FY97 forecast includes only sites that have been characterized, resulting in less forecast volume and higher forecast accuracy. As a result, sites such as the 618 Burial Grounds are not included in the present forecast.

Compared to the 1996 forecast, the percentage of metal debris has risen from 16% to 94% for this year. In addition, the Other category has nearly disappeared, falling from 42% to 2% this year. The amounts of organic, plastic/rubber, and heterogeneous debris make up much less of the whole as well.

The difference between hazardous constituents forecast in 1996 and 1997 is that only 40% of the volume was metals without mercury. State regulated waste also composed 40% of the waste, but it is not reported this year. Corrosive waste is also not reported this year, when in 1996 less than one cubic meter was forecast.

Comparison to Previous Baseline(s) by Waste Class



EM-40 Comparison: Waste Class	FY97.1 Forecast (m^3)	FY97.0 Forecast (m^3)	FY96 Forecast (m^3)
CH_LLMW	10	10	100
CH_TRU(M)	230	230	1,520
RH_TRU(M)	0	0	360
Subtotal	***240***	***240***	***1,980***
LLW	0	0	710
Total	***240***	***240***	***2,690***

Sum of totals may not add due to rounding: numbers over 10 m^3 are rounded to the nearest 10 m^3, numbers less than 10 m^3 are rounded to integers, non-zero numbers less than 1 are rounded to 1.

Background

The mission of Surplus Facilities is to perform clean-up 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 non-radioactive underground storage tanks and certain Resource Conservation and Recovery Act of 1976 (RCRA) facilities. D&D includes the surveillance and maintenance of facilities awaiting decommissioning as well as the D&D of facilities, abatement of asbestos, and compliance with all applicable regulations.

The Environmental Restoration Disposal Facilities Summary Subproject (ERDF) includes the planning, construction, and operation of all storage and disposal facilities required for the success of the 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

(LLMW), generated by remediation of the Hanford Site past-practice waste sites.

Waste consists primarily of soil samples.

Forecast Assumptions and Comments

The waste identified in this forecast is primarily from those projects and facilities currently under the Decontamination and Decommissions 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 LLMW debris is anticipated each fiscal year. Since waste has not been identified, characterization cannot be completed and any forecast would be inaccurate.

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

Although CERCLA wastes and RCRA Past Practice wastes are not included in this forecast, there is a possibility that many of the current facilities may be reclassified as CERCLA sites. This will reduce the amount of forecast waste substantially because it will be deposited in the ERDF unless it contains an untreatable Land Disposal Restricted material.

This forecast also assumes that some waste reduction techniques such as waste recycling, volume reduction, or waste minimization are performed—which would decrease the shipment volumes.

The plan for final disposal of the reactors has not yet officially changed, and one-piece transportation and disposal in the ERDF is still planned. In waste forecasting, it was assumed that each reactor will take 4 years to decommission, with 15% of the total waste volume to be deposited in the first year, 50% in the second year, 25% in the third year, and 10% in the fourth year.

The minimum and maximum ranges for this waste are both 100% of the baseline, indicating that there are minimal fluctuations expected from the baseline forecast.

Other Forecast Data

- **Low Level Waste**
  - No low level waste is expected from Environmental Restoration for management by the CWC.
  - This is a 100% decrease from the FY96 forecast of 710 m^3.
- **Hazardous Waste**
  - No hazardous waste is expected from Environmental Restoration for management by the CWC.

GENERATORS: *Surplus Facilities*	
PROGRAMS: Analytical Services · *EM-40* · Facility Transitions · Landlord · Liquid Effluent · NP · Offsite · PNNL · RCRA · Solid Waste · SNF · TWRS	
CHARACTERISTICS: CH_LLMW · RH_LLMW · CH_TRU(M) · RH_TRU(M) · GTC III · LLW · HAZ	CONTAINERS: CH_LLMW · RH_LLMW · CH_TRU(M) · RH_TRU(M) · GTC III · LLW · HAZ
WASTE CLASSES: CH_LLMW · RH_LLMW · CH_TRU(M) · RH_TRU(M) · GTC III · LLW · HAZ	
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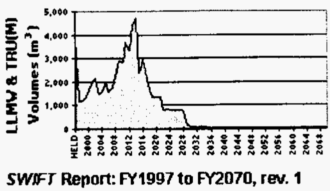

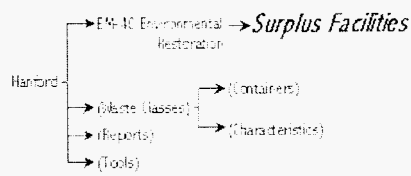

Site Rev. date:
12/31/96
Data version:
97.1
Data currency:
10/25/96

EM-40 (Environmental Restoration) — Surplus Facilities

Because Surplus Facilities is the only generator within the EM-40 (ER) program that will ship waste to the CWC, waste information for this generator is identical to that found on the program page.

GENERATORS:
Surplus Facilities

PROGRAMS:
Analytical Services · EM-40 · Facility Transitions · Landlord · Liquid Effluent · NP · Offsite · PNNL · RCRA · Solid Waste · SNF · TWRS

CHARACTERISTICS:
CH_LLMW · RH_LLMW · CH_TRU(M) · RH_TRU(M) · GTC III · LLW · HAZ

CONTAINERS:
CH_LLMW · RH_LLMW · CH_TRU(M) · RH_TRU(M) · GTC III · LLW · HAZ

WASTE CLASSES:
CH_LLMW · RH_LLMW · CH_TRU(M) · RH_TRU(M) · GTC III · LLW · HAZ

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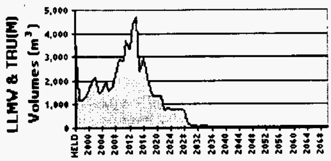


SWIFT **Report: FY1997 to FY2070, rev. 1**

Hanford → *Facility Transitions* → (Generators)
→ (Waste Classes) → (Containers) → (Characteristics)
→ (Reports)
→ (Tools)

Site Rev. date: *12/31/96*

Data version: *97.1*

Data currency: *10/25/96*

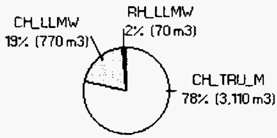
Facility Transitions

Contents

Highlights

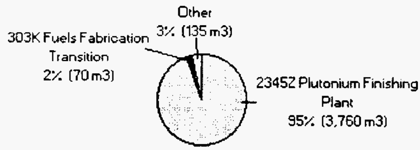
- The forecast life cycle for the Facility Transitions program ends in 2034.
- The life cycle total of LLMW and TRU(M) waste from Facility Transitions is 3,970 m³, or 6% of the Hanford total.
- This forecast shows a 65% decrease from the FY96 forecast of 11,370 m³, due primarily to revised estimates by the Plutonium Finishing Plant and B Plant.
- A 100 m³ increase is observed from the FY97.0 value of 3,870 m³ due to the transfer of 324 and 327 Buildings to this program.
- CH_TRU(M) waste is the primary waste class generated, representing 78%, (3,110 m³) of the Facility Transitions waste volume.
- The Plutonium Finishing Plant is the major source of waste, generating 95%, (3,760 m³) of the waste volume.
- 208 liter drums will hold 88% of the waste, and SWBs will contain 11% of the waste, while other container types are responsible for small volumes (<1%).
- This program's mixed waste physical waste forms are very diverse. Nearly 87% is expected to be debris of some kind, while inorganic solids and special wastes make up more than 10%.
- Most of the hazardous constituent volume will be metals without mercury (65%). Ignitable waste will be 13% of the volume, corrosive waste will be 9%, and organic waste will be 7%. State regulated waste accounts for 3% of the volume, and 4% will be other hazardous constituents.

Waste Class Distribution



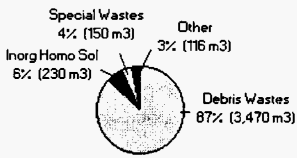
Total = 3,970 m3

Generator Distributions



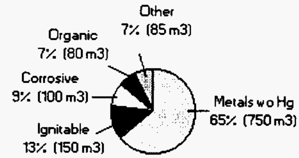
Total = 3,970 m3

Physical Waste Form Distribution



Total = 3,970 m3

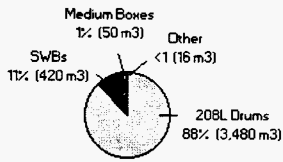
Hazardous Constituent Distribution



Total = 1,160 m3

Note: Includes LLMW and TRUM only

Container Distribution



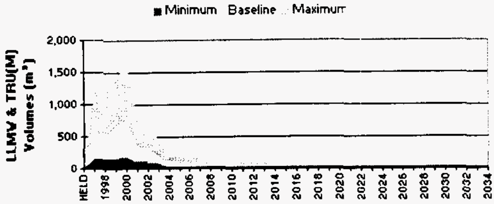
Total = 3,970 m3

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.

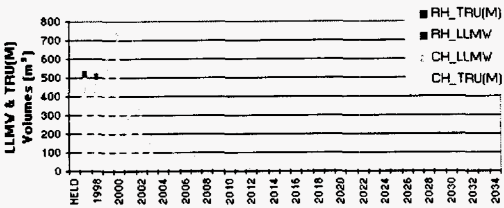
Annual Waste Class Volumes

Facility Transitions waste will be generated from 1997 to the end of life cycle in 2034.

Annual Baseline Volumes



Annual Baseline by Waste Class



Summary Table (Volumes in m^3)

Facility Transitions Summary: Generator	CH_LLMW	RH_LLMW	CH_TRU(M)	RH_TRU(M)	Subtotal	PCT
2345Z Plutonium Finishing Plant	710	0	3,050	0	3,760	95%
303K Fuels Fabrication Transition	0	70	0	0	70	2%
PNNL-327 Building	4	0	60	0	60	2%
PNNL-324 Building	20	0	4	10	40	1%
Waste Encapsulation/Storage Facility	30	0	0	0	30	1%
202A PUREX Operations	10	0	0	0	10	0%
225B B Plant	2	0	0	0	2	0%
309 PRTR Vault Waste (Ion Exchange Mod)	1	0	1	0	1	0%
335 Sodium Test Facility	1	0	0	0	1	0%
FFTF Transition Project	1	0	0	0	1	0%
Total	**770**	**70**	**3,110**	**10**	**3,970**	100%
PCT	*18%*	*2%*	*78%*	*0%*	*100%*	

Sum of totals may not add due to rounding: numbers over 10 m^3 are rounded to the nearest 10 m^3, numbers less than 10 m^3 are rounded to integers, non-zero numbers less than 1 are rounded to 1.

Comparison to Previous Baseline(s)

The FY97.1 forecast for Facility Transitions of 3,970 m^3 shows a 65% decrease from the FY96 forecast of 11,370 m^3. The Plutonium Finishing Plant decreased its forecast significantly because the shipped waste volumes were much lower than previously forecast. Also, the B-Plant generator reduced the LLMW forecast from 4,020 m^3 to almost 0 m^3 because:

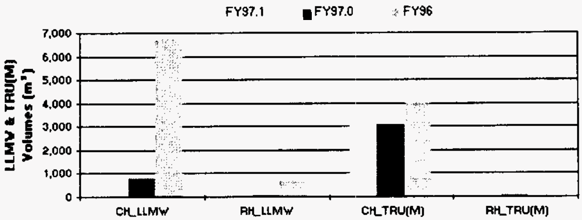
1. most of its waste has been reclassified as LLW associated with deactivation activities,

and
2. the FY96 forecast significantly overestimated waste volumes.

The FY97.1 forecast volume is an 100 m³ increase over the FY97.0 forecast due to the transfer of 324 and 327 Buildings to the program.

The only striking change in physical waste forms is that inorganic salt waste composed 7% of the LLMW volume last year, whereas that form is currently negligible.

Comparison to Previous Baseline(s) by Waste Class



Facility Transitions Comparison: **Waste Class**	**FY97.1 Forecast (m^3)**	**FY97.0 Forecast (m^3)**	**FY96 Forecast (m^3)**
CH_LLMW	770	750	6,710
RH_LLMW	70	70	660
CH_TRU(M)	3,110	3,050	4,010
RH_TRU(M)	10	0	0
Subtotal	***3,970***	***3,870***	***11,370***
LLW	6,470	5,410	9,600
HAZ	10	10	950
Total	***10,450***	***9,290***	***21,920***

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.

Background

The Facility Transitions 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 D&D program. The forecast life cycle for waste generated by Facility Transitions extends to 2034. The types of waste generated within this program 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.

Two generators that reported waste volumes in FY96 but not in FY97 are Legacy Facilities Transition and Large 105DR Sodium Fire Facility. These facilities are no longer generating solid waste.

Forecast Assumptions and Comments

The Facility Transitions 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 be cleaned out and the facility turned over to D&D by 2034.

The minimum and maximum range for this waste is 28% and 244% of the baseline, indicating a high degree of uncertainty for the baseline forecast.

Other Forecast Data

- **Low Level Waste**
    - A total of 6,470 m^3 of LLW is expected from Facility Transitions until 2034.
    - This forecast shows a 32% reduction from the FY96 forecast of 9,600 m^3 and a 20% increase from the FY97 forecast of 5,410 m^3.
    - LLW will be shipped in five different container types: 45% of the volume is contained in 208 liter drums, 24% in MB-IV boxes, 20% in MB-V boxes, 10% in Medium boxes, and 1% in others.
    - LLW physical forms are basically all debris (96%).

- **Hazardous Waste**
    - A total of 10 m^3 of hazardous waste is expected from Facility Transitions for management by the CWC.

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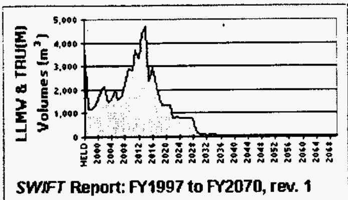
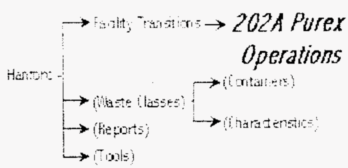




Site Rev. date: *12/31/96*

Data version: *97.1*

Data currency: *10/25/96*

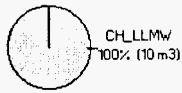
Facility Transitions — 202A PUREX Operations

Contents

Highlights

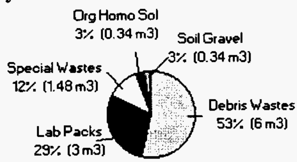
- The solid waste forecast life cycle for the PUREX (BWHC_PUREX) generator ends in 1997.
- This generator contributes 10 m³, or ≤1% of the Facility Transitions LLMW and TRU(M) waste total.
- This forecast shows a 75% decrease from the FY96 forecast of 40 m³.
- CH_LLMW is the only waste class generated.
- This LLMW waste is expected to be split very similarly between 208 liter drums and MB-IVs.
- The LLMW physical waste forms are diverse. More than half is debris, while lab packs, special waste, organic solids, and soil/gravel are almost half.
- PUREX hazardous constituents are very diverse. The two largest categories are metals without mercury, organic, state regulated wastes mixed together at 41% and a mixture of ignitable, corrosive, metals with mercury, organic, state regulated waste at 27% of the volume. Other hazardous constituents make up the last 32%.

Waste Class Distribution



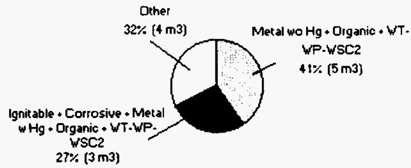
Total = 10 m3

Physical Waste Form Distribution



Total = 10 m3

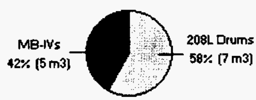
Hazardous Constituent Distribution



Total = 10 m3

Note: Includes LLMW and TRUM only

Container Distribution

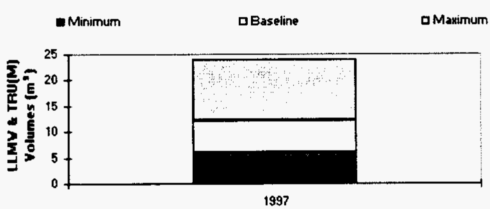


Total = 10 m3

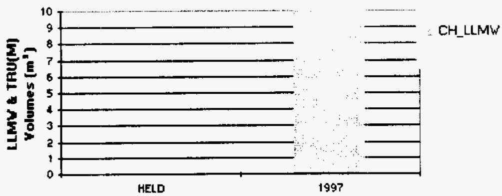
Sum of totals may not add due to rounding: numbers over 10 m³ are rounded to the nearest 10 m³, numbers less than 10 m³ are rounded to integers, non-zero numbers less than 1 are rounded to 1.

Annual Volumes

Annual Baseline Volumes



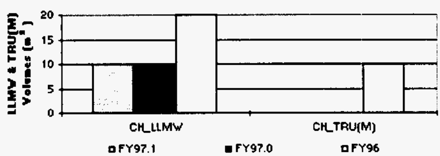
Annual Baseline by Waste Class



Comparison to Previous Baseline(s)

The FY97 forecast for PUREX of 10 m³ shows a 75% decrease from the FY96 forecast of 40 m³. There is also no TRU(M) waste expected from PUREX in FY97 compared to about 10 m³ of CH_TRU(M) forecasted in FY96. These forecast reductions are due to the completion of deactivation activities in 1997. Last year's forecast included waste to be generated in FY96–97; whereas only FY97 is included in the current forecast.

Comparison to Previous Baseline(s) by Waste Class



202A PUREX Operations Comparison: Waste Class	FY97.1 Forecast (m³)	FY97.0 Forecast (m³)	FY96 Forecast (m³)
CH_LLMW	10	10	20
CH_TRU(M)	0	0	10
Subtotal	***10***	***10***	***40***
LLW	390	390	590
HAZ	4	4	9
Total	***410***	***410***	***630***

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.

Background

PUREX is currently undergoing deactivation, expected to be completed in October 1997. Solid waste is generated from zone reduction, routine operations, maintenance activities, and housekeeping associated with the deactivation efforts.

Forecast Assumptions and Comments

Assumptions used in preparing this forecast are that PUREX will not generate or ship solid waste to the CWC after FY97; that PUREX waste volume may increase with deactivation efforts; and that solid waste characteristics, constituents, and container types currently described in the PUREX/Waste Management (formerly PUREX/Solid Waste) Interface Control Document will remain unchanged.

The minimum and maximum range for this waste volume is 50% and 200% of the baseline. The minimum percentage is based on uncertainty of waste volume generated from the PUREX deactivation efforts and the exact schedule in which waste will actually be generated. The maximum percentage is based on uncertainty about actual waste volumes that could be generated due to deactivation activities and zone reduction.

Other Forecast Data

- **Low Level Waste**
  - A total of 390 m^3 of LLW is expected from PUREX until 1997.
  - This forecast shows a 34% reduction from the FY96 forecast of 590 m^3.
  - MB-V boxes will account for 54% of the LLW, while 208 liter drums and Medium boxes will account for similar volumes of the rest of the waste (24% and 22% respectively).
  - Essentially all of the LLW will be in the physical form of debris: soil and soil/gravel and lab packs represent only a single percent of the volume.
- **Hazardous Waste**
  - About 4 m^3 of hazardous waste is expected from PUREX for management by the CWC.

GENERATORS:
202A PUREX Operations · 225B B Plant · 2345Z Plutonium Finishing Plant · 303K Fuels Fabrication Transition · 309 PRTR Vault Waste (Ion Exchange Mod) · 324 Building · 327 Building · 335 Sodium Test Facility · FFTF Transition Project · Waste Encapsulation/Storage Facility

PROGRAMS:
Analytical Services · EM-40 · Facility Transitions · Landlord · Liquid Effluent · NP · Offsite · PNNL · RCRA · Solid Waste · SNF · TWRS

CHARACTERISTICS:
CH_LLMW · RH_LLMW · CH_TRU(M) · RH_TRU(M) · GTC III · LLW · HAZ

CONTAINERS:
CH_LLMW · RH_LLMW · CH_TRU(M) · RH_TRU(M) · GTC III · LLW · HAZ

WASTE CLASSES:
CH_LLMW · RH_LLMW · CH_TRU(M) · RH_TRU(M) · GTC III · LLW · HAZ

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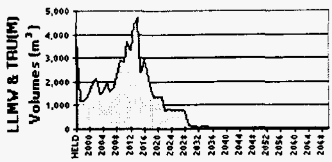


SWIFT Report: FY1997 to FY2070, rev. 1

Hanford → Facility Transitions → 225B B-Plant
→ (Waste Classes) → (Containers)
→ (Characteristics)
→ (Reports)
→ (Tools)

Site Rev. date: 12/31/96

Data version: 97.1

Data currency: 10/25/96

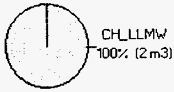
Facility Transitions — 225B B Plant

Contents

Highlights

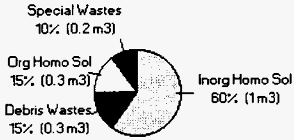
- The solid waste forecast life cycle for the B Plant generator ends in 1998.
- B Plant contributes 2 m^3 (<1%) of Facility Transitions' LLMW forecast.
- This forecast shows almost a 100% decrease from the FY96 forecast of 4,020 m^3, based on reclassification of some estimated waste to LLW.
- CH_LLMW is the only waste class generated.
- The 208 liter drum is to contain all of this generator's LLMW.
- The physical waste forms from B Plant are 60% inorganic solids, while organic solids, debris, and special wastes account for 15%, 15%, and 10% respectively.
- The LLMW hazardous constituents evenly divide the volume: corrosive, ignitable, state regulated wastes, organic, and metals without mercury; each compose 20% of the total volume.

Waste Class Distribution



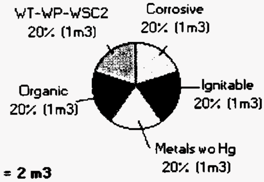
Total = 2 m3

Physical Waste Form Distribution



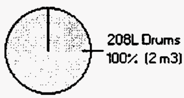
Total = 2 m3

Hazardous Constituent Distribution



Total = 2 m3
Note: Includes LLMW and TRUM only

Container Distribution

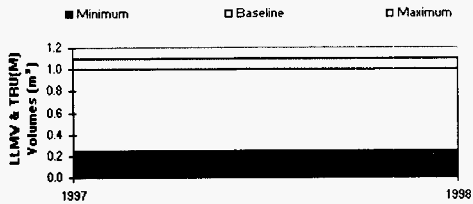


Total = 2 m3

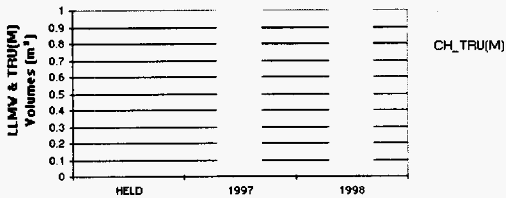
Sum of totals may not add due to rounding: numbers over 10 m^3 are rounded to the nearest 10 m^3, numbers less than 10 m^3 are rounded to integers, non-zero numbers less than 1 are rounded to 1.

Annual Volumes

Annual Baseline Volumes



Annual Baseline by Waste Class



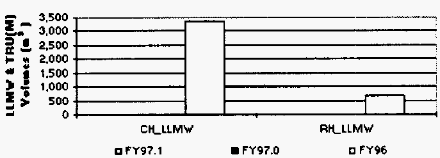
Comparison to Previous Baseline(s)

The FY97 forecast for B Plant of 2 m³ shows a 100% decrease from the FY96 forecast of 4,020 m³. This is because:

- some of the waste has been reclassified as LLW associated with deactivation activities.
- the FY96 forecast significantly overestimated waste volume.

The FY96 forecast for B Plant included the Waste Encapsulation/Storage Facility (WESF). In FY97, WESF waste is reported separately, reducing the B Plant waste volume by at least 7%.

Comparison to Previous Baseline(s) by Waste Class



225B B Plant Comparison: Waste Class	FY97.1 Forecast (m³)	FY97.0 Forecast (m³)	FY96 Forecast (m³)
CH_LLMW	2	2	3,360
RH_LLMW	0	0	660
Subtotal	***2***	***2***	***4,020***
LLW	270	270	0
Total	***270***	***270***	***4,020***

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.

Background

The current mission of B Plant is to transition the facility to a safe configuration for transfer to the ERC team for long term surveillance and maintenance activities. Wastes generated during this process are from the reduction/removal of hazards within the facility. The waste will include minor decontamination waste and system deactivation waste. Large portions of the waste will be from contamination control and personal protective equipment. Some chemical/product disposal will occur.

Forecast Assumptions and Comments

The main assumption for the B Plant forecast is that the facility will complete its deactivation mission by the end of FY98.

The minimum and maximum range for this waste is 25% and 110% of the baseline.

Other Forecast Data

- **Low Level Waste**
  - A total of 270 m^3 of LLW is expected from B Plant until 1998.
  - FY96 forecast of LLW was 0 m^3.
  - MB-V boxes will contain two-thirds of this LLW. Medium boxes will contain more than one-quarter of the waste, and some will arrive in 208 liter drums as well.
  - Four physical waste forms are reported for LLW: debris (89% by volume), soil and soil/gravel (7%), inorganic solids (2%), and organic solids (2%).

- **Hazardous Waste**
  - No hazardous waste is expected from B Plant for management by the CWC.

GENERATORS:
202A PUREX Operations · *225B B Plant* · 2345Z Plutonium Finishing Plant · 303K Fuels Fabrication Transition · 309 PRTR Vault Waste (Ion Exchange Mod) · 324 Building · 327 Building · 335 Sodium Test Facility · FFTF Transition Project · Waste Encapsulation/Storage Facility

PROGRAMS:
Analytical Services · EM-40 · Facility Transitions · Landlord · Liquid Effluent · NP · Offsite · PNNL · RCRA · Solid Waste · SNF · TWRS

CHARACTERISTICS:
CH_LLMW · RH_LLMW · CH_TRU(M) · RH_TRU(M) · GTC III · LLW · HAZ

CONTAINERS:
CH_LLMW · RH_LLMW · CH_TRU(M) · RH_TRU(M) · GTC III · LLW · HAZ

WASTE CLASSES:
CH_LLMW · RH_LLMW · CH_TRU(M) · RH_TRU(M) · GTC III · LLW · HAZ

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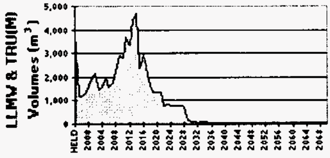


SWIFT Report: FY1997 to FY2070, rev. 1

Hanford → Facility Transitions → *2345Z Plutonium Finishing Plant*
→ (Waste Classes) → (Containers) → (Characteristics)
→ (Reports)
→ (Tools)

Site Rev. date: *12/31/96*

Data version: *97.1*

Data currency: *10/25/96*

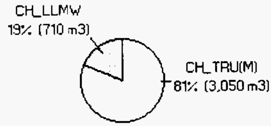
Facility Transitions — 2345Z Plutonium Finishing Plant

Contents

Highlights

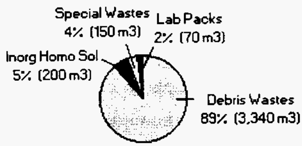
- The forecast life cycle for the Plutonium Finishing Plant (BWHC_PFP) generator ends in 2034.
- This generator contributes 3,760 m³, or 95% of the Facilities Transition LLMW and TRU(M) waste total.
- This forecast shows a 48% decrease from the FY96 forecast of 7,270 m³.
- CH_TRU(M) is the primary waste class generated, representing 81%, or 3,050 m³ of the Plutonium Finishing Plant waste volume.
- Roughly 89% of the LLMW and TRU(M) waste volume is projected to be shipped in 208 liter drums, and the rest of the waste in SWBs.
- Debris accounts for 89% of this LLMW and TRU(M) waste. Inorganic waste, lab packs, and special wastes account for the remaining 11%.
- Metals without mercury is the most common hazardous constituent (64% by volume). Other constituents are ignitable (14%), corrosive (9%), organic (7%), and PCBs and state regulated waste (6%).

Waste Class Distribution



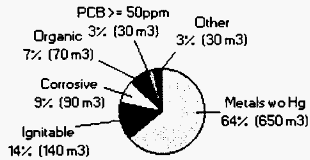
Total = 3,760 m3

Physical Waste Form Distribution



Total = 3,760 m3

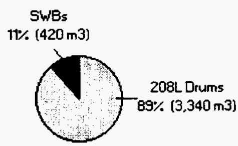
Hazardous Constituent Distribution



Total = 1,010 m3

Note: Includes LLMW and TRUM only

Container Distribution

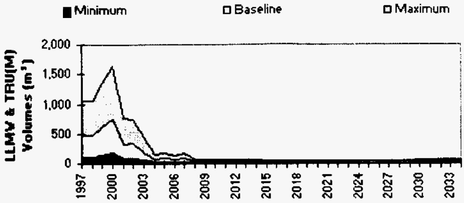


Total = 3,760 m3

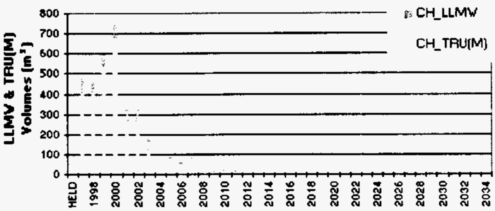
Sum of totals may not add due to rounding: numbers over 10 m^3 are rounded to the nearest 10 m^3, numbers less than 10 m^3 are rounded to integers, non-zero numbers less than 1 are rounded to 1.

Annual Volumes

Annual Baseline Volumes



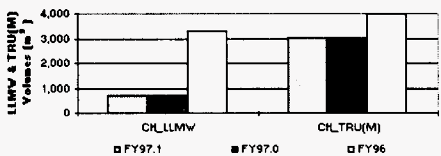
Annual Baseline by Waste Class



Comparison to Previous Baseline(s)

The FY97 forecast for Plutonium Finishing Plant of 3,760 m³ shows a 48% decrease from the FY96 forecast of 7,270 m³, primarily because the CH_LLMW and CH_TRU(M) shipped volumes were so much lower than previously forecast. Additionally, some reduction in CH_LLMW is due to the change of paint type, from paint that was a mixture of regulated metals and solvents to a paint that is regulated for only one type of hazard. Other reasons for the volume reduction are the cancellation, delay, and acceleration of a number of projects within this facility.

Comparison to Previous Baseline(s) by Waste Class



2345Z Plutonium Finishing Plant Comparison: Waste Class	FY97.1 Forecast (m³)	FY97.0 Forecast (m³)	FY96 Forecast (m³)
CH_LLMW	710	710	3,280
CH_TRU(M)	3,050	3,050	4,000
Subtotal	*3,760*	*3,760*	*7,270*
LLW	3,880	3,880	8,370
HAZ	0	0	900
Total	*7,630*	*7,630*	*16,540*

Sum of totals may not add due to rounding: numbers over 10 m^3 are rounded to the nearest 10 m^3, numbers less than 10 m^3 are rounded to integers, non-zero numbers less than 1 are rounded to 1.

Background

The Plutonium Finishing Plant consists of 14 facilities that generate solid waste. The waste is generated through surveillance and maintenance, decontamination, and stabilization activities. Most of the stabilization and deactivation will be completed by 2007.

Forecast Assumptions and Comments

The assumption method used in providing this forecast is the comparison of data with SWITS resulting in the lowering of LLMW and TRU(M) waste.

The minimum and maximum range for this waste volume is 27% and 242% of the baseline. The minimum percentage is based on clean-out activities not taking place and what is assumed to be a reasonable number. The maximum percentage is based on perceived variations in waste generating estimates. These percentages indicate a low degree of confidence in the forecast and a waste shipment that probably will be higher than the baseline volume.

Other Forecast Data

- **Low Level Waste**
  - A total of 3,880 m^3 of LLW is expected from Plutonium Finishing Plant until 2034.
  - This forecast shows a 54% decrease from the FY96 forecast of 8,370 m^3.
  - The containers for the LLW will be 208 liter drums (60%), MB-IV boxes (39%), and MB-V boxes (1%)
  - 100% of the PFP's LLW is debris in physical waste form; yet, the majority of the volume is the plastic/rubber variety of debris.

- **Hazardous Waste**
  - No hazardous waste is expected from Plutonium Finishing Plant for management by the CWC.

GENERATORS:
202A PUREX Operations · 225B B Plant · *2345Z Plutonium Finishing Plant* · 303K Fuels Fabrication Transition · 309 PRTR Vault Waste (Ion Exchange Mod) · 324 Building · 327 Building · 335 Sodium Test Facility · FFTF Transition Project · Waste Encapsulation/Storage Facility

PROGRAMS:
Analytical Services · EM-40 · Facility Transitions · Landlord · Liquid Effluent · NP · Offsite · PNNL · RCRA · Solid Waste · SNF · TWRS

CHARACTERISTICS:
CH_LLMW · RH_LLMW · CH_TRU(M) · RH_TRU(M) · GTC III · LLW · HAZ

CONTAINERS:
CH_LLMW · RH_LLMW · CH_TRU(M) · RH_TRU(M) · GTC III · LLW · HAZ

WASTE CLASSES:
CH_LLMW · RH_LLMW · CH_TRU(M) · RH_TRU(M) · GTC III · LLW · HAZ

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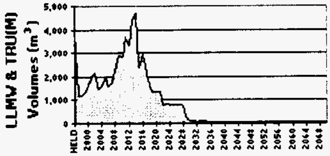


SWIFT Report: FY1997 to FY2070, rev. 1

Hanford → Facility Transitions → 303K Fuels Fabrication Transition
→ (Waste Classes) → (Containers) → (Characteristics)
→ (Reports)
→ (Tools)

Site Rev. date: 12/31/96

Data version: 97.1

Data currency: 10/25/96

Facility Transitions — 303K Fuels Fabrication Transition

Contents

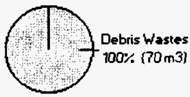
Highlights

- The forecast life cycle for the Fuels Fabrication Transition (BWHC_FUEL_TRANS) generator ends in 1998.
- This generator contributes 70 m³, or 2% of the Facilities Transition LLMW total.
- The FY97.1 forecast shows a 250% increase from the FY96 forecast of 20 m³.
- RH_LLMW is the only waste class generated.
- This generator will send RH_LLMW in Medium boxes (76%), Small boxes (14%), and 208 liter drums (10%).
- The only physical waste form is debris: 90% contaminated metal and 10% inorganic nonmetal.
- 100% of the LLMW is expected to have metals without mercury.

Waste Class Distribution

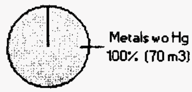
Total = 70 m3

Physical Waste Form Distribution



Total = 70 m3

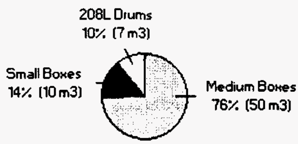
Hazardous Constituent Distribution



Total = 70 m3

Note: Includes LLMW and TRUM only

Container Distribution

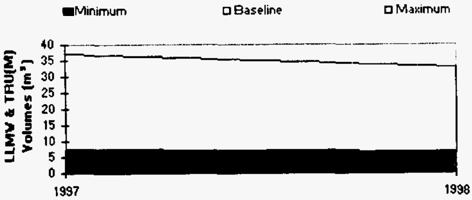


Total = 70 m3

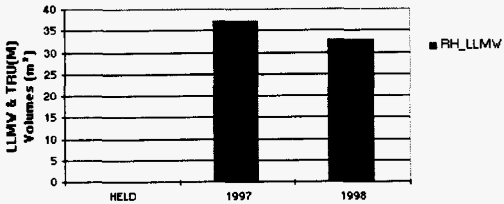
Sum of totals may not add due to rounding: numbers over 10 m^3 are rounded to the nearest 10 m^3, numbers less than 10 m^3 are rounded to integers, non-zero numbers less than 1 are rounded to 1.

Annual Volumes

Annual Baseline Volumes



Annual Baseline by Waste Class



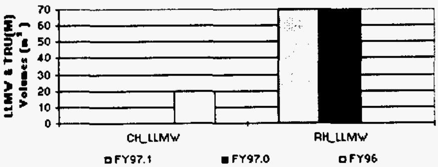
Comparison to Previous Baseline(s)

The FY97 forecast for 303 Fuels Fabrication Transition of 70 m³ shows a 250% increase from the FY96 forecast of 20 m³, primarily because the facility will be generating much more mixed waste due to changes in work scope. The FY97.1 forecast shows an 4 m³ increase in RH_LLMW that is not significant when the volumes are rounded.

The 1996 forecast expected only Other waste forms, but this year debris is the only expected form.

Hazardous constituents forecast last year were all in the 'other' category; however, only metals without mercury constituents are expected in this year's forecast.

Comparison to Previous Baseline(s) by Waste Class



303K Fuels Fabrication Transition Comparison: Waste Class	FY97.1 Forecast (m^3)	FY97.0 Forecast (m^3)	FY96 Forecast (m^3)
CH_LLMW	0	0	20
RH_LLMW	70	70	0
Subtotal	*70*	*70*	*20*
LLW	400	260	250
HAZ	0	0	2
Total	*470*	*320*	*270*

Sum of totals may not add due to rounding: numbers over 10 m^3 are rounded to the nearest 10 m^3, numbers less than 10 m^3 are rounded to integers, non-zero numbers less than 1 are rounded to 1.

Background

The mission for Fuels Fabrication Transition is to gain knowledge and provide training on the facility deactivation process. The LLMW is generated from facility clean-up.

Forecast Assumptions and Comments

The main assumption for the Fuels Fabrication Transition forecast is the continued RCRA clean-up activities in the 313S Sludge Recovery Area.

The minimum and maximum range for this waste volume is 20% and 100% of the baseline. These percentages are based on the uncertainties in the planned deactivation work schedules and the anticipated shipping schedule.

Other Forecast Data

- **ıw Level Waste**
  - A total of 400 m^3 of LLW is expected from Fuel Fabrication Transition until 1998.
  - The FY97.1 shows a 54% increase from the FY97 forecast.
  - The FY97.0 forecast of 260 m^3 is nearly identical to the FY96 forecast of 250 m^3.
  - 92% of the waste will be shipped in Medium boxes; only 8% of the LLW will be shipped in 208 liter drums.
  - All of the LLW is to be debris: 92% contaminated metal and 8% inorganic nonmetal.
- **Hazardous Waste**
  - No hazardous waste is expected from Fuel Fabrication for management by the CWC.

GENERATORS:
202A PUREX Operations · 225B B Plant · 2345Z Plutonium Finishing Plant · *303K Fuels Fabrication Transition* · 309 PRTR Vault Waste (Ion Exchange Mod) · 324 Building · 327 Building · 335 Sodium Test Facility · FFTF Transition Project · Waste Encapsulation/Storage Facility

PROGRAMS:
Analytical Services · EM-40 · Facility Transitions · Landlord · Liquid Effluent · NP · Offsite · PNNL · RCRA · Solid Waste · SNF · TWRS

CHARACTERISTICS:
CH_LLMW · RH_LLMW · CH_TRU(M) · RH_TRU(M) · GTC III · LLW · HAZ

CONTAINERS:
CH_LLMW · RH_LLMW · CH_TRU(M) · RH_TRU(M) · GTC III · LLW · HAZ

WASTE CLASSES:
CH_LLMW · RH_LLMW · CH_TRU(M) · RH_TRU(M) · GTC III · LLW · HAZ

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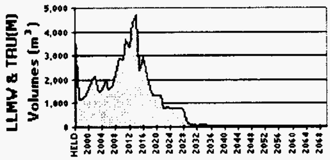


SWIFT Report: FY1997 to FY2070, rev. 1

Hanford → Facility Transitions → *309 PRTR Vault Waste*
→ (Waste Classes) → (Containers)
→ (Characteristics)
→ (Reports)
→ (Tools)

Site Rev. date:	Data version:	Data currency:
12/31/96	*97.1*	*10/25/96*

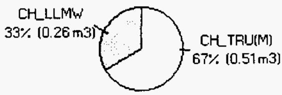
Facility Transitions — 309 PRTR Vault Waste (Ion Exchange Mod)

Contents

Highlights

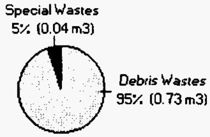
- The forecast life cycle for the 309 PRTR Vault Waste (BWHC_PRTR) generator ends in 1998.
- This generator contributes 1 m³, or <1% of the Facility Transitions LLMW and TRU(M) waste total.
- CH_TRU(M) waste and CH_LLMW are the two waste classes generated.
- The 208 liter drum is the only container reported for this LLMW and TRU(M) waste.
- Except for 5% special waste, all of the LLMW and TRU(M) waste is in the physical form of debris. The debris varies from metal, plastic/rubber, organic, and inorganic nonmetal.
- The LLMW hazardous constituents will be split equally between organic waste (54% by volume) and metals without mercury (46%).

Waste Class Distribution



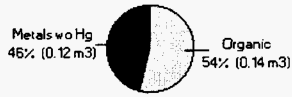
Total = 0.77 m3

Physical Waste Form Distribution



Total = 0.77 m3

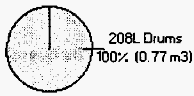
Hazardous Constituent Distribution



Total = 0.26 m3

Note: Includes LLMW and TRUM only

Container Distribution

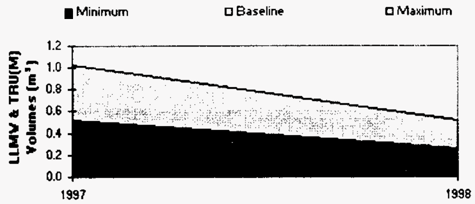


Total = 0.77 m3

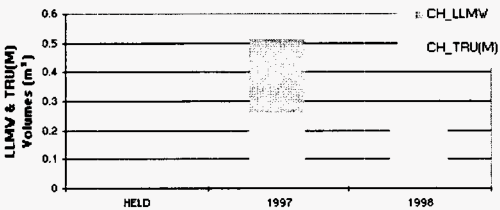
Sum of totals may not add due to rounding: numbers over 10 m^3 are rounded to the nearest 10 m^3, numbers less than 10 m^3 are rounded to integers, non-zero numbers less than 1 are rounded to 1.

Annual Volumes

Annual Baseline Volumes



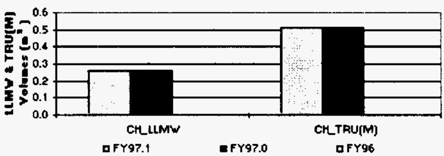
Annual Baseline by Waste Class



Comparison to Previous Baseline(s)

FY97 is the first year this generator provided a forecast. In previous forecasts, this generator was included in the Fast Flux Test Facility (BWHC_FFTF) forecast.

Comparison to Previous Baseline(s) by Waste Class



309 PRTR Vault Waste (Ion Exchange Mod) Comparison: Waste Class	FY97.1 Forecast (m³)	FY97.0 Forecast (m³)	FY96 Forecast (m³)
CH_LLMW	0.3	0.3	0
CH_TRU(M)	0.5	0.5	0
Subtotal	***0.8***	***0.8***	***0***
LLW	70	70	0
HAZ	1	1	0
Total	***70***	***70***	***0***

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.

Background

During facility transition to ERC, the 309 PRTR waste is generated in meeting turnover requirements.

Forecast Assumptions and Comments

The assumptions for this forecast are based on the current planning and scheduling of the facility transition to ERC and is expected on funding availability.

The minimum and maximum range for this waste volume is 100% and 200% of the baseline. The minimum percentage is based on an estimation of the confidence in the facility's ability to meet schedule. The maximum percentage is based on accelerating the work schedule.

Other Forecast Data

- **Low Level Waste**
  - A total of 70 m^3 of LLW is expected from PRTR until 1998.
  - No comparison is possible with FY96 data, since this generator was previously combined with other generators.
  - 78% of the LLW is expected in 208 liter drums, 20% in Medium boxes and 2% in Other drums.
  - Slightly more than half of the physical LLW form will be soil and soil/gravel (56%), while the rest will be debris (contaminated metal, inorganic nonmetal, plastic/rubber, and organic solids).
- **Hazardous Waste**
  - Less than 1 m^3 of hazardous waste is expected from 309 PRTR Vault Waste for management by the CWC.

GENERATORS:
202A PUREX Operations · 225B B Plant · 2345Z Plutonium Finishing Plant · 303K Fuels Fabrication Transition · *309 PRTR Vault Waste (Ion Exchange Mod)* · 324 Building · 327 Building · 335 Sodium Test Facility · FFTF Transition Project · Waste Encapsulation/Storage Facility

PROGRAMS:
Analytical Services · EM-40 · Facility Transitions · Landlord · Liquid Effluent · NP · Offsite · PNNL · RCRA · Solid Waste · SNF · TWRS

CHARACTERISTICS:
CH_LLMW · RH_LLMW · CH_TRU(M) · RH_TRU(M) · GTC III · LLW · HAZ

CONTAINERS:
CH_LLMW · RH_LLMW · CH_TRU(M) · RH_TRU(M) · GTC III · LLW · HAZ

WASTE CLASSES:
CH_LLMW · RH_LLMW · CH_TRU(M) · RH_TRU(M) · GTC III · LLW · HAZ

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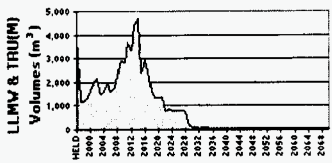


SWIFT Report: FY1997 to FY2070, rev. 1

Hanford → Facility Transitions → 324 Building
→ (Containers)
→ (Waste Classes)
→ (Characteristics)
→ (Reports)
→ (Tools)

Site Rev. date: *12/31/96*

Data version: *97.1*

Data currency: *10/25/96*

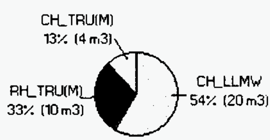
Facility Transitions — 324 Building

Contents

Highlights

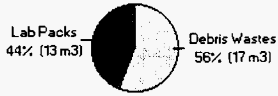
- 324 Building contributes 40 m³ (1%) of Facility Transition's solid waste forecast.
- The end of life cycle for the 324 Building is 2001.
- CH_LLMW is the primary waste class generated, representing 54% of the waste (20 m³).
- Containers for this facility's LLMW and TRU(M) waste are projected to be only 208 liter drums.
- The physical LLMW and TRU(M) waste forms are 56% debris, and 44% as lab packs.
- Metals without mercury account for 70% of the hazardous constituents. Organic, state regulated, and corrosive metals without mercury constituents each make up 10% of the volume.

Waste Class Distribution



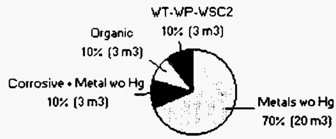
Total = 30 m3

Physical Waste Form Distribution



Total = 30 m3

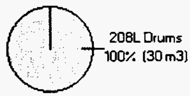
Hazardous Constituent Distribution



Total = 30 m3

Note: Includes LLMW and TRUM only

Container Distribution

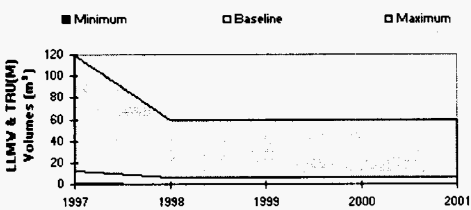


Total = 30 m3

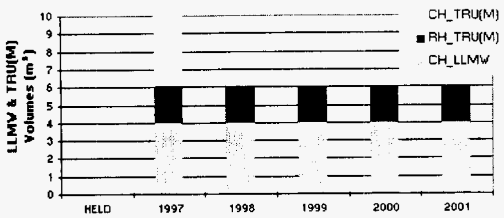
Sum of totals may not add due to rounding: numbers over 10 m³ are rounded to the nearest 10 m³, numbers less than 10 m³ are rounded to integers, non-zero numbers less than 1 are rounded to 1.

Annual Volumes

Annual Baseline Volumes



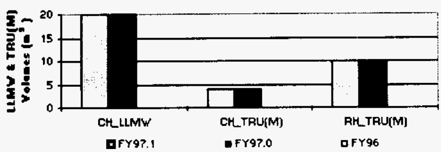
Annual Baseline by Waste Class



Comparison to Previous Baseline(s)

This generator was previously reported as a part of the overall forecast for PNNL. Now as part of Facility Transitions, the estimates have been updated as per the best currently available data.

Comparison to Previous Baseline(s) by Waste Class



324 Building (PNNL) Comparison: Waste Class	FY97.1 Forecast (m³)	FY97.0 Forecast (m³)	FY96 Forecast (m³)
CH_LLMW	20	20	0
CH_TRU(M)	4	4	0
RH_TRU(M)	10	10	0
Subtotal	*40*	*30*	*0*
LLW	690	690	0
Total	*730*	*720*	*0*

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.

Background

The 324 Building supported research operations and is now in transition.

Waste generated includes debris, miscellaneous PPE, contamination control equipment, and various wastes generated during facility operations and hot cell clean-out.

Forecast Assumptions and Comments

The 324 Building was transferred to the M&I contractor as of 11/1/96.

Waste will be generated from hot cell clean-out and each waste class could contain up to the category limit.

Confidence in these estimates is "one step above a guess" based on the limited data available. Any use of the data should take this into account.

Annual minimum and maximum ranges for the waste are 10% and 1,000% respectively. This large range is necessary to account for the lack of sufficient data to provide a good estimate.

Other Forecast Data

- **Low Level Waste**
  - A total of 690 m^3 of LLW is expected from the 324 Building.
  - No comparison with FY96 data is possible, since this generator was previously combined with other generators.
  - The majority (76%) of the waste will be in MB-V boxes, and 208 liter drums will hold the remaining 24%.
  - The only physical LLW forms projected are heterogeneous debris (88% by volume) and concrete shielding (12%).

- **Hazardous Waste**
  - No hazardous waste is expected from 324 Building for management by the CWC.

GENERATORS:
202A PUREX Operations · 225B B Plant · 2345Z Plutonium Finishing Plant · 303K Fuels Fabrication Transition · 309 PRTR Vault Waste (Ion Exchange Mod) · *324 Building* · 327 Building · 335 Sodium Test Facility · FFTF Transition Project · Waste Encapsulation/Storage Facility

PROGRAMS:
Analytical Services · *EM-40* · *Facility Transitions* · Landlord · Liquid Effluent · NP · Offsite · PNNL · RCRA · Solid Waste · SNF · TWRS

CHARACTERISTICS:
CH_LLMW · RH_LLMW · CH_TRU(M) · RH_TRU(M) · GTC III · LLW · HAZ

CONTAINERS:
CH_LLMW · RH_LLMW · CH_TRU(M) · RH_TRU(M) · GTC III · LLW · HAZ

WASTE CLASSES:
CH_LLMW · RH_LLMW · CH_TRU(M) · RH_TRU(M) · GTC III · LLW · HAZ

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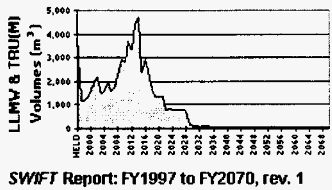
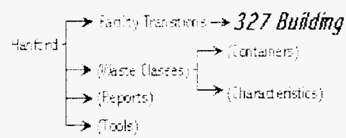




Site Rev. date: *12/31/96*

Data version: *97.1*

Data currency: *10/25/96*

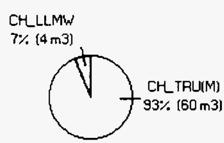
Facility Transitions — 327 Building

Contents

Highlights

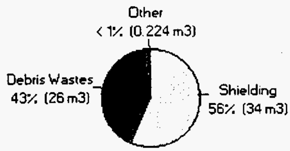
- The 327 Building contributes 60 m³ (1%) of Facility Transition's solid waste forecast.
- The end of life cycle for the 327 Building is 2000.
- CH_TRU(M) is the primary waste class generated, representing 93% of the waste (60 m³).
- The only container to be used for shipment of LLMW and TRU(M) waste is the 208 liter drum.
- The physical waste forms for LLMW and TRU(M) waste are split similarly between shielding and debris (56% vs. 43% respectively), while 1% is other physical waste forms.
- Corrosive hazardous constituents account for 55% of the volume, ignitables for 37%, and metals without mercury for 8%.

Waste Class Distribution



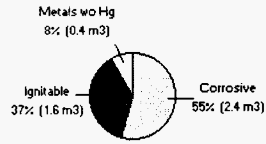
Total = 60 m3

Physical Waste Form Distribution



Total = 60 m3

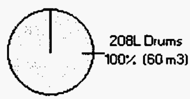
Hazardous Constituent Distribution



Total = 4 m3

Note: Includes LLMW and TRUM only

Container Distribution

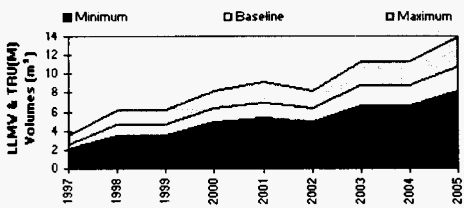


Total = 60 m3

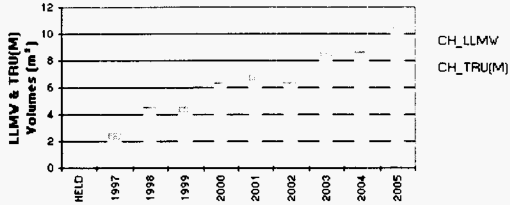
Sum of totals may not add due to rounding: numbers over 10 m^3 are rounded to the nearest 10 m^3, numbers less than 10 m^3 are rounded to integers, non-zero numbers less than 1 are rounded to 1.

Annual Volumes

Annual Baseline Volumes



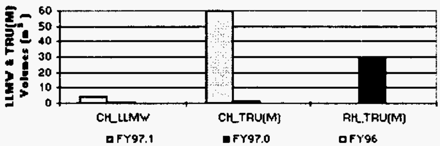
Annual Baseline by Waste Class



Comparison to Previous Baseline(s)

This generator was previously reported as a generator for PNNL. FY97.1 accounts for a 20 m³ increase of LLMW and TRU(M) waste and reclassification of RH _TRU(M) waste to CH_TRU(M) waste due to better estimates.

Comparison to Previous Baseline(s) by Waste Class



327 Building (PNNL) Comparison: Waste Class	FY97.1 Forecast (m³)	FY97.0 Forecast (m³)	FY96 Forecast (m³)
CH_LLMW	4	1	0
CH_TRU(M)	60	2	0
RH_TRU(M)	0	30	0
Subtotal	***60***	***30***	***0***
LLW	220	210	0
Total	***280***	***250***	***0***

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.

Background

The 327 Building is now in transition.

Forecast Assumptions and Comments

The 327 Building was transferred to the M&I contractor as of 11/1/96.

No minimum and maximum ranges were provided by this generator. In this case, the assumption is made that minimum and maximum ranges for the waste are 100% and 100% respectively.

Other Forecast Data

- **Low Level Waste**

  - A total of 220 m³ of LLW is expected from the 327 Building.
  - No comparison with FY96 data is possible, since this generator was previously combined with other generators. This FY97.1 volume is a 10 m³ increase from the FY97.0 volume.
  - MB-V boxes and 208 liter drums will contain 60% and 40% of the LLW, respectively.
  - All of the LLW's physical form is expected to be debris (plastic/rubber, organic, contaminated metal, and heterogeneous), except for less than one cubic meter of shielding.

- **Hazardous Waste**

  - No hazardous waste is expected from 327 Building for management by the CWC.

GENERATORS:
202A PUREX Operations · 225B B Plant · 2345Z Plutonium Finishing Plant · 303K Fuels Fabrication Transition · 309 PRTR Vault Waste (Ion Exchange Mod) · 324 Building · *327 Building* · 335 Sodium Test Facility · FFTF Transition Project · Waste Encapsulation/Storage Facility

PROGRAMS:
Analytical Services · EM-40 · Facility Transitions · Landlord · Liquid Effluent · NP · Offsite · PNNL · RCRA · Solid Waste · SNF · TWRS

CHARACTERISTICS:
CH_LLMW · RH_LLMW · CH_TRU(M) · RH_TRU(M) · GTC III · LLW · HAZ

CONTAINERS:
CH_LLMW · RH_LLMW · CH_TRU(M) · RH_TRU(M) · GTC III · LLW · HAZ

WASTE CLASSES:
CH_LLMW · RH_LLMW · CH_TRU(M) · RH_TRU(M) · GTC III · LLW · HAZ

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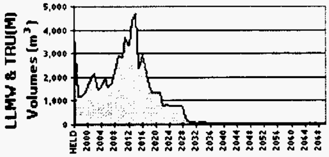


SWIFT Report: FY1997 to FY2070, rev. 1

Hanford → Facility Transitions → 335 Sodium Test Facility

→ (Waste Classes) → (Containers)

→ (Characteristics)

→ (Reports)

→ (Tools)

Site Rev. date: *12/31/96*

Data version: *97.1*

Data currency: *10/25/96*

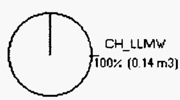
Facility Transitions — 335 Sodium Test Facility

Contents

Highlights

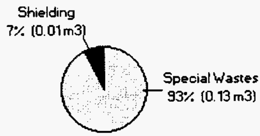
- The forecast life cycle for the 335 Sodium Test Facility (BWHC_SODIUM_TEST) generator ends in 1999.
- This generator contributes1 m³, or <1% of the Facility Transitions LLMW total.
- CH_LLMW is the sole waste class generated.
- This generator is the only one to report using the 114 liter drum as its sole container.
- The only physical waste forms for LLMW should be steel shielding and special waste.
- Except for 7% of the LLMW having metals without mercury, all of the hazardous constituents will be reactive waste (93%).

Waste Class Distribution



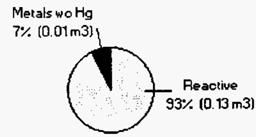
Total = 0.14 m3

Physical Waste Form Distribution



Total = 0.14 m3

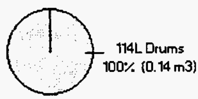
Hazardous Constituent Distribution



Total = 0.14 m3

Note: Includes LLMW and TRUM only

Container Distribution

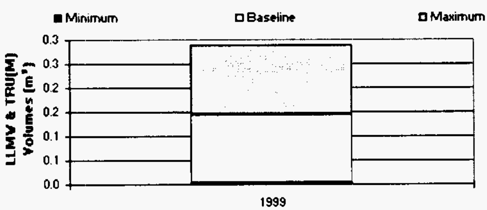


Total = 0.14 m3

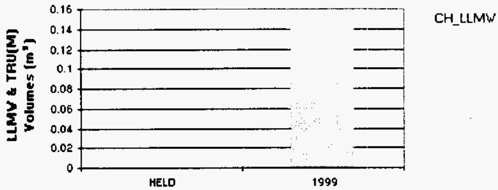
Sum of totals may not add due to rounding: numbers over 10 m³ are rounded to the nearest 10 m³, numbers less than 10 m³ are rounded to integers, non-zero numbers less than 1 are rounded to 1.

Annual Volumes

Annual Baseline Volumes



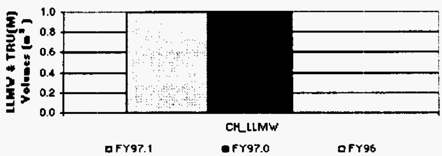
Annual Baseline by Waste Class



Comparison to Previous Baseline(s)

FY97 is the first year this generator provided a forecast. In previous forecasts, 335 Sodium Test Facility was included in the Fast Flux Test Facility (BWHC_FFTF) forecast.

Comparison to Previous Baseline(s) by Waste Class



335 Sodium Test Facility Comparison: Waste Class	FY97.1 Forecast (m³)	FY97.0 Forecast (m³)	FY96 Forecast (m³)
CH_LLMW	1	1	0
Subtotal	*1*	*1*	*0*
LLW	1	1	0
HAZ	9	9	0
Total	*10*	*10*	*0*

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.

Background

The mission for 335 Sodium Test Facility is to dismantle retired sodium test loops. The solid waste generated is from the small amount of material that cannot be recycled, scrapped, or shipped to a treatment center.

The work at 335 Sodium Test Facility is to remove the insulation and wiring from the sodium test systems, and to cut the sodium-wetted and sodium-filled piping.

Forecast Assumptions and Comments

The minimum and maximum range for this waste volume is 1% and 200% of the baseline. The minimum percentage, representing zero waste, would arise if the facility could clean or transfer all sodium-wetted materials. The maximum percentage is based on there being more material than anticipated that could not be sent to a landfill.

Other Forecast Data

- **Low Level Waste**
  - A total of 1 m^3 of LLW is expected from the 335 Sodium Test Facility.
  - 100% of the LLW is to be shipped in Other drums.
  - This LLW's physical form should be mostly lead shielding and some steel shielding.

- **Hazardous Waste**
  - A total of 9 m^3 of hazardous waste is expected from the 335 Sodium Test Facility for management by the CWC.

GENERATORS:
202A PUREX Operations · 225B B Plant · 2345Z Plutonium Finishing Plant · 303K Fuels Fabrication Transition · 309 PRTR Vault Waste (Ion Exchange Mod) · 324 Building · 327 Building · *335 Sodium Test Facility* · FFTF Transition Project · Waste Encapsulation/Storage Facility

PROGRAMS:
Analytical Services · EM-40 · Facility Transitions · Landlord · Liquid Effluent · NP · Offsite · PNNL · RCRA · Solid Waste · SNF · TWRS

CHARACTERISTICS:
CH_LLMW · RH_LLMW · CH_TRU(M) · RH_TRU(M) · GTC III · LLW · HAZ

CONTAINERS:
CH_LLMW · RH_LLMW · CH_TRU(M) · RH_TRU(M) · GTC III · LLW · HAZ

WASTE CLASSES:
CH_LLMW · RH_LLMW · CH_TRU(M) · RH_TRU(M) · GTC III · LLW · HAZ

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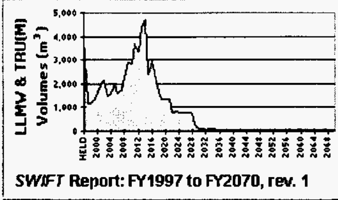


Hanford → Facility Transitions → *FFTF Transition Project*
→ (Waste Classes) → (Containers) → (Characteristics)
→ (Reports)
→ (Tools)

Site Rev. date: *12/31/96*

Data version: *97.1*

Data currency: *10/25/96*

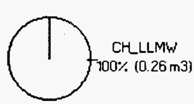
Facility Transitions — FFTF Transition Project

Contents

Highlights

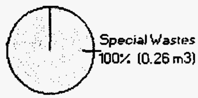
- The forecast life cycle for the Fast Flux Test Facility (FFTF) generator ends in 2001.
- This generator contributes 1 m³ (<1%) of Facility Transitions' LLMW forecast.
- This forecast shows a 97% decrease from the FY96 forecast of 30 m³, due to more accurate waste characterization information.
- CH_LLMW is the only waste class generated. This CH_LLMW is made up of small scrapings of radioactive sodium. Less than one gallon of waste is collected each year.
- The only container reported for this LLMW is the 208 liter drum.
- The physical form for the LLMW is special waste.
- 100% of the LLMW hazardous constituents will be reactive waste.

Waste Class Distribution



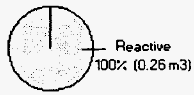
Total = 0.26 m3

Physical Waste Form Distribution



Total = 0.26 m3

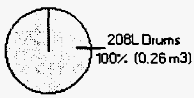
Hazardous Constituent Distribution



Total = 0.26 m3

Note: Includes LLMW and TRUM only

Container Distribution

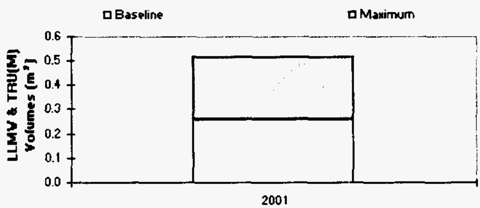


Total = 0.26 m3

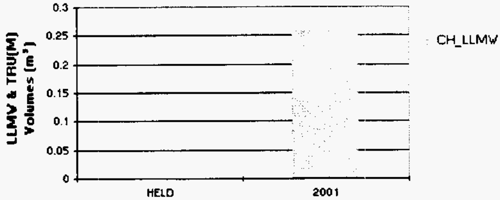
Sum of totals may not add due to rounding: numbers over 10 m³ are rounded to the nearest 10 m³, numbers less than 10 m³ are rounded to integers, non-zero numbers less than 1 are rounded to 1.

Annual Volumes

Annual Baseline Volumes



Annual Baseline by Waste Class



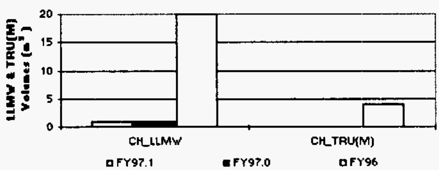
Comparison to Previous Baseline(s)

The FY97 forecast for FFTF of 1 m³ shows a 97% decrease from the FY96 forecast of 30 m³, primarily due to more accurate information on waste characterization.

The FY96 forecast for FFTF included 5 facilities: FFTF, 309 Facility, Legacy, 308 Facility, and 335 Sodium Test Facility. For the FY97 forecast, FFTF includes only 2 facilities: FFTF and 308 Facility. The other facilities either report separately or have been taken out of the forecast since they no longer generate solid waste.

The physical waste forms projected in 1996 included 4 cubic meters of debris (heterogeneous, metal, plastic/rubber, and organic) along with Other forms, but only special waste is forecast this year.

Comparison to Previous Baseline(s) by Waste Class



FFTF Transition Project Comparison: Waste Class	FY97.1 Forecast (m³)	FY97.0 Forecast (m³)	FY96 Forecast (m³)
CH_LLMW	1	1	20
CH_TRU(M)	0	0	4
Subtotal	*1*	*1*	*30*
LLW	80	80	390
HAZ	0	0	40
Total	*80*	*80*	*450*

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.

Background

Currently, FFTF's transition to the Surveillance and Maintenance Phase is being reviewed by the Department of Energy. Almost the entire waste volume forecast from FFTF is LLW generated during maintenance and decontamination activities, processing and disassembling irradiated reactor core components, and washing the FFTF fuel assemblies in the IEM cell.

Forecast Assumptions and Comments

The main assumption for the FFTF forecast is that the facility will continue on to Surveillance and Maintenance Phase by 2001.

Liquid and solid sodium is not included in this forecast.

The minimum and maximum range for this waste is 100% and 200% of the baseline.

Other Forecast Data

- **Low Level Waste**
  - A total of 80 m^3 of LLW is expected from FFTF until 2001.
  - This forecast shows a 79% decrease from the FY96 forecast of 390 m^3.
  - Waste will be split between other drums (41%) and 208 liter drums (37%), besides the 24% in MB-V boxes.
  - The physical waste forms for LLW include 3% (by volume) organic particulates and 97% debris (organic, metal/activated metal and heterogeneous).

- **Hazardous Waste**
  - No hazardous waste is expected from FFTF for management by the CWC.

GENERATORS:
202A PUREX Operations · 225B B Plant · 2345Z Plutonium Finishing Plant · 303K Fuels Fabrication Transition · 309 PRTR Vault Waste (Ion Exchange Mod) · 324 Building · 327 Building · 335 Sodium Test Facility · *FFTF Transition Project* · Waste Encapsulation/Storage Facility

PROGRAMS:
Analytical Services · EM-40 · Facility Transitions · Landlord · Liquid Effluent · NP · Offsite · PNNL · RCRA · Solid Waste · SNF · TWRS

CHARACTERISTICS:
CH_LLMW · RH_LLMW · CH_TRU(M) · RH_TRU(M) · GTC III · LLW · HAZ

CONTAINERS:
CH_LLMW · RH_LLMW · CH_TRU(M) · RH_TRU(M) · GTC III · LLW · HAZ

WASTE CLASSES:
CH_LLMW · RH_LLMW · CH_TRU(M) · RH_TRU(M) · GTC III · LLW · HAZ

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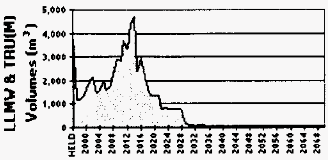


SWIFT Report: FY1997 to FY2070, rev. 1

Site Rev. date:	*12/31/96*
Data version:	*97.1*
Data currency:	*10/25/96*

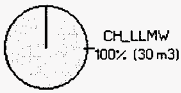
Facility Transitions — Waste Encapsulation/Storage Facility

Contents

Highlights

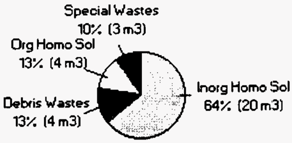
- The forecast life cycle for the Waste Encapsulation/Storage Facility (BWHC_WESF) generator ends in 2025.
- This generator contributes 30 m³, or < 1% of the Facility Transitions LLMW total.
- CH_LLMW is the sole waste class generated.
- The only reported LLMW container to be used is the 208 liter drum.
- Physical waste forms vary from 10% special waste, 13% organic solids, 13% debris, to 64% inorganic solids.
- The LLMW hazardous constituents will be evenly divided. State regulated, ignitable, and corrosive wastes each represent 25% of the volume. Metals without mercury and organic constituents account for 18% and 7%, respectively.

Waste Class Distribution



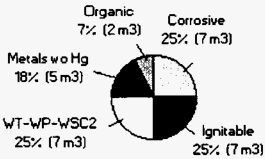
Total = 30 m3

Physical Waste Form Distribution



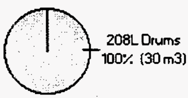
Total = 30 m3

Hazardous Constituent Distribution



Total = 30 m3
Note: Includes LLMW and TRUM only

Container Distribution

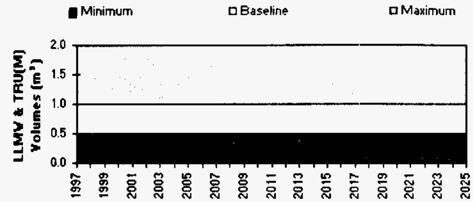


Total = 30 m3

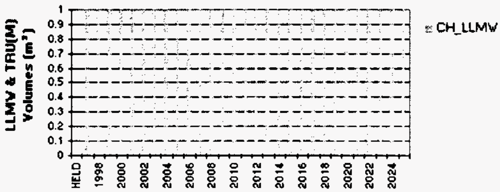
Sum of totals may not add due to rounding: numbers over 10 m³ are rounded to the nearest 10 m³, numbers less than 10 m³ are rounded to integers, non-zero numbers less than 1 are rounded to 1.

Annual Volumes

Annual Baseline Volumes



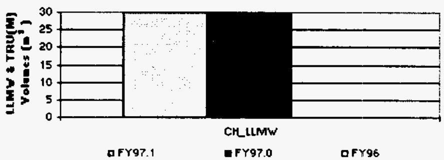
Annual Baseline by Waste Class



Comparison to Previous Baseline(s)

FY97 is the first year this generator provided a forecast. In previous forecasts Waste Encapsulation/Storage Facility was included in the B Plant generator (BWHC_B_PLANT) forecast.

Comparison to Previous Baseline(s) by Waste Class



Waste Encapsulation/Storage Facility Comparison: Waste Class	FY97.1 Forecast (m³)	FY97.0 Forecast (m³)	FY96 Forecast (m³)
CH_LLMW	30	30	0
Subtotal	***30***	***30***	***0***
LLW	460	460	0
Total	***490***	***490***	***0***

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.

Background

The mission for Waste Encapsulation/Storage Facility is the continued safe and efficient storage of cesium and strontium capsules until final disposition has been determined. Waste generated from this facility is associated with entry into radiological areas, radiological decontamination, etc.

Forecast Assumptions and Comments

This forecast assumes that waste generation remains constant over the life cycle, and that waste currently being accumulated in B Cell will be packaged and stored in B Plant Cell 4 and will not be shipped to the burial grounds in the foreseeable future. Also, strontium and cesium capsules are not included in this forecast.

The minimum and maximum range for this waste volume is 50% and 200% of the baseline. Since this is the first year Waste Encapsulation/Storage Facility waste has been identified separately from B Plant, there is a high degree of uncertainty associated with the forecast quantities. Although best estimates place generation at about 10% of the combined total, it is thought it could vary by a factor of 2 in either direction.

Other Forecast Data

- **Low Level Waste**
  - 460 m^3 of LLW is expected from Waste Encapsulation/Storage Facility.
  - There are no details available for the FY96 forecast.
  - This waste will be sent in mostly MB-V boxes (61%), 22% in Medium boxes, and 17% in 208 liter drums.
  - The physical LLW form will vary from 4% (by volume) inorganic and organic solids, to some soil and soil/gravel, to five kinds of debris (90%).

- **Hazardous Waste**
  - No hazardous waste is expected from Waste Encapsulation/Storage Facility for management by the CWC.

GENERATORS:
202A PUREX Operations · 225B B Plant · 2345Z Plutonium Finishing Plant · 303K Fuels Fabrication Transition · 309 PRTR Vault Waste (Ion Exchange Mod) · 324 Building · 327 Building · 335 Sodium Test Facility · FFTF Transition Project · *Waste Encapsulation/Storage Facility*

PROGRAMS:
Analytical Services · EM-40 · Facility Transitions · Landlord · Liquid Effluent · NP · Offsite · PNNL · RCRA · Solid Waste · SNF · TWRS

CHARACTERISTICS:	CONTAINERS:
CH_LLMW · RH_LLMW · CH_TRU(M) · RH_TRU(M) · GTC III · LLW · HAZ	CH_LLMW · RH_LLMW · CH_TRU(M) · RH_TRU(M) · GTC III · LLW · HAZ

WASTE CLASSES:
CH_LLMW · RH_LLMW · CH_TRU(M) · RH_TRU(M) · GTC III · LLW · HAZ

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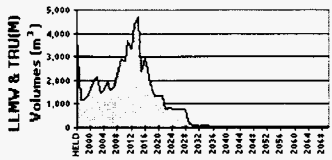

***SWIFT* Report: FY1997 to FY2070, rev. 1**

Hanford → *Landlord (EM-60)* → (Generators)
→ (Waste Classes) → (Containers) → (Characteristics)
→ (Reports)
→ (Tools)

Site Rev. date: *12/31/96*

Data version: *97.1*

Data currency: *10/25/96*

Landlord (EM-60)

The Landlord program did not provide a forecast in FY97 nor for the 97.1 revision for the following reasons:

- As with previous forecasts, the program does not expect to generate LLMW, TRU(M) waste, or LLW.
- Hazardous waste generated by the program will be managed directly by the program and will not utilize the Waste Management Project. This is a change from previous years.

PROGRAMS:
Analytical Services · EM-40 · Facility Transitions · *Landlord* · Liquid Effluent · NP · Offsite · PNNL · RCRA · Solid Waste · SNF · TWRS

CHARACTERISTICS:
CH_LLMW · RH_LLMW · CH_TRU(M) · RH_TRU(M) · GTC III · LLW · HAZ

CONTAINERS:
CH_LLMW · RH_LLMW · CH_TRU(M) · RH_TRU(M) · GTC III · LLW · HAZ

WASTE CLASSES:
CH_LLMW · RH_LLMW · CH_TRU(M) · RH_TRU(M) · GTC III · LLW · HAZ

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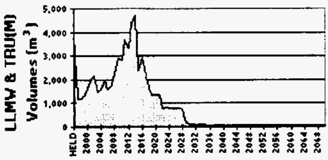


SWIFT **Report: FY1997 to FY2070, rev. 1**

Hanford → *Liquid Effluent* → (Generators)
→ (Waste Classes) → (Containers)
→ (Characteristics)
→ (Reports)
→ (Tools)

Site Rev. date: *12/31/96*

Data version: *97.1*

Data currency: *10/25/96*

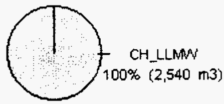
Liquid Effluent

Contents

Highlights

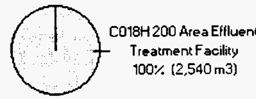
- The overall life cycle for the Liquid Effluent program ends in 2034.
- A total of 2,540 m^3 of LLMW is expected from this generator over the life cycle, or 4% of the Hanford total.
- This forecast shows a 55% decrease from the FY96 forecast of 5,620 m^3, due to the use of more likely production rates.
- CH_LLMW is the sole waste class generated by the 200 Area Effluent Treatment Facility.
- 100% of the LLMW from this program is projected to be sent in 208 liter drums.
- The Liquid Effluent program expects to ship five physical forms of LLMW: 79% inorganic solids, 13% debris, 5% organic solids, 2% special waste, and 1% lab packs.
- 75% of the LLMW is metals without mercury. The rest of the volume is a mixture of various hazardous constituents.

Waste Class Distribution



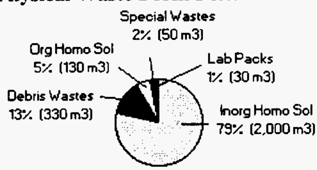
Total = 2,540 m3

Generator Distribution



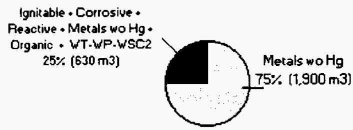
Total = 2,540 m3

Physical Waste Form Distribution



Total = 2,540 m3

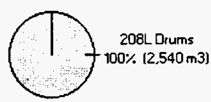
Hazardous Constituent Distribution



Total = 2,540 m3

Note: Includes LLMW and TRUM only

Container Distribution



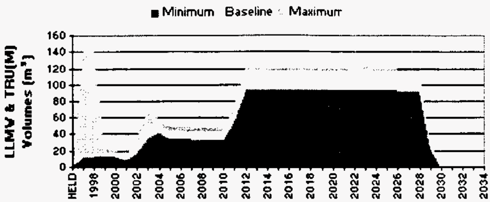
Total = 2,540 m3

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.

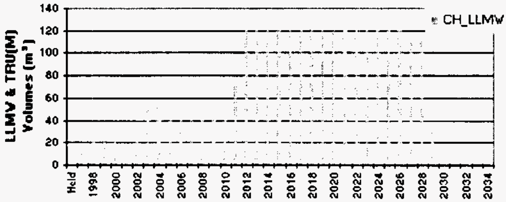
Annual Waste Class Volumes

Liquid Effluent waste will be generated from 1997 to the end of the life cycle in 2034. The major amount of waste will be generated from 2011 to 2028, corresponding to the expected treatment of liquid waste from the TWRS program.

Annual Baseline Volumes



Annual Baseline by Waste Class



Summary Table (Volumes in m³)

Liquid Effluent Summary: **Generator**	**CH_LLMW**	***Subtotal***	**PCT**
C018H 200 Area Effluent Treatment Facility	2,540	*2,540*	100%
Total	**2,540**	***2,540***	*100%*
PCT	100%	*100%*	

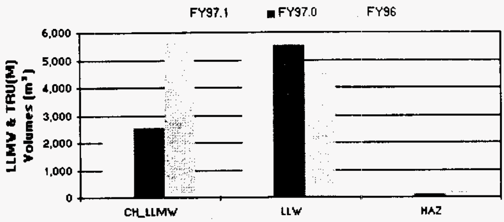
Sum of totals may not add due to rounding: numbers over 10 m³ are rounded to the nearest 10 m³, numbers less than 10 m³ are rounded to integers, non-zero numbers less than 1 are rounded to 1.

Comparison to Previous Baseline(s)

The FY97 forecast for Liquid Effluent of 2,540 m³ shows a 55% decrease from the FY96 forecast of 5,620 m³. This reduction is because last year's forecast was based on predictions of production rates. The FY97 forecast is from a schedule of 26 Liquid Effluents to LERF/ETF.

The 1996 hazardous constituents forecast showed only 1% of the volume as metals without mercury, whereas the current expectation is for most of the waste to be metals without mercury. While 25% of the waste is forecast to be mixed constituents, these same constituents were reported as separate last year.

Comparison to Previous Baseline(s) by Waste Class



Liquid Effluent Comparison: Waste Class	FY97.1 Forecast (m³)	FY97.0 Forecast (m³)	FY96 Forecast (m³)
CH_LLMW	2,540	2,540	5,620
Subtotal	**2,540**	**2,540**	**5,620**
LLW	5,490	5,490	4,480
HAZ	80	80	190
Total	**8,110**	**8,110**	**10,290**

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.

Background

The Liquid Effluent program mission is to eliminate the use of the soil column for liquid effluent treatment, and to manage current and future liquid effluent streams in a safe, responsible, cost-effective, and legally compliant manner. The program generates solid waste during the treatment of liquid effluents from TWRS' 242-A Evaporator and from the 300 Area. The forecast life cycle for generators in this program extends to 2034.

Two generators reported solid waste in this program: 200 Area Effluent Treatment Facility, and the 300 Area/Treated Effluent Disposal Facilities (which now includes the Waste Neutralization Facility). The latter generator reported only LLW.

Forecast Assumptions and Comments

The minimum and maximum range for this waste is 79% and 117% of the baseline. The minimum percentage assumes that all solid waste from 200-UP-1 groundwater, N-Basin water, and purge water are sent to ERDF. The maximum percentage assumes that all these are sent to Waste Management.

Other Forecast Data

- **Low Level Waste**
  - A total of 5,490 m³ of LLW is expected from all generators in the Liquid Effluent program. 80 m³ is expected from the 200 Area Effluent Treatment Facility, and 5,410 m³ is expected from the 300 Area/Treated Effluent Disposal Facilities.
  - This forecast shows a 23% increase from the FY96 forecast of 4,480 m³.
  - LLW will be shipped in Medium boxes (98% of the volume) and in 208 liter drums (2%).

- LLW's physical forms are mostly all inorganic salt waste, with 6% debris, 2% of organic solids, and less than one percent of soil and soil/gravel.

- **Hazardous Waste**

  - A total of 80 m^3 of hazardous waste is expected from the 200 Area Effluent Treatment Facility for management by the CWC.

<table>
<tr><td colspan="2">GENERATORS:
300 Area/Treated Effluent Disposal Facilities · C018H-200 Area Effluent Treatment Facility</td></tr>
<tr><td colspan="2">PROGRAMS:
Analytical Services · EM-40 · Facility Transitions · Landlord · Liquid Effluent · NP · Offsite · PNNL · RCRA · Solid Waste · SNF · TWRS</td></tr>
<tr><td>CHARACTERISTICS:
CH_LLMW · RH_LLMW · CH_TRU(M) · RH_TRU(M) · GTC III · LLW · HAZ</td><td>CONTAINERS:
CH_LLMW · RH_LLMW · CH_TRU(M) · RH_TRU(M) · GTC III · LLW · HAZ</td></tr>
<tr><td colspan="2">WASTE CLASSES:
CH_LLMW · RH_LLMW · CH_TRU(M) · RH_TRU(M) · GTC III · LLW · HAZ</td></tr>
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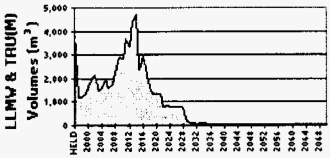


SWIFT **Report: FY1997 to FY2070, rev. 1**

Hanford → Liquid Effluent → *300 Area/Treated Effluent Disposal Facilities*
→ (Waste Classes) → (Containers) / (Characteristics)
→ (Reports)
→ (Tools)

Site Rev. date: *12/31/96*

Data version: *97.1*

Data currency: *10/25/96*

Liquid Effluent — 300 Area/Treated Effluent Disposal Facilities

Contents

Highlights

- The 300 Area Treated Effluent Disposal Facility (WHC_TEDF) waste volume forecast also includes volumes from Waste Neutralization Facility.
- The overall life cycle for the 300 Area Treated Effluent Disposal Facility ends in 2025.
- No LLMW or TRU(M) waste is expected from these generators.
- Only LLW is expected at a total of 5,410 m³ of LLW for the life cycle of the facility.

Annual LLMW and TRU(M) Waste Volumes

Annual Baseline Volumes

No LLMW or TRU(M) waste is expected from 300 Area/Treated Effluent Disposal Facilities.

Annual Baseline by Waste Class

(Not applicable.)

Comparison to Previous Baseline(s)

The FY96 forecast included 3 m³ of LLMW from the Waste Neutralization Facility. The FY97 forecast includes only LLW.

Comparison to Previous Baseline(s) by Waste Class

300 Area/Treated Effluent Disposal Facilities Comparison: Waste Class	FY97.1 Forecast (m³)	FY97.0 Forecast (m³)	FY96 Forecast (m³)
LLW	5,410	5,410	4,360
Total	***5,410***	***5,410***	***4,360***

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.

Background

The Waste Neutralization Facility accumulates and provides interim storage for tank waste analysis effluents generated by 300 Area Laboratories. This facility also provides online monitoring of the 300 Area Retention Process Sewer to ensure protection of the environment prior to the effluents being sent to the 300 Area TEDF. The mission of the 300 Area / Treated Effluent Disposal Facilities 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-shelled tanks.

Forecast Assumptions and Comments

The assumptions for this forecast are that the TEDF operating parameters continue unchanged, that the Offsite release criteria applicable to suspect LLW does not change, that the TEDF influent volumes remain unchanged, that the contaminant loading in TEDF influent does not increase markedly, and that the TEDF spent IX resin is LLW.

Other Forecast Data

- **Low Level Waste**
  - A total of 5,410 m³ of LLW is expected from 300 Area Treated Effluent Disposal Facility.
  - This forecast shows a 24% increase over the FY96 forecast of 4,360 m³. This increase is mainly due to the site receiving indication from DOE_RL that 340 may shut down in less than 2 years, causing TEDF to switch to bulk disposal of sludge.
  - LLW will be shipped in Medium boxes (99%) and in 208 liter drums (1%).
  - Nearly all of the LLW is in the inorganic salt waste physical form. Debris accounts for 6% of the volume, and organic solids and soil/gravel account for 1%.

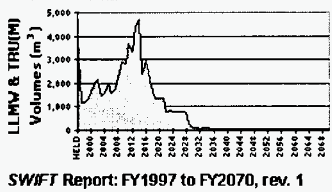
- **Hazardous Waste**
  - No hazardous waste is expected from 300 Area Treated Effluent Disposal Facility for management by the CWC.

GENERATORS:
300 Area/Treated Effluent Disposal Facilities · C018H-200 Area Effluent Treatment Facility

PROGRAMS:
Analytical Services · EM-40 · Facility Transitions · Landlord · Liquid Effluent · NP · Offsite · PNNL · RCRA · Solid Waste · SNF · TWRS

CHARACTERISTICS:	CONTAINERS:
CH_LLMW · RH_LLMW · CH_TRU(M) · RH_TRU(M) · GTC III · LLW · HAZ	CH_LLMW · RH_LLMW · CH_TRU(M) · RH_TRU(M) · GTC III · LLW · HAZ

WASTE CLASSES:
CH_LLMW · RH_LLMW · CH_TRU(M) · RH_TRU(M) · GTC III · LLW · HAZ



Hanford → Liquid Effluent → *C018H-200 Area Effluent Treatment Facility*
→ (Waste Classes) → (Containers) → (Characteristics)
→ (Reports)
→ (Tools)

Site Rev. date: *12/31/96*

Data version: *97.1*

Data currency: *10/25/96*

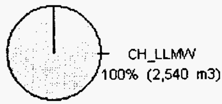
Liquid Effluent — C018H-200 Area Effluent Treatment Facility

Contents

Highlights

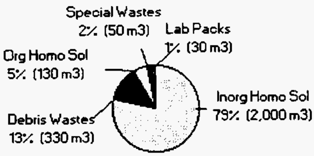
- The overall life cycle for the 200 Area Effluent Treatment Facility ends in 2034.
- This generator contributes 2,540 m³ (100%) of the total LLMW generated by the Liquid Effluent program.
- This forecast shows a 55% decrease from the FY96 forecast of 5,620 m³.
- CH_LLMW is the sole waste class generated by the 200 Area Effluent Treatment Facility.
- All of the LLMW will be shipped using 208 liter drums.
- The effluent treatment facility expects to send five physical forms of LLMW: 79% inorganic solids, 13% debris, 5% organic solids, 2% special waste, and 1% lab packs.
- 75% of the LLMW is metals without mercury. The rest of the volume is a mixture of various hazardous constituents.

Waste Class Distribution



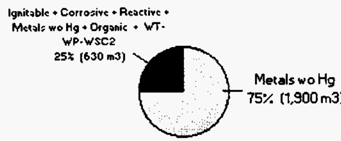
Total = 2,540 m3

Physical Waste Form Distribution



Total = 2,540 m3

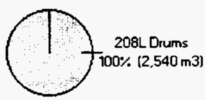
Hazardous Constituent Distribution



Total = 2,540 m3

Note: Includes LLMW and TRUM only

Container Distribution

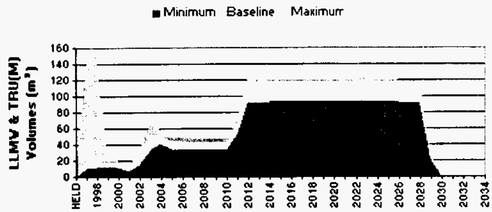


Total = 2,540 m3

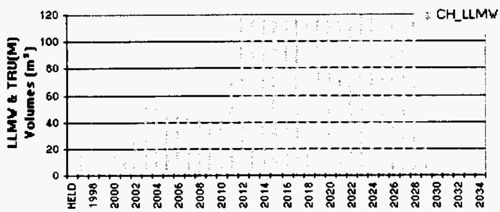
Sum of totals may not add due to rounding: numbers over 10 m³ are rounded to the nearest 10 m³, numbers less than 10 m³ are rounded to integers, non-zero numbers less than 1 are rounded to 1.

Annual Volumes

Annual Baseline Volumes



Annual Baseline by Waste Class

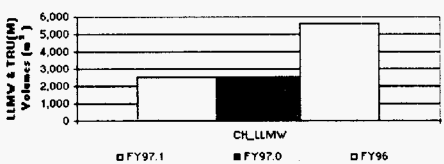


Comparison to Previous Baseline(s)

The FY97 forecast for 200 Area Effluent Treatment Facility of 2,540 m³ shows a 55% decrease from the FY96 forecast of 5,620 m³. This reduction is because last year's forecast was based on predictions of production rates. The FY97 forecast is from a schedule of 26 Liquid Effluents to LERF/ETF.

The 1996 hazardous constituents forecast showed only 1% of the volume as metals without mercury, whereas the current expectation is for most of the waste to be metals without mercury. While 25% of the waste is forecast to be mixed constituents, these same constituents were reported as separate last year.

Comparison to Previous Baseline(s) by Waste Class



C018H-200 Area Effluent Treatment Facility Comparison: Waste Class	FY97.1 Forecast (m^3)	FY97.0 Forecast (m^3)	FY96 Forecast (m^3)
CH_LLMW	2,540	2,540	5,620
Subtotal	**2,540**	**2,540**	**5,620**
LLW	80	80	0
HAZ	80	80	190
Total	**2,700**	**2,700**	**5,810**

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.

Background

The 200 Area Effluent Treatment Facility is designed to provide effluent treatment and disposal capabilities required to support the continued operation of the 242-A Evaporator and to process the stored evaporator effluents in the Liquid Effluent Retention Facility (LERF). Operations began in 1995 and will continue through 2033.

The mission of 200 Area Effluent Treatment Facility is to treat liquid waste on the Hanford site to a level at which the end product meets the limits within the facility's State Waste Discharge permit for release to the environment.

Forecast Assumptions and Comments

The minimum and maximum range for this waste is 79% and 117% of the baseline. The minimum percentage assumes that all solid waste from 200-UP-1 groundwater, N-Basin water, and purge water are sent to ERDF. The maximum percentage assumes that all these are sent to SWDD.

Other Forecast Data

- **Low Level Waste**
  - 80 m³ of LLW is expected from the 200 Area Effluent Treatment Facility.
  - No LLW was indicated in the FY96 forecast.
  - 208 liter drums will contain all of this LLW.
  - The physical LLW forms are 55% debris (five different kinds), 35% organic solids, and 10% inorganic solids.

- **Hazardous Waste**
  - A total of 80 m³ of hazardous waste is expected from 200 Area Effluent Treatment Facility for management by the CWC.

GENERATORS: 300 Area/Treated Effluent Disposal Facilities · *C018H-200 Area Effluent Treatment Facility*
PROGRAMS: Analytical Services · EM-40 · Facility Transitions · Landlord · Liquid Effluent · NP · Offsite · PNNL · RCRA · Solid Waste · SNF · TWRS

CHARACTERISTICS: CH_LLMW · RH_LLMW · CH_TRU(M) · RH_TRU(M) · GTC III · LLW · HAZ	CONTAINERS: CH_LLMW · RH_LLMW · CH_TRU(M) · RH_TRU(M) · GTC III · LLW · HAZ

WASTE CLASSES: CH_LLMW · RH_LLMW · CH_TRU(M) · RH_TRU(M) · GTC III · LLW · HAZ
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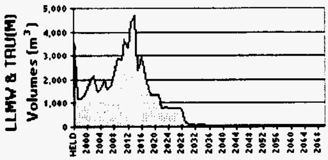


SWIFT Report: FY1997 to FY2070, rev. 1

Hanford → **Non-Programmatic** → (Generators)
→ (Waste Classes) → (Containers) → (Characteristics)
→ (Reports)
→ (Tools)

Site Rev. date: *12/31/96*

Data version: *97.1*

Data currency: *10/25/96*

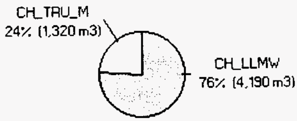
Non-Programmatic

Contents

Highlights

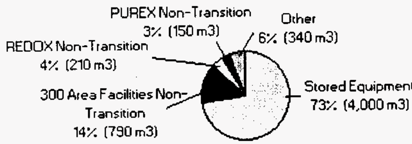
- The forecast life cycle for all non-programmatic generators ends in 2037.
- The life cycle total of LLMW and TRU(M) waste for these generators is 5,510 m^3, or 8% of the Hanford total.
- This forecast shows a 36% decrease from the FY96 forecast of 8,590 m^3, due to a revised estimate for Stored Equipment (formerly Buried Equipment) based on new information.
- CH_LLMW is the primary waste class generated, representing 76% (4,190 m^3) of the waste volume.
- Stored Equipment is the major source of waste, generating 73% (4,000 m^3) of the waste volume.
- The containers used by this generator include large boxes (72% by volume), 208 liter drums (25%), and SWBs (3%).
- Every generator but one will use 208 liter drums to ship LLMW and TRU(M) waste.
- The physical waste forms reported show 98% of the LLMW and TRU(M) waste volume to be debris. Lab packs, special waste, organic, and inorganic solids are all included, but account for negligible volumes.
- The Non-Programmatic program forecasts more kinds of hazardous constituents than any other program. Nearly all (91%) of the LLMW and TRU(M) waste volume is metals without mercury and organic mixed constituents. Metals without mercury represents 5%, and the last 4% includes many mixed hazardous constituents.

Waste Class Distribution



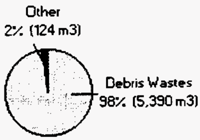
Total = 5,510 m3

Generator Distribution



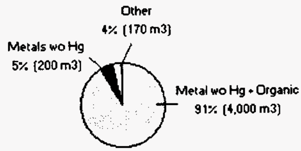
Total = 5,510 m3

Physical Waste Form Distribution



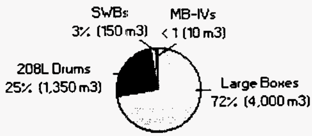
Total = 5,510 m3

Hazardous Constituent Distribution



Total = 4,370 m3
Note: Includes LLMW and TRUM only

Container Distribution



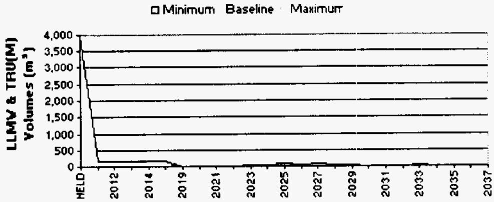
Total = 5,510 m3

Sum of totals may not add due to rounding: numbers over 10 m^3 are rounded to the nearest 10 m^3, numbers less than 10 m^3 are rounded to integers, non-zero numbers less than 1 are rounded to 1.

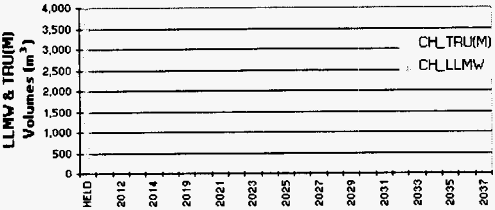
Annual Waste Class Volumes

The majority of waste expected from non-programmatic generators is in the HELD category. This is Stored Equipment waste that currently exists, but for which no shipping schedule has been set. In addition to HELD waste, non-programmatic generators will generate waste intermittently from 2011 through 2037.

Annual Baseline Volumes



Annual Baseline by Waste Class



Summary Table (Volumes in m³)

Non Programmatic Summary: Generator	CH_LLMW	CH_TRU(M)	*Subtotal*	PCT
Stored Equipment	4,000	0	*4,000*	73%
300 Area Facilities Non-Transition	60	730	*790*	14%
REDOX Non-Transition	2	210	*210*	4%
PUREX Non-Transition	50	110	*150*	3%
PFP Non-Transition	80	60	*130*	2%
400 Area Facilities Non-Transition	0	70	*70*	1%
B Plant Non-Transition	0	60	*60*	1%
T Plant Non-Transition	0	40	*40*	1%
Site Support Non-Transition	0	30	*30*	1%
U Plant Non-Transition	3	10	*10*	0%
Total	***4,190***	***1,320***	***5,510***	100%
PCT	76%	24%	*100%*	

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.

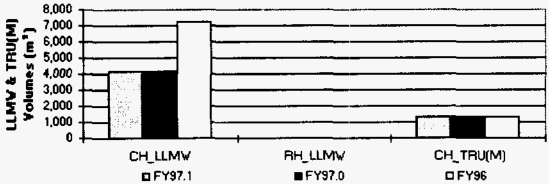
Comparison to Previous Baseline(s)

The FY97 forecast shows a decrease from the FY96 forecast of 8,590 m³. This decrease is due to a revised estimate of the amount of waste expected from Stored Equipment, based on new information regarding the location and amount of waste to be managed.

The forecast estimates for other generators within this group are equivalent to the FY96 forecast.

Unlike the 1996 hazardous constituent forecast which showed 80% of the volume as organic waste, the 1997 forecast is mostly organic and metals without mercury waste combined. The 1996 forecast also expected 18% of the volume to be metals without mercury, which is only 5% of the volume this year. In essence then, waste is currently expected to have a combined hazardous constituent makeup, whereas the previous forecast showed the constituents well separated.

Comparison to Previous Baseline(s) by Waste Class



Non-Programmatic Comparison: **Waste Class**	**FY97.1 Forecast (m^3)**	**FY97.0 Forecast (m^3)**	**FY96 Forecast (m^3)**
CH_LLMW	4,190	4,190	7,270
RH_LLMW	0	0	0
CH_TRU(M)	1,320	1,320	1,320
Subtotal	***5,510***	***5,510***	***8,590***
LLW	2,330	2,330	2,330
HAZ	0	0	500
Total	***7,840***	***7,840***	***11,420***

Sum of totals may not add due to rounding: numbers over 10 m^3 are rounded to the nearest 10 m^3, numbers less than 10 m^3 are rounded to integers, non-zero numbers less than 1 are rounded to 1.

Background

Non-programmatic generators include generators not currently within a Hanford program, and generators with uncertainties regarding which program is responsible for their future waste-generating activities ("orphan" facilities).

Forecast Assumptions and Comments

The volumes reported for most non-Programmatic waste generators are from BEMR estimates from FY96. In particular, "orphan" facility waste volumes were estimated by BEMR through use of a modeling tool that projected future transitional waste volumes for those facilities currently not within the Facility Transitions program.

In addition, the Stored Equipment (formerly Buried Equipment) generator has not completed a forecast since 1992 as no program currently has responsibility for this waste; therefore, waste volumes from the 1992 forecasts have been used as a starting point for this generator, with revisions this year based on new information. One result is that this generator's name has been changed from the FY96 forecast name of Buried Equipment, because it has been determined that the waste is not buried as previously thought, but is stored in 2711-E.

In addition, the container, hazardous constituent, physical waste form, radionuclides, handling characteristics, and waste class information was assumed to be similar to that within the Facility Transition Program. For this generator, the average information from Facility Transition Program was used.

Minimum and maximum ranges are assumed to be 100%.

Other Forecast Data

- **Low Level Waste**
  - A total of 2,330 m^3 of LLW is expected from non-programmatic generators.
  - This forecast shows no change from the FY96 forecast.
  - The physical LLW forms reported shows 96% of the volume to be debris. Soil and soil/gravel accounts for 3% of the volume, and fractions of organic solids, inorganic solids, and lab packs are also forecast.
  - 45% of this LLW will be contained in MB-V boxes, 38% of the volume is to be in 208 liter drums, Medium boxes contain 14%, and other boxes and drums hold the last 3%.

- **Hazardous Waste**
  - No hazardous waste from non-programmatic generators is expected to be managed by the CWC.

GENERATORS:
300 Area Facilities Non-Transition · 400 Area Facilities Non-Transition · B Plant Non-Transition · PFP Non-Transition · PUREX Non-Transition · REDOX Non-Transition · Site Support Non-Transition · Stored Equipment · T Plant Non-Transition · U Plant Non-Transition

PROGRAMS:
Analytical Services · EM-40 · Facility Transitions · Landlord · Liquid Effluent · *NP* · Offsite · PNNL · RCRA · Solid Waste · SNF · TWRS

CHARACTERISTICS:
CH_LLMW · RH_LLMW · CH_TRU(M) · RH_TRU(M) · GTC III · LLW · HAZ

CONTAINERS:
CH_LLMW · RH_LLMW · CH_TRU(M) · RH_TRU(M) · GTC III · LLW · HAZ

WASTE CLASSES:
CH_LLMW · RH_LLMW · CH_TRU(M) · RH_TRU(M) · *GTC III* · LLW · HAZ

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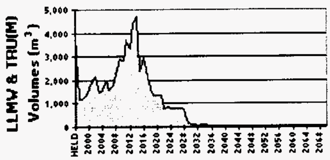


SWIFT Report: FY1997 to FY2070, rev. 1

Hanford → Non-Programmatic → *300 Area Facilities Non-Transition* → (Containers) → (Characteristics)
→ (Waste Classes)
→ (Reports)
→ (Tools)

Site Rev. date: *12/31/96*

Data version: *97.1*

Data currency: *10/25/96*

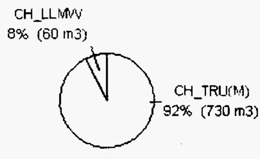
Non-Programmatic — 300 Area Facilities Non-Transition

Contents

Highlights

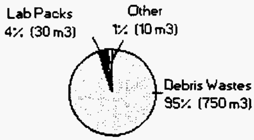
- 300 Area Facilities – Non-Transition (NP_300) contributes 790 m³ (14%) of the non-programmatic generators' LLMW and TRU(M) solid waste forecast.
- The end of life cycle for NP_300 is 2015.
- CH_TRU(M) is the primary waste class generated, representing 92% of the waste (730 m³).
- The majority of the containers to be sent are 208 liter drums (85%), but SWBs account for 15% by volume.
- Physical LLMW and TRU(M) waste forms are 95% debris. Lab packs, special wastes, organic solids, inorganic solids, and soil/gravel are expected as well but in fractional volumes.
- This generator expects more hazardous constituent varieties than any other. Metals without mercury composes 61% of the LLMW and TRU(M) waste volume, while mixed ignitable, corrosive, metals without mercury, organic, state regulated compose 19%, and metals without mercury, organic, state regulated mixed constituents compose 13%. Other hazardous constituents accounts for the last 7%.

Waste Class Distribution



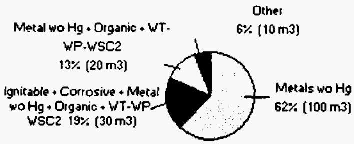
Total = 790 m3

Physical Waste Form Distribution



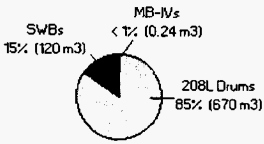
Total = 790 m3

Hazardous Constituent Distribution



Total = 160 m3
Note: Includes LLMW and TRUM only

Container Distribution

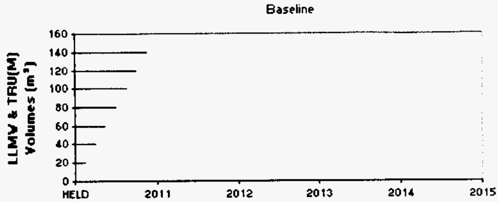


Total = 790 m3

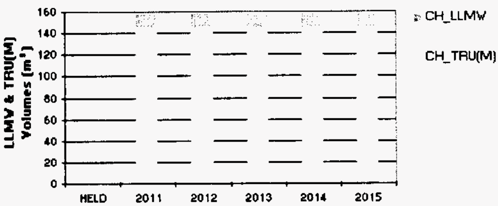
Sum of totals may not add due to rounding: numbers over 10 m³ are rounded to the nearest 10 m³, numbers less than 10 m³ are rounded to integers, non-zero numbers less than 1 are rounded to 1.

Annual Volumes

Annual Baseline Volumes



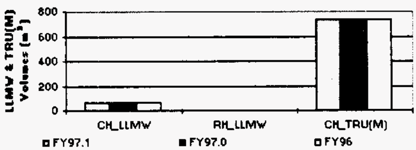
Annual Baseline by Waste Class



Comparison to Previous Baseline(s)

The FY97 forecast is equivalent to the FY96 forecast.

Comparison to Previous Baseline(s) by Waste Class



300 Area Facilities Non-Transition Comparison: Waste Class	FY97.1 Forecast (m³)	FY97.0 Forecast (m³)	FY96 Forecast (m³)
CH_LLMW	60	60	60
RH_LLMW	0	0	0
CH_TRU(M)	730	730	730
Subtotal	***790***	***790***	***790***
LLW	1,420	1,420	1,420
HAZ	0	0	180
Total	***2,210***	***2,210***	***2,390***

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.

Background

This waste generator is a grouping of 32 facilities that are expected to require deactivation in 2011 through 2015. The deactivation of these facilities has not been included in the planning baseline of any program to date; therefore, the solid waste resulting from deactivation of these facilities has been deemed "non-programmatic."

Forecast Assumptions and Comments

The volumes reported for this generator are from BEMR estimates from FY96. In particular, waste volumes were estimated by BEMR through use of a modeling tool that projected future transitional waste volumes. In addition, the container, hazardous constituent, physical waste form, radionuclides, handling characteristics, and waste class information was assumed to be similar to that within the Facility Transition Program. For this generator, the average information from Facility Transition Program was used.

Minimum and maximum ranges were not collected for this generator, since forecast volumes were obtained from BEMR model results that did not account for variations in waste generation. In this case, the assumption is made that minimum and maximum ranges for the waste are 100% and 100% respectively.

Other Forecast Data

- **Low Level Waste**
  - A total of 1,420 m^3 of LLW is expected from NP_300.
  - This forecast shows no change from the FY96 forecast.
  - Physical LLW forms are 95% debris. Soil/gravel, lab packs, organic solids, inorganic solids, and shielding are expected as well but in fractional volumes.
  - Of the containers used for LLW, both MB-V boxes and 208 liter drums share similar volumes: 45% and 44% respectively. Medium boxes hold 11%, while a negligible volume will utilize various boxes and drums.
- **Hazardous Waste**
  - No hazardous waste is expected from NP_300 for management by the CWC.

GENERATORS:

300 Area Facilities Non-Transition · 400 Area Facilities Non-Transition · B Plant Non-Transition · PFP Non-Transition · PUREX Non-Transition · REDOX Non-Transition · Site Support Non-Transition · Stored Equipment · T Plant Non-Transition · U Plant Non-Transition

PROGRAMS:

Analytical Services · EM-40 · Facility Transitions · Landlord · Liquid Effluent · NP · Offsite · PNNL · RCRA · Solid Waste · SNF · TWRS

CHARACTERISTICS:

CH_LLMW · RH_LLMW · CH_TRU(M) · RH_TRU(M) · GTC III · LLW · HAZ

CONTAINERS:

CH_LLMW · RH_LLMW · CH_TRU(M) · RH_TRU(M) · GTC III · LLW · HAZ

WASTE CLASSES:

CH_LLMW · RH_LLMW · CH_TRU(M) · RH_TRU(M) · GTC III · LLW · HAZ

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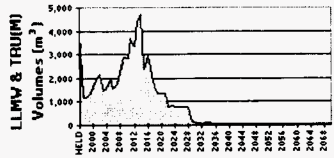

SWIFT Report: FY1997 to FY2070, rev. 1

Hanford → Non-Programmatic → *400 Area Facilities Non-Transition*
→ (Waste Classes) → (Containers) → (Characteristics)
→ (Reports)
→ (Tools)

Site Rev. date: *12/31/96*

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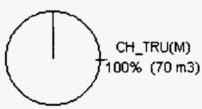
Non-Programmatic — 400 Area Facilities Non-Transition

Contents

Highlights

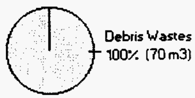
- 400 Area Facilities - Non-Transition (NP_400) contributes 70 m³ (1%) of the non-programmatic generators' LLMW and TRU(M) solid waste forecast.
- The end of life cycle for NP_400 is 2023.
- CH_TRU(M) is the only waste class generated, representing 100% of the waste (70 m³).
- The great majority of this volume (89%) will be contained in 208 liter drums, and SWBs will be used also (11%).
- All of the TRU(M) waste volume is debris (heterogeneous, contaminated metal, plastic/rubber, and organic).

Waste Class Distribution



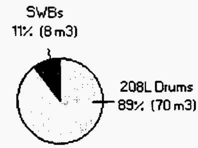
Total = 70 m3

Physical Waste Form Distribution



Total = 70 m3

Container Distribution

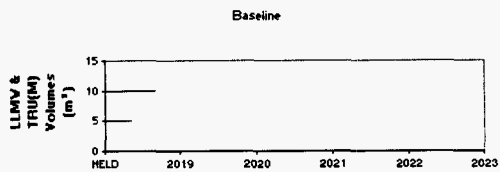


Total = 70 m3

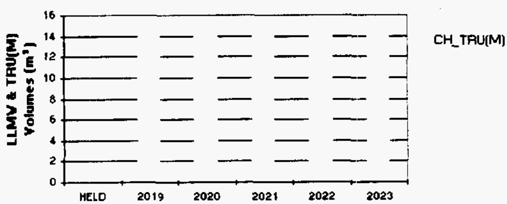
Sum of totals may not add due to rounding: numbers over 10 m^3 are rounded to the nearest 10 m^3, numbers less than 10 m^3 are rounded to integers, non-zero numbers less than 1 are rounded to 1.

Annual Volumes

Annual Baseline Volumes



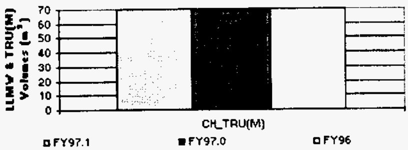
Annual Baseline by Waste Class



Comparison to Previous Baseline(s)

The FY97 forecast is equivalent to the FY96 forecast.

Comparison to Previous Baseline(s) by Waste Class



400 Area Facilities Non-Transition Comparison: Waste Class	FY97.1 Forecast (m^3)	FY97.0 Forecast (m^3)	FY96 Forecast (m^3)
CH_TRU(M)	70	70	70
Subtotal	*70*	*70*	*70*
LLW	100	100	100
HAZ	0	0	20
Total	*170*	*170*	*190*

Sum of totals may not add due to rounding: numbers over 10 m^3 are rounded to the nearest 10 m^3, numbers less than 10 m^3 are rounded to integers, non-zero numbers less than 1 are rounded to 1.

Background

This waste generator is a grouping of facilities at the 400 Area that are expected to require deactivation. The deactivation of these facilities has not been included in the planning baseline of any program to date; therefore, the solid waste resulting from deactivation of these facilities has been deemed "non-programmatic."

Forecast Assumptions and Comments

The volumes reported for this generator are from BEMR estimates from FY96. In particular, waste volumes were estimated by BEMR through use of a modeling tool that projected future transitional waste volumes. In addition, the container, hazardous constituent, physical waste form, radionuclides, handling characteristics, and waste class information was assumed to be similar to that within the Facility Transition Program. For this generator, the average information from the FFTF Transition Facility was used.

Minimum and maximum ranges were not collected for this generator, since forecast volumes were obtained from BEMR model results that did not account for variations in waste generation. In this case, the assumption is made that minimum and maximum ranges for the waste are 100% and 100% respectively.

Other Forecast Data

- **Low Level Waste**
  - A total of 100 m^3 of LLW is expected from NP_400.
  - This forecast shows no change from the FY96 forecast.
  - 208 liter drums are forecast to contain 39% of the LLW volume, Other drums will contain 36%, and one-quarter of the waste will use MB-V boxes.
  - This physical LLW form is all debris except for 3 cubic meters of forecast organic particulates.

- **Hazardous Waste**
  - No hazardous waste is expected from NP_400 for management by the CWC.

GENERATORS: 300 Area Facilities Non-Transition · *400 Area Facilities Non-Transition* · B Plant Non-Transition · PFP Non-Transition · PUREX Non-Transition · REDOX Non-Transition · Site Support Non-Transition · Stored Equipment · T Plant Non-Transition · U Plant Non-Transition	
PROGRAMS: Analytical Services · EM-40 · Facility Transitions · Landlord · Liquid Effluent · NP · Offsite · PNNL · RCRA · Solid Waste · SNF · TWRS	
CHARACTERISTICS: CH_LLMW · RH_LLMW · CH_TRU(M) · RH_TRU(M) · GTC III · LLW · HAZ	CONTAINERS: CH_LLMW · RH_LLMW · CH_TRU(M) · RH_TRU(M) · GTC III · LLW · HAZ
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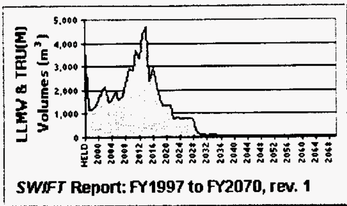

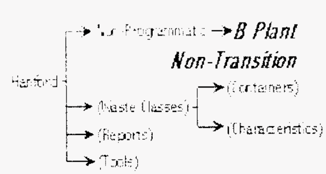

Site Rev. date: *12/31/96*

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Data currency: *10/25/96*

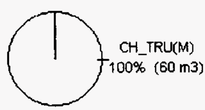
Non-Programmatic — B Plant Non-Transition

Contents

Highlights

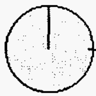
- B Plant- Non-Transition (NP_B Plant) contributes 60 m^3 (1%) of the non-programmatic generators' LLMW and TRU(M) solid waste forecast.
- The end of life cycle for NP_B Plant is 2025.
- CH_TRU(M) is the only waste class generated, representing 100% of the waste (60 m^3).
- B Plant projects to utilize SWBs for 12% of their TRU(M) waste, with the rest of it in 208 liter drums.
- Physical TRU(M) waste forms are 100% debris.
- The TRU(M) waste will be 100% metals without mercury.

Waste Class Distribution



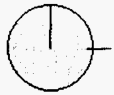
Total = 60 m3

Physical Waste Form Distribution



Total = 60 m3

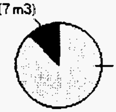
Hazardous Constituent Distribution



Total = 1 m3

Note: Includes LLMW and TRUM only

Container Distribution

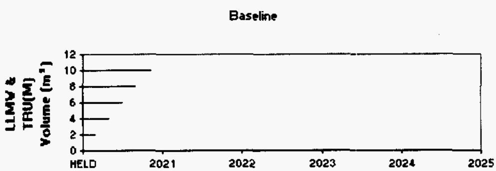


Total = 60 m3

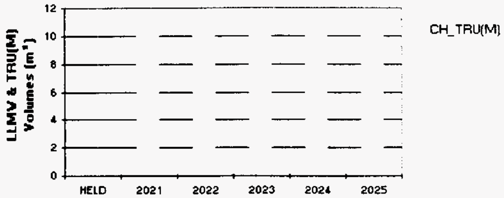
Sum of totals may not add due to rounding: numbers over 10 m³ are rounded to the nearest 10 m³, numbers less than 10 m³ are rounded to integers, non-zero numbers less than 1 are rounded to 1.

Annual Volumes

Annual Baseline Volumes



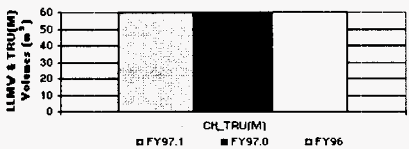
Annual Baseline by Waste Class



Comparison to Previous Baseline(s)

The FY97 forecast is equivalent to the FY96 forecast.

Comparison to Previous Baseline(s) by Waste Class



B Plant Non-Transition Comparison: Waste Class	FY97.1 Forecast (m³)	FY97.0 Forecast (m³)	FY96 Forecast (m³)
CH_TRU(M)	60	60	60
Subtotal	*60*	*60*	*60*
LLW	90	90	90
HAZ	0	0	10
Total	*150*	*150*	*160*

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.

Background

This waste generator represents B Plant deactivation. The deactivation has not been included in the planning baseline of any program to date; therefore, the solid waste resulting from this deactivation has been deemed "non-programmatic."

Forecast Assumptions and Comments

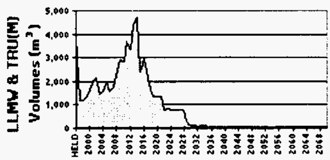
The volumes reported for this generator are from BEMR estimates from FY96. In particular, waste volumes were estimated by BEMR through use of a modeling tool that projected future transitional waste volumes. In addition, the container, hazardous constituent, physical waste form, radionuclides, handling characteristics, and waste class information was assumed to be similar to that within the Facility Transition Program. For this generator, the average information from the B Plant Transition Facility was used.

Minimum and maximum ranges were not collected for this generator, since forecast volumes were obtained from BEMR model results that did not account for variations in waste generation. In this case, the assumption is made that minimum and maximum ranges for the waste are 100% and 100% respectively.

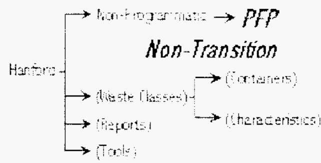
Other Forecast Data

- **Low Level Waste**
  - A total of 90 m³ of LLW is expected from NP_B Plant.
  - This forecast shows no change from the FY96 forecast.
  - The LLW will be sent in a variety of containers including boxes (37% by volume), 208 liter drums (13%), and 50% in Medium boxes.
  - The physical LLW forms are 87% debris, 6% soil and soil/gravel, 3% inorganic solids, 3% organic solids, and 1% shielding.

- **Hazardous Waste**
  - No hazardous waste is expected from NP_B Plant for management by the CWC.



SWIFT Report: FY1997 to FY2070, rev. 1



Site Rev. date: *12/31/96*

Data version: *97.1*

Data currency: *10/25/96*

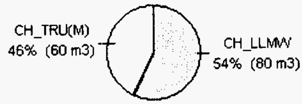
Non-Programmatic — PFP Non-Transition

Contents

Highlights

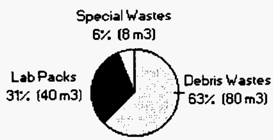
- PFP-Non-Transition (NP_PFP) contributes 130 m³ (2%) of the non-programmatic generators' LLMW and TRU(M) solid waste forecast.
- The end of life cycle for NP_PFP is 2037.
- CH_LLMW and CH_TRU(M) are generated in roughly equal proportions.
- SWBs will be used for some CH_TRU(M) waste (7% of the total volume), and 208 liter drums for the remaining 93%.
- The physical waste forms are mostly debris. In addition, organic lab packs account for 31% of the volume, and special waste composes 6%.
- LLMW and TRU(M) waste hazardous constituents are mixed ignitable, corrosive, metals without mercury, organic, state regulated (42% by volume), mixed metals without mercury, organic, state regulated (33%), metals without mercury (22%), and state regulated (3%).

Waste Class Distribution



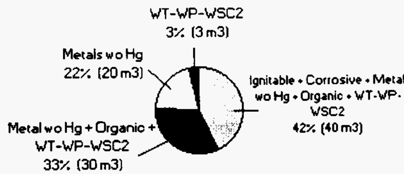
Total = 130 m3

Physical Waste Form Distribution



Total = 130 m3

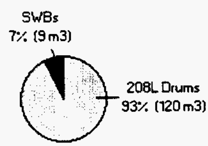
Hazardous Constituent Distribution



Total = 90 m3

Note: Includes LLMW and TRUM only

Container Distribution

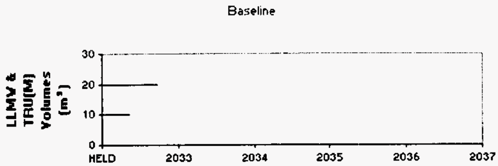


Total = 130 m3

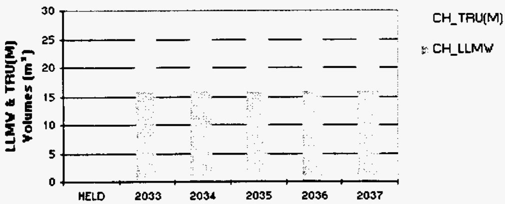
Sum of totals may not add due to rounding: numbers over 10 m³ are rounded to the nearest 10 m³, numbers less than 10 m³ are rounded to integers, non-zero numbers less than 1 are rounded to 1.

Annual Volumes

Annual Baseline Volumes



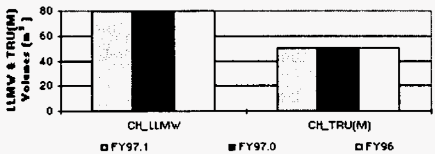
Annual Baseline by Waste Class



Comparison to Previous Baseline(s)

The FY97 forecast is equivalent to the FY96 forecast.

Comparison to Previous Baseline(s) by Waste Class



PFP Non-Transition Comparison: Waste Class	FY97.1 Forecast (m³)	FY97.0 Forecast (m³)	FY96 Forecast (m³)
CH_LLMW	80	80	80
CH_TRU(M)	50	50	50
Subtotal	***130***	***130***	***130***
LLW	70	70	70
HAZ	0	0	10
Total	***200***	***200***	***210***

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.

Background

This waste generator represents PFP deactivation. The deactivation has not been included in the planning baseline of any program to date; therefore, the solid waste resulting from this deactivation has been deemed "non-programmatic."

Forecast Assumptions and Comments

The volumes reported for this generator are from BEMR estimates from FY96. In particular, waste volumes were estimated by BEMR through use of a modeling tool that projected future transitional waste volumes. In addition, the container, hazardous constituent, physical waste form, radionuclides, handling characteristics, and waste class information was assumed to be similar to that within the Facility Transition Program. For this generator, the average information from the PFP Transition Facility was used.

Minimum and maximum ranges were not collected for this generator, since forecast volumes were obtained from BEMR model results that did not account for variations in waste generation. In this case, the assumption is made that minimum and maximum ranges for the waste are 100% and 100% respectively.

Other Forecast Data

- **Low Level Waste**
  - A total of 70 m^3 of LLW is expected from NP_PFP.
  - This forecast shows no change from the FY96 forecast.
  - Except for a tiny amount of waste in MB-IV boxes, the containers forecast are 208 liter drums (61% by volume) and MB-V boxes (39%).
  - The physical LLW form from PFP is 98% debris (by volume). Soil and soil/gravel is also expected for 2% of the LLW.

- **Hazardous Waste**
  - No hazardous waste is expected from NP_PFP for management by the CWC.

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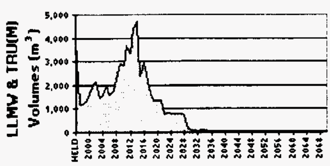


SWIFT **Report: FY1997 to FY2070, rev. 1**

Hanford → Non-Programmatic → *PURFX Non-Transition*
→ (Waste Classes) → (Containers) → (Characteristics)
→ (Reports)
→ (Tools)

Site Rev. date: *12/31/96*

Data version: *97.1*

Data currency: *10/25/96*

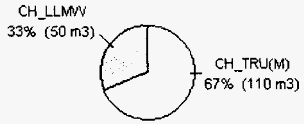
Non-Programmatic — PUREX Non-Transition

Contents

Highlights

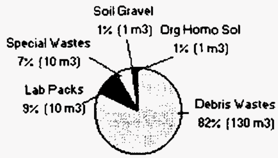
- PUREX - Non-Transition (NP_PUREX) contributes 150 m³ (3%) of the non-programmatic generators' LLMW and TRU(M) solid waste forecast.
- The end of life cycle for NP_PUREX is 2027.
- CH_TRU(M) is the primary waste class generated, representing 67% of the waste (110 m³).
- Nearly all of this waste will be in 208 liter drums, with 7% in MB-IV boxes.
- Debris accounts for 82% of the LLMW and TRU(M) waste volume. Other physical waste forms include lab packs (9%), special waste (7%), soil/gravel (1%), and organic solids (2%).
- LLMW and TRU(M) waste hazardous constituents are metals without mercury (51% by volume), mixed ignitable, corrosive, metals with mercury, organic, state regulated (17%), mixed metals without mercury, organic, state regulated (17%), mixed ignitable, metals with mercury, organic, state regulated (10%), and other hazardous contituents (5%).

Waste Class Distribution



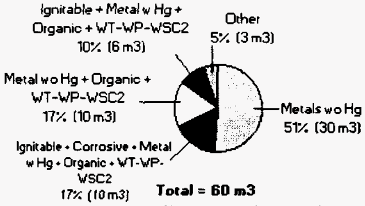
Total = 150 m3

Physical Waste Form Distribution



Total = 150 m3

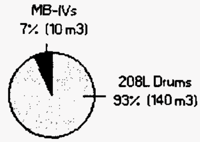
Hazardous Constituent Distribution



Total = 60 m3

Note: Includes LLMW and TRUM only

Container Distribution

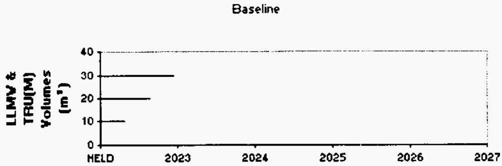


Total = 150 m3

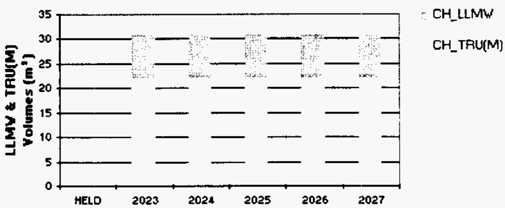
Sum of totals may not add due to rounding: numbers over 10 m^3 are rounded to the nearest 10 m^3, numbers less than 10 m^3 are rounded to integers, non-zero numbers less than 1 are rounded to 1.

Annual Volumes

Annual Baseline Volumes



Annual Baseline by Waste Class

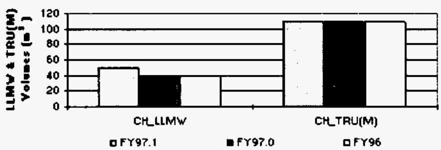


Comparison to Previous Baseline(s)

The FY97 forecast is equivalent to the FY96 forecast.

Comparison to Previous Baseline(s) by Waste Class

The apparent increase in the FY97.1 forecast of CH_LLMW for PUREX is a result of a change in the rounding formula.



PUREX Non-Transition Comparison: Waste Class	FY97.1 Forecast (m³)	FY97.0 Forecast (m³)	FY96 Forecast (m³)
CH_LLMW	50	40	40
CH_TRU(M)	110	110	110
Subtotal	*150*	*150*	*150*
LLW	170	170	170
HAZ	0	0	30
Total	*330*	*330*	*360*

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.

Background

This waste generator represents PUREX deactivation. The deactivation has not been included in the planning baseline of any program to date; therefore, the solid waste resulting from this deactivation has been deemed "non-programmatic."

Forecast Assumptions and Comments

The volumes reported for this generator are from BEMR estimates from FY96. In particular, waste volumes were estimated by BEMR through use of a modeling tool that projected future transitional waste volumes. In addition, the container, hazardous constituent, physical waste form, radionuclides, handling characteristics, and waste class information was assumed to be similar to that within the Facility Transition Program. For this generator, the average information from the PUREX Transition Facility was used.

Minimum and maximum ranges were not collected for this generator, since forecast volumes were obtained from BEMR model results that did not account for variations in waste generation. In this case, the assumption is made that minimum and maximum ranges for the waste are 100% and 100% respectively.

Other Forecast Data

- **Low Level Waste**
  - A total of 170 m^3 of LLW is expected from NP_PUREX.
  - This forecast shows no change from the FY96 forecast.
  - The containers for LLW are MB-V boxes (54% of the volume), 208 liter drums (24%), and also Medium boxes (22%).
  - 99% of the LLW is debris, and the remaining volume is soil/gravel and labpacks.

- **Hazardous Waste**
  - No hazardous waste is expected from NP_PUREX for management by the CWC.

GENERATORS:
300 Area Facilities Non-Transition · 400 Area Facilities Non-Transition · B Plant Non-Transition · PFP Non-Transition · *PUREX Non-Transition* · REDOX Non-Transition · Site Support Non-Transition · Stored Equipment · T Plant Non-Transition · U Plant Non-Transition

PROGRAMS:
Analytical Services · EM-40 · Facility Transitions · Landlord · Liquid Effluent · NP · Offsite · PNNL · RCRA · Solid Waste · SNF · TWRS

CHARACTERISTICS:
CH_LLMW · RH_LLMW · CH_TRU(M) · RH_TRU(M) · GTC III · LLW · HAZ

CONTAINERS:
CH_LLMW · RH_LLMW · CH_TRU(M) · RH_TRU(M) · GTC III · LLW · HAZ

WASTE CLASSES:
CH_LLMW · RH_LLMW · CH_TRU(M) · RH_TRU(M) · GTC III · LLW · HAZ

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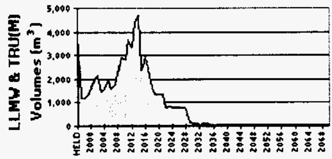


SWIFT Report: FY1997 to FY2070, rev. 1

Hanford → Non-Programmatic → *REDOX Non-Transition*
→ (Waste Classes) → (Containers)
→ (Characteristics)
→ (Reports)
→ (Tools)

Site Rev. date: *12/31/96*

Data version: *97.1*

Data currency: *10/25/96*

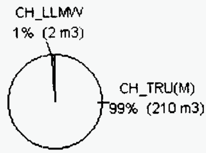
Non-Programmatic — REDOX Non-Transition

Contents

Highlights

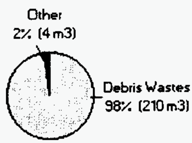
- REDOX - Non-Transition (NP_REDOX) contributes 210 m³ (4%) of the non-programmatic generators' LLMW and TRU(M) solid waste forecast.
- The end of life cycle for NP_REDOX is 2029.
- CH_TRU(M) is the primary waste class generated, representing almost 100% of the waste (rounded to 210 m³).
- Almost 100% of this volume will be in 208 liter containers.
- Physical waste forms from REDOX are 98% debris with the remaining 2% as miscellaneous hazardous constituents.
- LLMW and TRU(M) waste hazardous constituents are nearly all metals without mercury (96% by volume). The last 4% includes many other miscellaneous hazardous constituents.

Waste Class Distribution



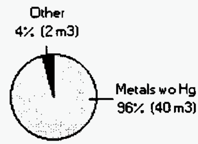
Total = 210 m3

Physical Waste Form Distribution



Total = 210 m3

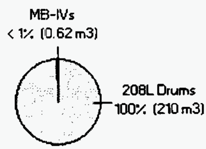
Hazardous Constituent Distribution



Total = 40 m3

Note: Includes LLMW and TRUM only

Container Distribution

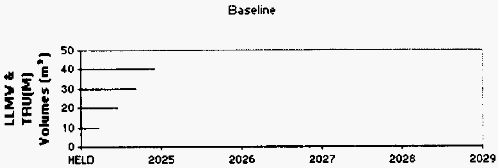


Total = 210 m3

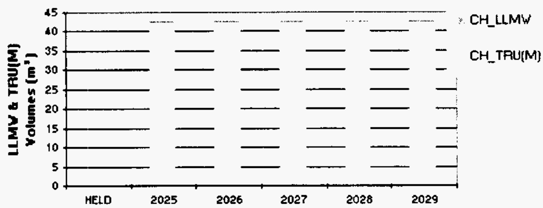
Sum of totals may not add due to rounding: numbers over 10 m^3 are rounded to the nearest 10 m^3, numbers less than 10 m^3 are rounded to integers, non-zero numbers less than 1 are rounded to 1.

Annual Volumes

Annual Baseline Volumes



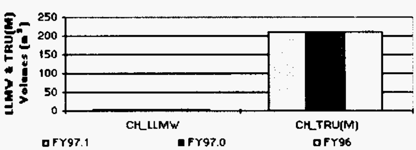
Annual Baseline by Waste Class



Comparison to Previous Baseline(s)

The FY97 forecast is equivalent to the FY96 forecast.

Comparison to Previous Baseline(s) by Waste Class



REDOX Non-Transition Comparison: Waste Class	FY97.1 Forecast (m^3)	FY97.0 Forecast (m^3)	FY96 Forecast (m^3)
CH_LLMW	2	2	2
CH_TRU(M)	210	210	210
Subtotal	*210*	*210*	*210*
LLW	300	300	300
HAZ	0	0	40
Total	*510*	*510*	*550*

Sum of totals may not add due to rounding: numbers over 10 m^3 are rounded to the nearest 10 m^3, numbers less than 10 m^3 are rounded to integers, non-zero numbers less than 1 are rounded to 1.

Background

This waste generator represents REDOX deactivation. The deactivation has not been included in the planning baseline of any program to date; therefore, the solid waste resulting from this deactivation has been deemed "non-programmatic."

Forecast Assumptions and Comments

The volumes reported for this generator are from BEMR estimates from FY96. In particular, waste volumes were estimated by BEMR through use of a modeling tool that projected future transitional waste volumes. In addition, the container, hazardous constituent, physical waste form, radionuclides, handling characteristics, and waste class information was assumed to be similar to that within the Facility Transition Program. For this generator, the average information from the PUREX Transition Facility was used.

Minimum and maximum ranges were not collected for this generator, since forecast volumes were obtained from BEMR model results that did not account for variations in waste generation. In this case, the assumption is made that minimum and maximum ranges for the waste are 100% and 100% respectively.

Other Forecast Data

- **Low Level Waste**
  - A total of 300 m^3 of LLW is expected from NP_REDOX.
  - This forecast shows no change from the FY96 forecast.
  - Half of the volume (54%) will utilize MB-V boxes, while 208 liter drums (24%) and Medium boxes (22%) constitute similar shares of the rest.
  - LLW physical forms are 99% debris. Lab packs and soil and soil/gravel total 1% of the volume.

- **Hazardous Waste**
  - No hazardous waste is expected from NP_REDOX for management by the CWC.

GENERATORS:
300 Area Facilities Non-Transition · 400 Area Facilities Non-Transition · B Plant Non-Transition · PFP Non-Transition · PUREX Non-Transition · *REDOX Non-Transition* · Site Support Non-Transition · Stored Equipment · T Plant Non-Transition · U Plant Non-Transition

PROGRAMS:
Analytical Services · EM-40 · Facility Transitions · Landlord · Liquid Effluent · NP · Offsite · PNNL · RCRA · Solid Waste · SNF · TWRS

CHARACTERISTICS:
CH_LLMW · RH_LLMW · CH_TRU(M) · RH_TRU(M) · GTC III · LLW · HAZ

CONTAINERS:
CH_LLMW · RH_LLMW · CH_TRU(M) · RH_TRU(M) · GTC III · LLW · HAZ

WASTE CLASSES:
CH_LLMW · RH_LLMW · CH_TRU(M) · RH_TRU(M) · GTC III · LLW · HAZ

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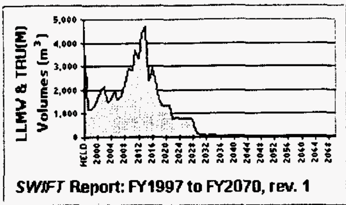
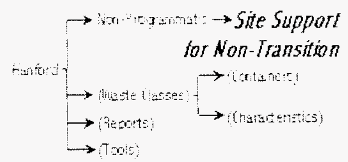




Site Rev. date: *12/31/96*

Data version: *97.1*

Data currency: *10/25/96*

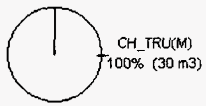
Non-Programmatic — Site Support for Non-Transition

Contents

Highlights

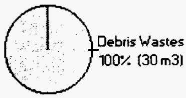
- Site Support Facilities - Non-Transition (NP_SITE) contributes 30 m³ (1%) of the non-programmatic generators' LLMW and TRU(M) solid waste forecast.
- The end of life cycle for NP_SITE is 2031.
- CH_TRU(M) is the only waste class generated, representing 100% of the waste (30 m³).
- SWBs will contain 16% of the TRU(M) waste volume, and 208 liter drums will contain 84% of the waste.
- Debris is the only physical waste form expected from Site Support.
- The TRU(M) waste hazardous constituents are 100% metals without mercury.

Waste Class Distribution



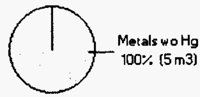
Total = 30 m3

Physical Waste Form Distribution



Total = 30 m3

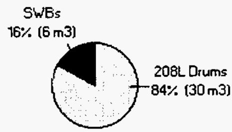
Hazardous Constituent Distribution



Total = 5 m3

Note: Includes LLMW and TRUM only

Container Distribution

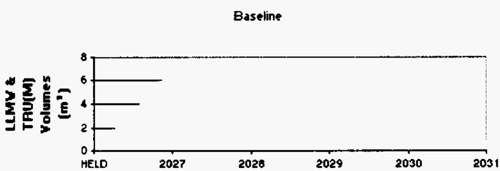


Total = 30 m3

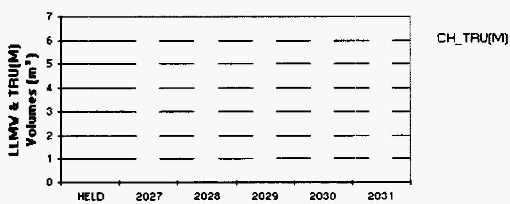
Sum of totals may not add due to rounding: numbers over 10 m³ are rounded to the nearest 10 m³, numbers less than 10 m³ are rounded to integers, non-zero numbers less than 1 are rounded to 1.

Annual Volumes

Annual Baseline Volumes



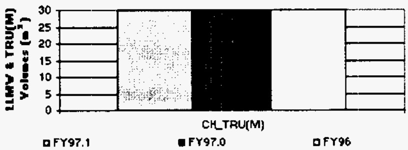
Annual Baseline by Waste Class



Comparison to Previous Baseline(s)

The FY97 forecast is equivalent to the FY96 forecast.

Comparison to Previous Baseline(s) by Waste Class



Site Support Non-Transition Comparison: Waste Class	FY97.1 Forecast (m³)	FY97.0 Forecast (m³)	FY96 Forecast (m³)
CH_TRU(M)	30	30	30
Subtotal	*30*	*30*	*30*
LLW	50	50	50
HAZ	0	0	180
Total	*90*	*90*	*270*

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.

Background

This waste generator represents deactivation of a group of site support facilities. The deactivation has not been included in the planning baseline of any program to date; therefore, the solid waste resulting from this deactivation has been deemed "non-programmatic."

Forecast Assumptions and Comments

The volumes reported for this generator are from BEMR estimates from FY96. In particular, waste volumes were estimated by BEMR through use of a modeling tool that projected future transitional waste volumes. In addition, the container, hazardous constituent, physical waste form, radionuclides, handling characteristics, and waste class information was assumed to be similar to that within the Facility Transition Program. For this generator, the average information from the Facility Transition Program was used.

Minimum and maximum ranges were not collected for this generator, since forecast volumes were obtained from BEMR model results that did not account for variations in waste generation. In this case, the assumption is made that minimum and maximum ranges for the waste are 100% and 100% respectively.

Other Forecast Data

- **Low Level Waste**

- A total of 50 m^3 of LLW is expected from NP_SITE.
- This forecast shows no change from the FY96 forecast.
- Both MB-V boxes and 208 liter drums will contain 44% of the LLW, leaving 12% in other boxes and drums.
- LLW physical forms are nearly all (95%) debris. 4% of the volume should be soil and soil/gravel, while inorganic solids, organic solids, shielding, and lab packs total 1%.

- **Hazardous Waste**

  - No hazardous waste is expected from NP_SITE for management by the CWC.

GENERATORS:
300 Area Facilities Non-Transition · 400 Area Facilities Non-Transition · B Plant Non-Transition · PFP Non-Transition · PUREX Non-Transition · REDOX Non-Transition · *Site Support Non-Transition* · Stored Equipment · T Plant Non-Transition · U Plant Non-Transition

PROGRAMS:
Analytical Services · EM-40 · Facility Transitions · Landlord · Liquid Effluent · NP · Offsite · PNNL · RCRA · Solid Waste · SNF · TWRS

CHARACTERISTICS:
CH_LLMW · RH_LLMW · CH_TRU(M) · RH_TRU(M) · GTC III · LLW · HAZ

CONTAINERS:
CH_LLMW · RH_LLMW · CH_TRU(M) · RH_TRU(M) · GTC III · LLW · HAZ

WASTE CLASSES:
CH_LLMW · RH_LLMW · CH_TRU(M) · RH_TRU(M) · GTC III · LLW · HAZ

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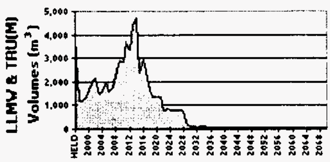


***SWIFT* Report: FY1997 to FY2070, rev. 1**

Hanford - → Non-Programmatic → *Stored Equipment*
→ (Waste Classes) → (Containers) → (Characteristics)
→ (Reports)
→ (Tools)

Site Rev. date:	*12/31/96*
Data version:	*97.1*
Data currency:	*10/25/96*

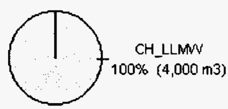
Non-Programmatic — Stored Equipment

Contents

Highlights

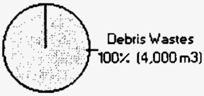
- Stored Equipment (formerly Buried Equipment) contributes 4,000 m³ (73%) of the non-programmatic generators' LLMW and TRU(M) solid waste forecast.
- All of Stored Equipment's waste is in the HELD category since a shipping schedule is undetermined due to funding issues.
- CH_LLMW is the only waste class generated, representing 100% of the waste (4,000 m³).
- All of the LLMW waste will be shipped in Large boxes.
- Contaminated metal debris is the only physical LLMW form
- The LLMW hazardous constituents are 100% metals without mercury and organic.

Waste Class Distribution



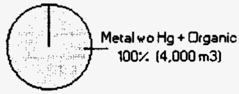
Total = 4,000 m3

Physical Waste Form Distribution



Total = 4,000 m3

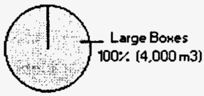
Hazardous Constituent Distribution



Total = 4,000 m3

Note: Includes LLMW and TRUM only

Container Distribution

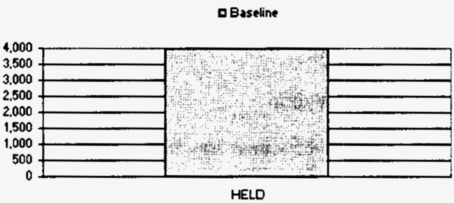


Total = 4,000 m3

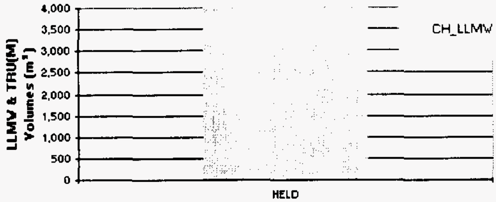
Sum of totals may not add due to rounding: numbers over 10 m³ are rounded to the nearest 10 m³, numbers less than 10 m³ are rounded to integers, non-zero numbers less than 1 are rounded to 1.

Annual Volumes

Annual Baseline Volumes



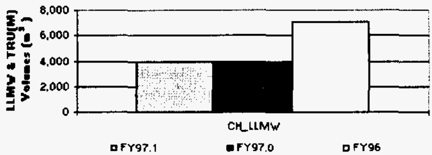
Annual Baseline by Waste Class



Comparison to Previous Baseline(s)

The FY97 forecast shows a decrease from the FY96 forecast of 7,080 m³. This decrease is due to a revised estimate based on new information regarding the location and amount of waste to be managed. Some of the previously forecasted equipment has been released for public use; thus, the waste volumes have been revised.

Comparison to Previous Baseline(s) by Waste Class



Stored Equipment Comparison: Waste Class	FY97.1 Forecast (m³)	FY97.0 Forecast (m³)	FY96 Forecast (m³)
CH_LLMW	4,000	4,000	7,080
Subtotal	*4,000*	*4,000*	*7,080*
Total	*4,000*	*4,000*	*7,080*

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.

Background

This generator has stored general purpose coded equipment since 1992. The waste includes vehicles and mobile construction units used in tank farms that are classified as contact-handled LLMW.

Forecast Assumptions and Comments

The Stored Equipment generator has not completed a forecast since 1992, as no program currently has responsibility for this waste; therefore, waste volumes from the 1992 forecasts have been used as a starting point for this generator, with revisions this year based on new information. One result is that this generator's name has been changed from the FY96 forecast name of Buried Equipment, because it has been determined that the waste is not buried as previously thought, but is stored in 2711-E. Although a path forward has not been determined for this equipment, a viable option is management at CWC—if funding is available.

The general assumption for Stored Equipment is that the material is currently not declared waste. However, if the path forward for this material is determined to be the Waste Management Program, it would be designated as LLMW.

No minimum and maximum ranges were provided by this generator. In this case, the assumption is made that minimum and maximum ranges for the waste are 100% and 100% respectively.

Other Forecast Data

- **Low Level Waste**
  - No LLW is expected from Stored Equipment.
- **Hazardous Waste**
  - No hazardous waste is expected from Stored Equipment for management by the CWC.

GENERATORS:
300 Area Facilities Non-Transition · 400 Area Facilities Non-Transition · B Plant Non-Transition · PFP Non-Transition · PUREX Non-Transition · REDOX Non-Transition · Site Support Non-Transition · *Stored Equipment* · T Plant Non-Transition · U Plant Non-Transition

PROGRAMS:
Analytical Services · EM-40 · Facility Transitions · Landlord · Liquid Effluent · NP · Offsite · PNNL · RCRA · Solid Waste · SNF · TWRS

CHARACTERISTICS:
CH_LLMW · RH_LLMW · CH_TRU(M) · RH_TRU(M) · GTC III · LLW · HAZ

CONTAINERS:
CH_LLMW · RH_LLMW · CH_TRU(M) · RH_TRU(M) · GTC III · LLW · HAZ

WASTE CLASSES:
CH_LLMW · RH_LLMW · CH_TRU(M) · RH_TRU(M) · GTC III · LLW · HAZ

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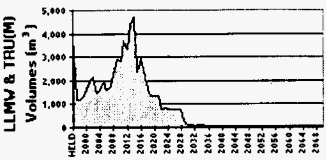


SWIFT Report: FY1997 to FY2070, rev. 1

Hanford → Non-Programmatic → *T Plant Non-Transition*

→ (Waste Classes) → (Containers) → (Characteristics)

→ (Reports)

→ (Tools)

Site Rev. date: *12/31/96*

Data version: *97.1*

Data currency: *10/25/96*

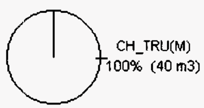
Non-Programmatic — T Plant Non-Transition

Contents

Highlights

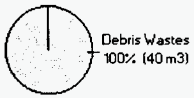
- T Plant - Non-Transition (NP_T Plant) contributes 40 m³ (1%) of the non-programmatic generators' LLMW and TRU(M) solid waste forecast.
- The end of life cycle for NP_T Plant is 2033.
- CH_TRU(M) is the only waste class generated, representing 100% of the waste (40 m³).
- The only containers expected to be used for this TRU(M) are 208 liter drums.
- 100% of the TRU(M) waste has the physical form of debris (organic, contaminated metal, and plastic/rubber).
- The TRU(M) waste hazardous constituents are 100% metals without mercury.

Waste Class Distribution



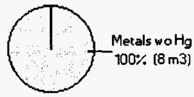
Total = 40 m3

Physical Waste Form Distribution



Total = 40 m3

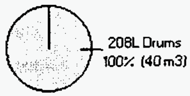
Hazardous Constituent Distribution



Total = 8 m3

Note: Includes LLMW and TRUM only

Container Distribution

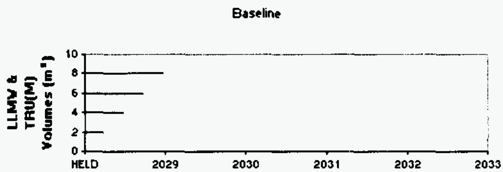


Total = 40 m3

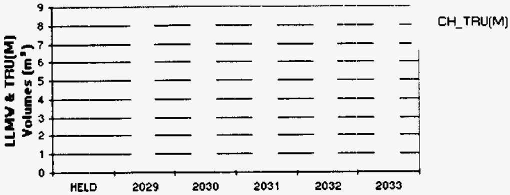
Sum of totals may not add due to rounding: numbers over 10 m³ are rounded to the nearest 10 m³, numbers less than 10 m³ are rounded to integers, non-zero numbers less than 1 are rounded to 1.

Annual Volumes

Annual Baseline Volumes



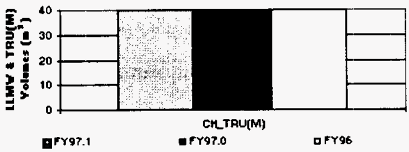
Annual Baseline by Waste Class



Comparison to Previous Baseline(s)

The FY97 forecast is equivalent to the FY96 forecast.

Comparison to Previous Baseline(s) by Waste Class



T Plant Non-Transition Comparison: Waste Class	FY97.1 Forecast (m³)	FY97.0 Forecast (m³)	FY96 Forecast (m³)
CH_TRU(M)	40	40	40
Subtotal	***40***	***40***	***40***
LLW	80	80	80
HAZ	0	0	40
Total	***120***	***120***	***160***

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.

Background

This waste generator represents T Plant deactivation. The deactivation has not been included in the planning baseline of any program to date; therefore, the solid waste resulting from this deactivation has been deemed "non-programmatic."

Forecast Assumptions and Comments

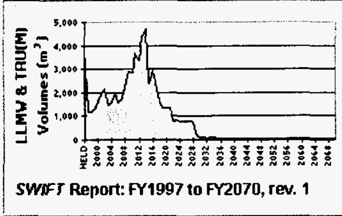
The volumes reported for this generator are from BEMR estimates from FY96. In particular, waste volumes were estimated by BEMR through use of a modeling tool that projected future transitional waste volumes. In addition, the container, hazardous constituent, physical waste form, radionuclides, handling characteristics, and waste class information was assumed to be similar to that within the Facility Transition Program. For this generator, the average information from the PUREX Transition Facility was used.

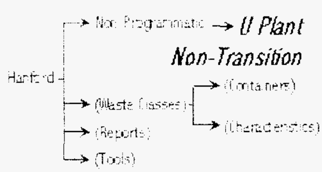
Minimum and maximum ranges were not collected for this generator, since forecast volumes were obtained from BEMR model results that did not account for variations in waste generation. In this case, the assumption is made that minimum and maximum ranges for the waste are 100% and 100% respectively.

Other Forecast Data

- **Low Level Waste**
  - A total of 80 m³ of LLW is expected from NP_T Plant.
  - This forecast shows no change from the FY96 forecast.
  - LLW should arrive in Medium boxes and 208 liter drums in near equal amounts (22% and 24% respectively), but 54% of the volume should be in MB-V boxes.
  - The LLW physical form is essentially all debris (99%). Soil, soil/gravel and lab packs compose 1% of the volume.

- **Hazardous Waste**
  - No hazardous waste is expected from NP_T Plant for management by the CWC.





Site Rev. date: *12/31/96*

Data version: *97.1*

Data currency: *10/25/96*

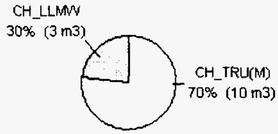
Non-Programmatic — U Plant Non-Transition

Contents

Highlights

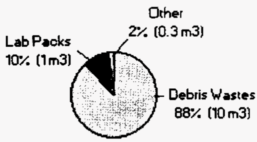
- U Plant - Non-Transition (NP_U Plant) contributes 10 m³ (<1%) of the non-programmatic generators' llmw and tru(m) solid waste forecast.
- The end of life cycle for NP_U Plant is 2035.
- CH_TRU(M) is the primary waste class generated, representing about 70% of the waste (rounded to 10 m³).
- 208 liter boxes (87% by volume) and SWBs (13%) are expected to contain the LLMW and TRU(M) waste.
- 88% of the waste will be debris, 10% lab packs, and the last 2% consists of organic solids, organic solids and soil/gravel.
- LLMW and TRU(M) waste hazardous constituents are metals without mercury (46% by volume), mixed ignitable, corrosive, metals without mercury, organic, state regulated (33%), and mixed metals without mercury, organic, state regulated (21%). The last 1% includes various other hazardous constituents.

Waste Class Distribution



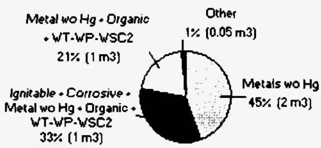
Total = 10 m3

Physical Waste Form Distribution



Total = 10 m3

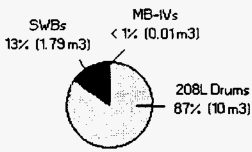
Hazardous Constituent Distribution



Total = 4 m3

Note: Includes LLMW and TRUM only

Container Distribution

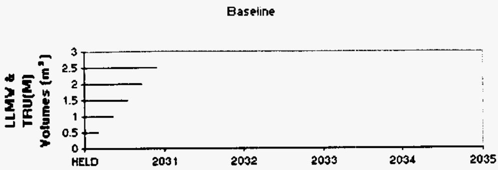


Total = 10 m3

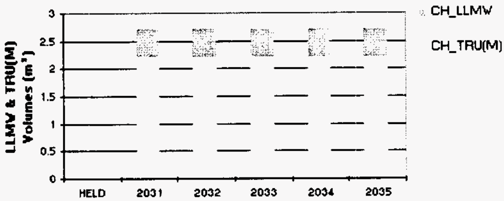
Sum of totals may not add due to rounding: numbers over 10 m³ are rounded to the nearest 10 m³, numbers less than 10 m³ are rounded to integers, non-zero numbers less than 1 are rounded to 1.

Annual Volumes

Annual Baseline Volumes



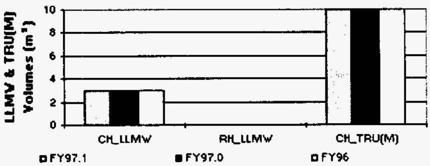
Annual Baseline by Waste Class



Comparison to Previous Baseline(s)

The FY97 forecast is equivalent to the FY96 forecast.

Comparison to Previous Baseline(s) by Waste Class



Comparison: Waste Class	FY97.1 Forecast (m³)	FY97.0 Forecast (m³)	FY96 Forecast (m³)
CH_LLMW	3	3	3
RH_LLMW	0	0	0
CH_TRU(M)	10	10	10
Subtotal	*10*	*10*	*10*
LLW	30	30	30
HAZ	0	0	5
Total	*50*	*50*	*50*

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.

Background

This waste generator represents U Plant deactivation. The deactivation has not been included in the planning baseline of any program to date; therefore, the solid waste resulting from this deactivation has been deemed "non-programmatic."

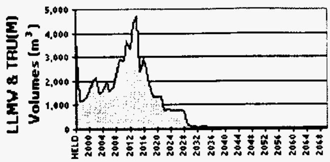
Forecast Assumptions and Comments

The volumes reported for this generator are from BEMR estimates from FY96. In particular, waste volumes were estimated by BEMR through use of a modeling tool that projected future transitional waste volumes. In addition, the container, hazardous constituent, physical waste form, radionuclides, handling characteristics, and waste class information was assumed to be similar to that within the Facility Transition Program. For this generator, the average information from the Facility Transition Program was used.

Minimum and maximum ranges were not collected for this generator, since forecast volumes were obtained from BEMR model results that did not account for variations in waste generation. In this case, the assumption is made that minimum and maximum ranges for the waste are 100% and 100% respectively.

Other Forecast Data

- **Low Level Waste**
  - A total of 30 m^3 of LLW is expected from NP_U Plant.
  - *This forecast shows no change from the FY96 forecast.*
  - 88% of the LLW volume will be evenly split between MB-V boxes and 208 liter drums, and other boxes and drums will contain the remaining 12%.
  - The physical forms for LLW are debris (95%), soil and soil/gravel (4%), while organic solids, inorganic solids, lab packs, and shielding total to 1% of the volume.
- **Hazardous Waste**
  - No hazardous waste is expected from NP_U Plant for management by the CWC.



SWIFT Report: FY1997 to FY2070, rev. 1

Hanford → Offsite → (Generators)
→ (Waste Classes) → (Containers) → (Characteristics)
→ (Reports)
→ (Tools)

Site Rev. date: *12/31/96*

Data version: *97.1*

Data currency: *10/25/96*

Offsite

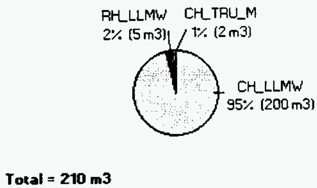
Contents

Highlights

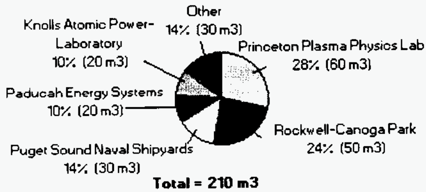
- The forecast life cycle for the Offsite program ends in 2070.
- A total of 210 m³ of LLMW and TRU(M) waste is expected from this program over the life cycle. This volume represents less than 1% of the total LLMW and TRU(M) waste expected at Hanford.
- This forecast shows a 38% decrease from the FY96 forecast of 340 m³ , primarily due to some generators that do not expect Hanford to be the primary site for waste treatment, while some other generators have shortened their life cycles.
- This forecast shows a 30 m³ increase from the FY97.0 version due to revised estimates from Paducah Energy Systems and Battelle Columbus Laboratory.
- CH_LLMW is the primary waste class, representing 95%, or 200 m³ of the Offsite waste volume.
- The Princeton Plasma Physics Laboratory generator is expected to generate the most waste in this program, 28% or 60 m³. The second highest generator is Rockwell-Canoga Park, expected to generate 24% or 50 m³.
- The Offsite program will be using two main kinds of containers for LLMW and TRU(M) waste volumes: 37% MB-IV boxes and 33% 208 liter drums. The remaining waste will be distributed similarly among 322 liter drums (10%), Small boxes (10%), and Other drums (10%).
- 50% of the volume is forecast to have the physical form of debris. Organic solids represent 29% of the volume, inorganic solids 14%, special waste 5%, and other physical waste forms comprise the remaining 2%.
- The Offsite program forecast 12 different kinds of hazardous constituents. The LLMW and TRU(M)

waste volume is 32% metals without mercury, 30% state regulated, 25% organic, 5% metals with mercury, and 4% ignitable constituents. The other 4% includes other miscellaneous hazardous constituents.

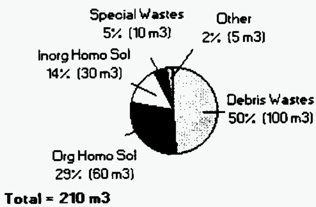
Waste Class Distribution



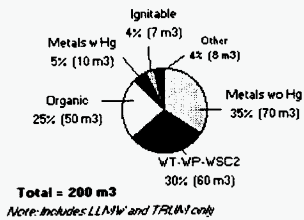
Generator Distribution



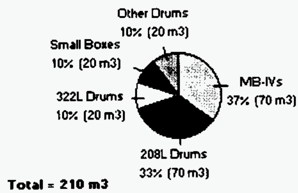
Physical Waste Form Distribution



Hazardous Constituent Distribution



Container Distribution

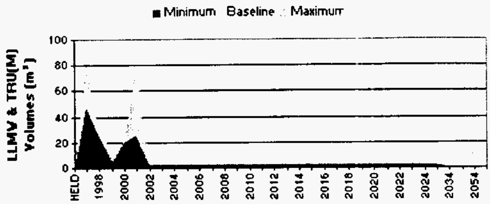


Sum of totals may not add due to rounding: numbers over 10 m³ are rounded to the nearest 10 m³, numbers less than 10 m³ are rounded to integers, non-zero numbers less than 1 are rounded to 1.

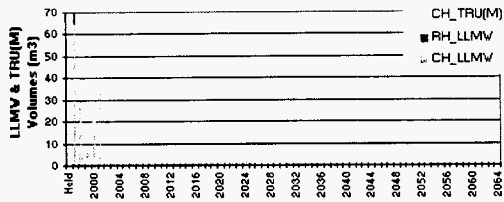
Annual Waste Class Volumes

Offsite program waste will be generated from 1997 to the end of life cycle in 2070. The large amount of LLMW forecast is in 1997, corresponding to initial waste shipments from Princeton Plasma Physics Laboratory and Rockwell-Canoga Park.

Annual Baseline Volumes



Annual Baseline by Waste Class



Summary Table (Volumes in m^3)

Offsite Summary: Generator	CH_LLMV	RH_LLMV	CH_TRU(M)	*Subtotal*	PCT
Princeton Plasma Physics Lab	60	0	0	*60*	28%
Rockwell-Canoga Park	50	0	0	*50*	24%
Puget Sound Naval Shipyards	30	0	0	*30*	14%
Paducah Energy Systems	20	0	0	*20*	10%
Knolls Atomic Power-Laboratory	10	5	0	*20*	10%
Battelle Columbus Laboratories	8	0	0	*8*	4%
General Atomics	7	0	0	*7*	3%
University of Utah	7	0	0	*7*	3%
Pearl Harbor Naval Shipyards	5	0	0	*5*	2%
Lawrence Berkeley Laboratory	0	0	1	*1*	< 1%
Portsmouth Naval Shipyards	1	0	0	*1*	< 1%
Ames Laboratory-Ames, Iowa	0	0	<1	*<1*	< 1%
Total	**200**	**5**	**2**	***210***	98%
PCT	97%	2%	1%	*100%*	

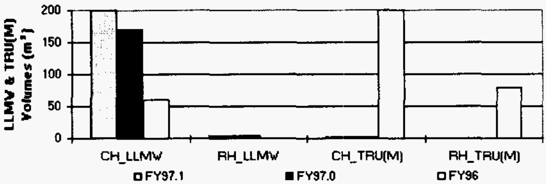
Sum of totals may not add due to rounding: numbers over 10 m^3 are rounded to the nearest 10 m^3, numbers less than 10 m^3 are rounded to integers, non-zero numbers less than 1 are rounded to 1.

Comparison to Previous Baseline(s)

The FY97.1 forecast for Offsite generators of 210 m^3 shows a 38% decrease from the FY96 forecast of 340 m^3. This reduction is because four generators do not expect Hanford to be the primary site for treatment, storage, and disposal of LLMW and TRU(M) waste. Additionally, the decrease from the FY96 forecast is that the life cycle end date being reported for a number of generators has been reduced from 2070 to earlier dates. The 2070 estimate for last year was based on the Hanford life cycle end date. This year, the generators have corrected this estimate by providing their own specifically scheduled end dates. The FY97.1 shows a 30 m³ increase from the FY97.0 volume of 180 m³ due to revised estimates from Paducah Energy systems and Battelle Columbus Laboratory.

The differences between the 1996 hazardous constituents forecast and this year's forecast are as follows: Metals without mercury composed 50% of the volume in 1996, but is currently down to 35%, while both state regulated and organic constituents have increased from single digit percents to around 25% of the volume; also, the amount of 'other' constituents has fallen.

Comparison to Previous Baseline(s) by Waste Class



Offsite Comparison: Waste Class	FY97.1 Forecast (m³)	FY97.0 Forecast (m³)	FY96 Forecast (m³)
CH_LLMW	200	170	60
RH_LLMW	5	5	0
CH_TRU(M)	2	2	200
RH_TRU(M)	0	0	80
Subtotal	**210**	**180**	**340**
LLW	46,500	46,500	170,830
Total	**46,710**	**46,680**	**171,170**

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.

Background

The missions for Offsite program include general maintenance and operations, environmental restoration, D&D, and research and development. There are 23 generators within the Offsite program. Most of these generators expect very little to no LLMW and TRU(M) waste.

Forecast Assumptions and Comments

The data reported are based on solid waste forecasts in all cases except 3 generators: Portsmouth, Pearl Harbor, and Puget Sound Naval Shipyards. For these generators, the Site Treatment Plans (STPs) are the basis for the data reported.

Note that for some of the generators other than the 3 noted above, the forecast waste levels are somewhat larger than waste levels set in their STPs. In each of these cases, the sites are currently negotiating with their respective states for an increase in the STP to meet the forecast level.

For 3 generators, Hanford is not the first choice for solid waste management: Ames, Princeton, and the University of Utah.

The minimum and maximum ranges for this waste are 78% and 139% of the baseline. These ranges are based on uncertainty of project schedules, uncertainty with waste characterization and volumes, and minimization and consolidation techniques.

Other Forecast Data

- **Low Level Waste**
  - A total of 46,500 m³ of LLW is expected the Offsite program.
  - This forecast shows a 73% decrease from the FY96 forecast of 170,830 m³, primarily due to some sites no longer forecasting waste volumes for Hanford.
  - The various generators will be sending seemingly every kind of container there is for LLW; yet, the three most common types should be Small boxes, Extra Large boxes, and then 208 liter drums.
  - Physical LLW forms are for the most part debris (91%). Soil and soil/gravel is the other waste form of considerable volume at 5%. Inorganic solids, organic solids, lab packs and shielding represent the other 4%.

- **Hazardous Waste**
  - No hazardous waste is expected from the Offsite program for management by the CWC.

GENERATORS:
Ames Laboratory-Ames, Iowa · Argonne National Laboratory-East · Bates Accelerator-Massachusetts · Battelle Columbus Laboratories · Bettis Atomic Power-Laboratory · Bettis Atomic Power-Shipyards · Brookhaven National Laboratory · Fermi National Accelerator Laboratory · General Atomics · Knolls Atomic Power-Laboratory · Knolls Atomic Power-Shipyards · Lawrence Berkeley Laboratory · Paducah Energy Systems · Pearl Harbor Naval Shipyards · Portsmouth Energy Systems · Portsmouth Naval Shipyards · Princeton Plasma Physics Laboratory · Puget Sound Naval Shipyards · Rockwell-Canoga Park · Rocky Flats · Stanford Linear Accelerator Center · University of California-Davis · University of Utah

PROGRAMS:
Analytical Services · EM-40 · Facility Transitions · Landlord · Liquid Effluent · NP · *Offsite* · PNNL · RCRA · Solid Waste · SNF · TWRS

CHARACTERISTICS:
CH_LLMW · RH_LLMW · CH_TRU(M) · RH_TRU(M) · GTC III · LLW · HAZ

CONTAINERS:
CH_LLMW · RH_LLMW · CH_TRU(M) · RH_TRU(M) · GTC III · LLW · HAZ

WASTE CLASSES:
CH_LLMW · RH_LLMW · CH_TRU(M) · RH_TRU(M) · GTC III · LLW · HAZ

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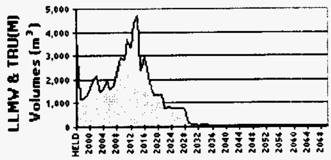


SWIFT Report: FY1997 to FY2070, rev. 1

Hanford → Offsite → Ames Laboratory-Ames, Iowa → (Waste Classes) → (Containers), (Characteristics); (Reports); (Tools)

Site Rev. date: *12/31/96*

Data version: *97.1*

Data currency: *10/25/96*

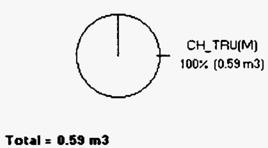
Offsite — Ames Laboratory – Ames, Iowa

Contents

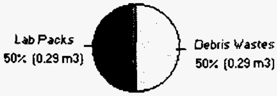
Highlights

- The forecast life cycle for the Ames Laboratory generator ends in 2070.
- The life cycle total of TRU(M) waste for this generator is less than 1 m³.
- Only CH_TRU(M) waste is included in this forecast of solid waste to be shipped to Hanford.
- This generator expects to use Other drums as their sole TRU(M) waste container.
- The physical waste forms are heterogeneous debris and aqueous lab pack which split the volume 50/50.
- TRU(M) waste hazardous constituents are 100% metals without mercury.

Waste Class Distribution

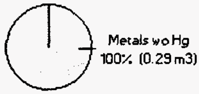


Physical Waste Form Distribution



Total = 0.59 m3

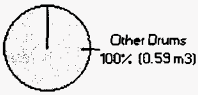
Hazardous Constituent Distribution



Total = 0.29 m3

Note: includes LLMW and TRUM only

Container Distribution



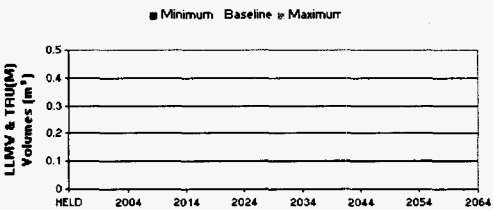
Total = 0.59 m3

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.

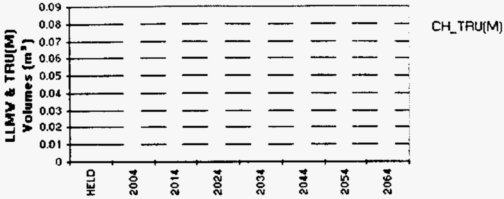
Annual Volumes

Annual Baseline Volumes

The graph shows LLMW and TRU(M) annual forecast volumes; note that the forecast in this case ends in 2064; LLW is forecast until 2070.



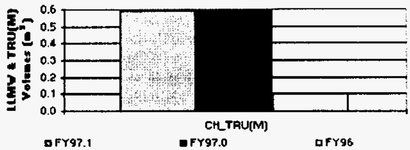
Annual Baseline by Waste Class



Comparison to Previous Baseline(s)

The FY97 forecast is consistent with the FY96 forecast of <1 m³.

Comparison to Previous Baseline(s) by Waste Class



Ames Laboratory Comparison: Waste Class	FY97.1 Forecast (m³)	FY97.0 Forecast (m³)	FY96 Forecast (m³)
CH_TRU(M)	0.59	0.59	0
Subtotal	***0.59***	***0.59***	***0***
LLW	130	130	110
Total	***130***	***130***	***110***

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.

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

The minimum and maximum range for this waste volume is 1% and 100% of the baseline.

This forecast assumes that the Alpha Operations Facility will be funded and the planned transuranic work will proceed. Another assumption is that the facility renovation will continue, which is the main source for the LLW.

Other Forecast Data

- **Low Level Waste**

  - 130 m³ of LLW is expected from Ames Laboratory.
  - This forecast shows a 9% increase over the FY96 forecast of 110 m³, primarily due to the facility renovation.
  - 64% of the LLW volume will be in 208 liter drums, while Small boxes and Medium boxes will each contain 18% of the volume.
  - LLW physical forms are 10% (by volume) inorganic particulates and 90% debris.

- **Hazardous Waste**

  - No hazardous waste is expected from Ames Laboratory for management by the CWC.

GENERATORS:
Ames Laboratory-Ames, Iowa · Argonne National Laboratory-East · Bates Accelerator-Massachusetts · Battelle Columbus Laboratories · Bettis Atomic Power-Laboratory · Bettis Atomic Power-Shipyards · Brookhaven National Laboratory · Fermi National Accelerator Laboratory · General Atomics · Knolls Atomic Power-Laboratory · Knolls Atomic Power-Shipyards · Lawrence Berkeley Laboratory · Paducah Energy Systems · Pearl Harbor Naval Shipyards · Portsmouth Energy Systems · Portsmouth Naval Shipyards · Princeton Plasma Physics Laboratory · Puget Sound Naval Shipyards · Rockwell-Canoga Park · Rocky Flats · Stanford Linear Accelerator Center · University of California-Davis · University of Utah

PROGRAMS:
Analytical Services · EM-40 · Facility Transitions · Landlord · Liquid Effluent · NP · Offsite · PNNL · RCRA · Solid Waste · SNF · TWRS

CHARACTERISTICS:
CH_LLMW · RH_LLMW · CH_TRU(M) · RH_TRU(M) · GTC III · LLW · HAZ

CONTAINERS:
CH_LLMW · RH_LLMW · CH_TRU(M) · RH_TRU(M) · *GTC III* · *LLW* · *HAZ*

WASTE CLASSES:
CH_LLMW · RH_LLMW · CH_TRU(M) · RH_TRU(M) · *GTC III* · LLW · HAZ

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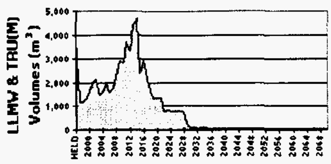

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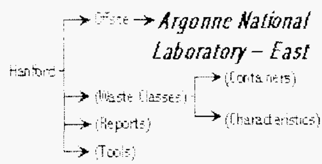


Site Rev. date: 12/31/96

Data version: 97.1

Data currency: 10/25/96

Offsite — Argonne National Laboratory – East

Contents

Highlights

- The forecast life cycle for the Argonne National Laboratory-East generator ends in 2070.
- Only LLW is included in this forecast of solid waste to be shipped to Hanford.

Annual Volumes

Annual Baseline Volumes

No LLMW or TRU(M) waste is expected from this generator.

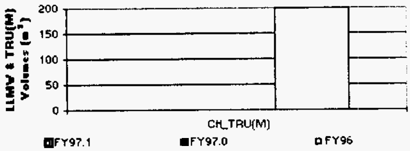
Annual Baseline by Waste Class

Not applicable.

Comparison to Previous Baseline(s)

This generator did not forecast any LLMW or TRU(M) for FY97 because the waste will be treated onsite and sent elsewhere for disposal; including the 200 m³ of CH_TRU(M) waste previously forecast in FY96.

Comparison to Previous Baseline(s) by Waste Class



Argonne National Laboratory-East Comparison: Waste Class	FY97.1 Forecast (m^3)	FY97.0 Forecast (m^3)	FY96 Forecast (m^3)
CH_TRU(M)	0	0	200
Subtotal	***0***	***0***	***200***
LLW	20,040	20,040	20,430
Total	***20,040***	***20,040***	***20,620***

Sum of totals may not add due to rounding: numbers over 10 m^3 are rounded to the nearest 10 m^3, numbers less than 10 m^3 are rounded to integers, non-zero numbers less than 1 are rounded to 1.

Background

The current mission of Argonne National Laboratory-East is to conduct research.

Forecast Assumptions and Comments

This forecast assumes that D&D projects and Remediation Cleanup Projects will receive funding, and that projects will be completed as scheduled. Additionally, general laboratory waste streams will remain unchanged, and that the wastes will be shipped as planned.

Other Forecast Data

- **Low Level Waste**
  - A total of 20,040 m^3 of LLW is expected from Argonne National Laboratory-East.
  - This forecast shows a 2% decrease from the FY96 forecast of 20,430 m^3.
  - 21% of this waste is to be contained in 208 liter drums; the rest will be in Small Boxes.
  - Debris accounts for 87% of the LLW physical waste forms. Soil and soil/gravel represents 9% of the waste form, and inorganic and organic solids are each 2%.

- **Hazardous Waste**
  - No hazardous waste is expected from Argonne National Laboratory-East for management by the CWC.

GENERATORS:
Ames Laboratory-Ames, Iowa · *Argonne National Laboratory-East* · Bates Accelerator-Massachusetts · Battelle Columbus Laboratories · Bettis Atomic Power-Laboratory · Bettis Atomic Power-Shipyards · Brookhaven National Laboratory · Fermi National Accelerator Laboratory · General Atomics · Knolls Atomic Power-Laboratory · Knolls Atomic Power-Shipyards · Lawrence Berkeley Laboratory · Paducah Energy Systems · Pearl Harbor Naval Shipyards · Portsmouth Energy Systems · Portsmouth Naval Shipyards · Princeton Plasma Physics Laboratory · Puget Sound Naval Shipyards · Rockwell-Canoga Park · Rocky Flats · Stanford Linear Accelerator Center · University of California-Davis · University of Utah

PROGRAMS:
Analytical Services · EM-40 · Facility Transitions · Landlord · Liquid Effluent · NP · Offsite · PNNL · RCRA · Solid Waste · SNF · TWRS

CHARACTERISTICS:
CH_LLMW · RH_LLMW · CH_TRU(M) · RH_TRU(M) · GTC III · LLW · HAZ

CONTAINERS:
CH_LLMW · RH_LLMW · CH_TRU(M) · RH_TRU(M) · GTC III · LLW · HAZ

WASTE CLASSES:
CH_LLMW · RH_LLMW · CH_TRU(M) · RH_TRU(M) · GTC III · LLW · HAZ

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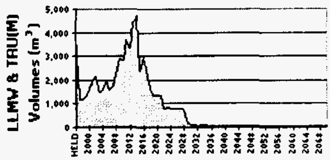

SWIFT Report: FY1997 to FY2070, rev. 1

Hanford → Offsite → Bates Accelerator – Massachusetts → (Containers) (Characteristics)
→ (Waste Classes)
→ (Reports)
→ (Tools)

Site Rev. date: 12/31/96

Data version: 97.1

Data currency: 10/25/96

Offsite — Bates Accelerator – Massachusetts

Contents

Highlights

- The forecast life cycle for the Bates Accelerator generator ends in 2030.
- No LLMW or TRU(M) waste is expected from Bates Accelerator.
- Only LLW is included in this forecast of solid waste to be shipped to Hanford.

Annual Volumes

Annual Baseline Volumes

No LLMW or TRU(M) waste is expected from this generator.

Annual Baseline by Waste Class

Not applicable.

Comparison to Previous Baseline(s)

Bates Accelerator forcasted no LLMW or TRU(M) waste in FY96 or FY97.

Comparison to Previous Baseline(s) by Waste Class

Bates Accelerator-Massachusetts Comparison: Waste Class	FY97.1 Forecast (m³)	FY97.0 Forecast (m³)	FY96 Forecast (m³)
LLW	40	40	480
Total	***40***	***40***	***480***

Sum of totals may not add due to rounding: numbers over 10 m^3 are rounded to the nearest 10 m^3, numbers less than 10 m^3 are rounded to integers, non-zero numbers less than 1 are rounded to 1.

Background

Bates Linear Accelerator is a medium energy electron facility with principal focus on electron scattering. This forecast is based on waste generated from existing operation. The generated waste will be limited to LLW and consist of resin used in the cooling water purification system.

Forecast Assumptions and Comments

This forecast assumes that all waste will be generated from existing operations.

Other Forecast Data

- **Low Level Waste**
  - 40 m^3 of LLW is expected from Bates Accelerator.
  - This LLW forecast shows a 92% decrease from the FY96 forecast of 480 m^3, due primarily to the implementation of a waste reduction plan.
  - 208 liter drums are projected to be the only container for this waste.
  - 100% of the LLW has the physical form of organic particulates.

- **Hazardous Waste**
  - No hazardous waste is expected from Bates Accelerator for management by the CWC.

GENERATORS:
Ames Laboratory-Ames, Iowa · Argonne National Laboratory-East · *Bates Accelerator-Massachusetts* · Battelle Columbus Laboratories · Bettis Atomic Power-Laboratory · Bettis Atomic Power-Shipyards · Brookhaven National Laboratory · Fermi National Accelerator Laboratory · General Atomics · Knolls Atomic Power-Laboratory · Knolls Atomic Power-Shipyards · Lawrence Berkeley Laboratory · Paducah Energy Systems · Pearl Harbor Naval Shipyards · Portsmouth Energy Systems · Portsmouth Naval Shipyards · Princeton Plasma Physics Laboratory · Puget Sound Naval Shipyards · Rockwell-Canoga Park · Rocky Flats · Stanford Linear Accelerator Center · University of California-Davis · University of Utah

PROGRAMS:
Analytical Services · EM-40 · Facility Transitions · Landlord · Liquid Effluent · NP · Offsite · PNNL · RCRA · Solid Waste · SNF · TWRS

CHARACTERISTICS:
CH_LLMW · RH_LLMW · CH_TRU(M) · RH_TRU(M) · GTC III · LLW · HAZ

CONTAINERS:
CH_LLMW · RH_LLMW · CH_TRU(M) · RH_TRU(M) · GTC III · LLW · HAZ

WASTE CLASSES:
CH_LLMW · RH_LLMW · CH_TRU(M) · RH_TRU(M) · GTC III · LLW · HAZ

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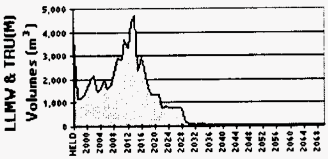

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Site Rev. date: *12/31/96*

Data version: *97.1*

Data currency: *10/25/96*

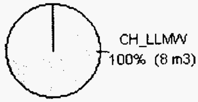
Offsite — Battelle Columbus Laboratories

Contents

Highlights

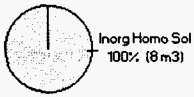
- The forecast life cycle for the Battelle Columbus Laboratory generator ends in 2003.
- The total LLMW forecast is 8 m³, or 4% of the total offsite waste volume.
- This forecast amount shows a 91% decrease from the FY96 forecast of 90 m³, primarily because the majority of the waste (80 m³ of RH_TRU(M) waste) is not allowed in Washington State and thus will be shipped elsewhere.
- This forecast also shows a 2 m³ increase from the FY97.0 volume due to the availability of better estimates.
- Only CH_LLMW is included in this forecast of solid waste to be shipped to Hanford.
- 100% of the CH_LLMW will be in 208 liter drums.
- 100% of this CH_LLMW has the physical waste form of inorganic solids.
- CH_LLMW hazardous constituents are 100% metals with mercury.

Waste Class Distribution



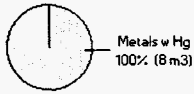
Total = 8 m3

Physical Waste Form Distribution



Total = 8 m3

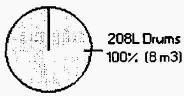
Hazardous Constituent Distribution



Total = 8 m3

Note: Includes LLMW and TRUM only

Container Distribution



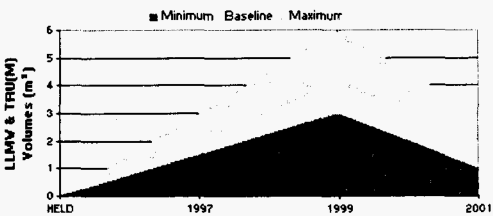
Total = 8 m3

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.

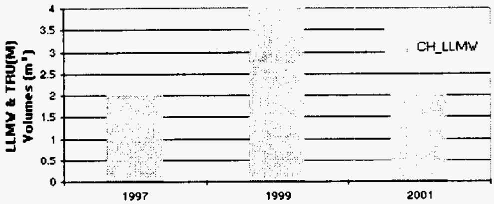
Annual Volumes

Annual Baseline Volumes

The graph shows LLMW annual forecast volumes; note that the forecast in this case ends in 2001; LLW is forecast until 2003.



Annual Baseline by Waste Class



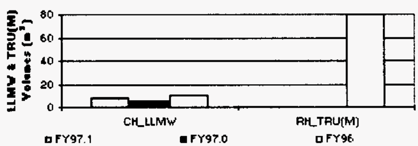
Comparison to Previous Baseline(s)

The FY97.1 forecast of 8 m³ shows a 91% decrease from the FY96 forecast of 90 m³. The main reason for this decrease is because the majority of the waste (80 m³ of RH_TRU(M) waste) is not allowed in Washington State and thus will be shipped elsewhere.

The 1996 physical waste form forecast showed 60% of the volume to be debris and shielding, which is a change from the current excpectation of only inorganic solids.

The 1996 hazardous constituents forecast showed 38% of the volume to be metals without mercury, 8% to be organic, and 54% to be other constituents, while the current forecast expects only metals with mercury.

Comparison to Previous Baseline(s) by Waste Class



Battelle Columbus Laboratories Comparison: Waste Class	FY97.1 Forecast (m³)	FY97.0 Forecast (m³)	FY96 Forecast (m³)
CH_LLMW	8	6	10
RH_TRU(M)	0	0	80
Subtotal	*8*	*6*	*90*
LLW	1,030	1,030	1,270
Total	*1,040*	*1,040*	*1,360*

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.

Background

The current mission of Battelle Columbus Laboratory is to decontaminate and decommission facilities that were used to perform DOE and commercial nuclear research to be returned to

Battelle for use without radiological restrictions. The LLMW is a result the removal of radioactive drain lines.

Forecast Assumptions and Comments

The minimum and maximum percentages are 67% and 150% of the baseline volume. These percentages are based upon fluctuations in D&D schedules which cause fluctuations in the beginning and end of year shipping schedules.

The main assumption for this forecast is that Battelle will receive DOE funding to decontaminate and decommission the former nuclear sciences area at the West Jefferson, Ohio site to completion.

Other Forecast Data

- **Low Level Waste**
  - A total of 1,030 m³ of LLW is expected from Battelle Columbus Laboratories
  - This forecast shows a 19% decrease from the FY96 forecast of 1,270 m³.
  - The only containers for the LLW volume are MB-IV boxes.
  - The physical LLW form forecast is 100% contaminated metal debris.

- **Hazardous Waste**
  - No hazardous waste is expected from Battelle Columbus Laboratories for management by the CWC.

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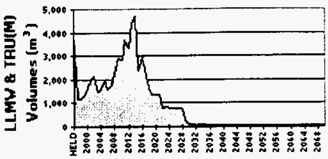

SWIFT Report: FY1997 to FY2070, rev. 1

Hanford → Offsite → *Bettis Atomic Power Laboratory*
→ (Waste Classes) → (Containers)
→ (Characteristics)
→ (Reports)
→ (Tools)

Site Rev. date: *12/31/96*

Data version: *97.1*

Data currency: *10/25/96*

Offsite — Bettis Atomic Power Laboratory

Contents

Highlights

- The forecast life cycle for the Bettis Atomic Power Laboratory generator ends in 2009.
- Only LLW is included in this forecast of solid waste to be shipped to Hanford.

Annual Volumes

Annual Baseline Volumes

No LLMW or TRU(M) waste is expected from this generator.

Annual Baseline by Waste Class

Not applicable.

Comparison to Previous Baseline(s)

Similar to FY96, this generator did not forecast any LLMW or TRU(M) waste for FY97.

Comparison to Previous Baseline(s) by Waste Class

Bettis Atomic Power Laboratory Comparison: Waste Class	FY97.1 Forecast (m³)	FY97.0 Forecast (m³)	FY96 Forecast (m³)
LLW	210	210	1
Total	*210*	*210*	*1*

Sum of totals may not add due to rounding: numbers over 10 m^3 are rounded to the nearest 10 m^3, numbers less than 10 m^3 are rounded to integers, non-zero numbers less than 1 are rounded to 1.

Background

The current mission of Bettis Atomic Power Laboratory is to conduct research, as well as decontamination and decommission.

Forecast Assumptions and Comments

This forecast assumes that removal of the L-Building inactive fuel processing equipment is expected to be completed by 2009. Forecast of the research and development work is projected to the same year.

Other Forecast Data

- **Low Level Waste**
  - A total of 210 m^3 of LLW is expected from Bettis Atomic Power Laboratory.
  - This forecast shows a more than 200-fold (21,000%) increase over the FY96 forecast of less than 1 m^3, due primarily to increased D&D activities.
  - 98% of this LLW will be shipped in MB-IV boxes, and the other 2% will be in 208 liter drums.
  - Besides 2% of the volume having the form of organic solids, all of the waste is debris by physical form.
- **Hazardous Waste**
  - No hazardous waste is expected from Bettis Atomic Power Laboratory for management by the CWC.

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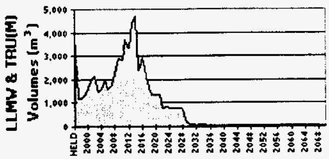


SWIFT Report: FY1997 to FY2070, rev. 1

Hanford → Offsite → *Bettis Atomic Power Shipyards*
→ (Waste Classes) → (Containers) → (Characteristics)
→ (Reports)
→ (Tools)

Site Rev. date: *12/31/96*

Data version: *97.1*

Data currency: *10/25/96*

Offsite — Bettis Atomic Power – Shipyards

Contents

Highlights

- The forecast life cycle for the Bettis Atomic Power-Shipyards generator ends in 2012.
- Only LLW is included in this forecast of solid waste to be shipped to Hanford.

Annual Volumes

Annual Baseline Volumes

No LLMW or TRU(M) waste is expected from this generator.

Annual Baseline by Waste Class

Not applicable.

Comparison to Previous Baseline(s)

Similar to FY96, this generator did not forecast any LLMW or TRU(M) waste for FY97.

Comparison to Previous Baseline(s) by Waste Class

Bettis Atomic Power-Shipyards Comparison: Waste Class	FY97.1 Forecast (m³)	FY97.0 Forecast (m³)	FY96 Forecast (m³)
LLW	50	50	40
Total	***50***	***50***	***40***

Sum of totals may not add due to rounding: numbers over 10 m³ are rounded to the nearest 10 m³, numbers less

than 10 m^3 are rounded to integers, non-zero numbers less than 1 are rounded to 1.

Background

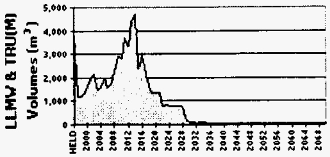
The current mission of Bettis Atomic Power-Shipyards is submarine and surface ship reactor defueling operations.

Forecast Assumptions and Comments

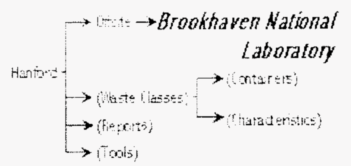
The main assumption for this forecast is that the reactor components are removed during refueling.

Other Forecast Data

- **Low Level Waste**
  - A total of 50 m^3 of LLW is expected from Bettis Atomic Power-Shipyards.
  - This forecast shows a 25% increase over the FY96 forecast of 40 m^3.
  - 98% of the LLW is essentially split between Large (50%) and Medium (48%), boxes. The last 2% is contained in Small boxes.
  - Contaminated metal debris is the physical waste form for 100% of the waste.
- **Hazardous Waste**
  - No hazardous waste is expected from Bettis Atomic Power – Shipyards for management by the CWC.



***SWIFT* Report: FY1997 to FY2070, rev. 1**



Site Rev. date: *12/31/96*

Data version: *97.1*

Data currency: *10/25/96*

Offsite — Brookhaven National Laboratory

Contents

Highlights

- The forecast life cycle for the Brookhaven National Laboratory generator ends in 2016.
- Only LLW is included in this forecast of solid waste to be shipped to Hanford.

Annual Volumes

Annual Baseline Volumes

No LLMW or TRU(M) waste is expected from this generator.

Annual Baseline by Waste Class

Not applicable.

Comparison to Previous Baseline(s)

As in FY96, no LLMW and TRU(M) waste is forecast from this generator.

Comparison to Previous Baseline(s) by Waste Class

Brookhaven National Laboratory Comparison: Waste Class	FY97.1 Forecast (m^3)	FY97.0 Forecast (m^3)	FY96 Forecast (m^3)
LLW	3,090	3,090	74,890
Total	***3,090***	***3,090***	***74,890***

Sum of totals may not add due to rounding: numbers over 10 m^3 are rounded to the nearest 10 m^3, numbers less

than 10 m^3 are rounded to integers, non-zero numbers less than 1 are rounded to 1.

Background

The current mission of Brookhaven National Laboratory 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. LLW are generated from the construction, operation, and dismantling of these facilities.

Forecast Assumptions and Comments

The main assumption for this forecast is that current funding projections remain and Brookhaven continues to operate under its current mission. Should additional funding be available, additional waste may be shipped to Hanford.

Other Forecast Data

- **Low Level Waste**
  - A total of 3,090 m^3 of LLW is expected from Brookhaven National Laboratory.
  - This forecast shows a 96% decrease from the FY96 forecast of 74,890 m^3, because less waste is expected to be shipped offsite for disposal due to decreases in funding.
  - Four container types are forecast: MB-IV boxes (50% by volume), Medium boxes (42%), Small boxes (4%), and Other drums (4%).
  - 100% of the LLW has the physical form of debris: activated metal, contaminated metal, plastic/rubber, and heterogeneous.

- **Hazardous Waste**
  - No hazardous waste is expected from Brookhaven National Laboratory for management by the CWC.

GENERATORS:
Ames Laboratory-Ames, Iowa · Argonne National Laboratory-East · Bates Accelerator-Massachusetts · Battelle Columbus Laboratories · Bettis Atomic Power-Laboratory · Bettis Atomic Power-Shipyards · *Brookhaven National Laboratory* · Fermi National Accelerator Laboratory · *General Atomics* · Knolls Atomic Power-Laboratory · Knolls Atomic Power-Shipyards · Lawrence Berkeley Laboratory · Paducah Energy Systems · Pearl Harbor Naval Shipyards · Portsmouth Energy Systems · Portsmouth Naval Shipyards · Princeton Plasma Physics Laboratory · Puget Sound Naval Shipyards · Rockwell-Canoga Park · Rocky Flats · Stanford Linear Accelerator Center · University of California-Davis · University of Utah

PROGRAMS:
Analytical Services · EM-40 · Facility Transitions · Landlord · Liquid Effluent · NP · Offsite · PNNL · RCRA · Solid Waste · SNF · TWRS

CHARACTERISTICS:
CH_LLMW · RH_LLMW · CH_TRU(M) · RH_TRU(M) · GTC III · LLW · HAZ

CONTAINERS:
CH_LLMW · RH_LLMW · CH_TRU(M) · RH_TRU(M) · GTC III · LLW · HAZ

WASTE CLASSES:
CH_LLMW · RH_LLMW · CH_TRU(M) · RH_TRU(M) · GTC III · LLW · HAZ

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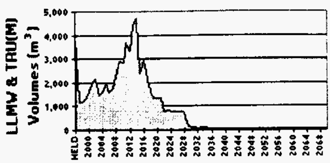

SWIFT Report: FY1997 to FY2070, rev. 1

Hanford → Offsite → *Fermi National Accelerator Laboratory*
→ (Waste Classes) → (Containers) → (Characteristics)
→ (Reports)
→ (Tools)

Site Rev. date: *12/31/96*

Data version: *97.1*

Data currency: *10/25/96*

Offsite — Fermi National Accelerator Laboratory

Contents

Highlights

- The forecast life cycle for the Fermi National Accelerator Laboratory generator ends in 2027.
- No LLMW and TRU(M) waste is forecast from this generator.
- Only LLW is included in this forecast of solid waste to be shipped to Hanford.

Annual Volumes

Annual Baseline Volumes

No LLMW or TRU(M) waste is expected from this generator.

Annual Baseline by Waste Class

Not applicable.

Comparison to Previous Baseline(s)

As in FY96, no LLMW or TRU(M) waste is forecast by the Fermi National Accelerator Laboratory.

Comparison to Previous Baseline(s) by Waste Class

Comparison: Waste Class	FY97.1 Forecast (m^3)	FY97.0 Forecast (m^3)	FY96 Forecast (m^3)
LLW	1,520	1,520	3,350
Total	*1,520*	*1,520*	*3,350*

Sum of totals may not add due to rounding: numbers over 10 m^3 are rounded to the nearest 10 m^3, numbers less than 10 m^3 are rounded to integers, non-zero numbers less than 1 are rounded to 1.

Background

The mission of Fermi National Accelerator Laboratory is to provide resources to conduct basic research in high-energy physics and related disciplines. The Fermi lab 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 accelerators activate accelerator components and equipment. These components and equipment become waste when they fail and are removed or are no longer needed. Small volumes of protective clothing are generated by technicians working on contaminated equipment or in contamination areas.

Forecast Assumptions and Comments

The assumptions for this forecast are 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 DOE will provide the necessary funds to ship the waste as it is generated.

Other Forecast Data

- **Low Level Waste**
  - A total of 1,520 m^3 of LLW is expected from the Fermi National Accelerator Laboratory.
  - This forecast shows a 55% decrease from the FY96 forecast of 3,350 m^3, because the life cycle has been reduced from 2070 in FY96 to 2027 for FY97.
  - 77% of this volume will be contained in Small boxes, and the rest will use 208 liter drums.
  - Physical waste forms include inorganic solids (4%), soil/gravel (3%), organic solids (1%), and debris (92%) - of which activated metals compose 76%.

- **Hazardous Waste**
  - No hazardous waste is expected from Fermi for management by the CWC.

GENERATORS:
Ames Laboratory-Ames, Iowa · Argonne National Laboratory-East · Bates Accelerator-Massachusetts · Battelle Columbus Laboratories · Bettis Atomic Power-Laboratory · Bettis Atomic Power-Shipyards · Brookhaven National Laboratory · *Fermi National Accelerator Laboratory* · General Atomics · Knolls Atomic Power-Laboratory · Knolls Atomic Power-Shipyards · Lawrence Berkeley Laboratory · Paducah Energy Systems · Pearl Harbor Naval Shipyards · Portsmouth Energy Systems · Portsmouth Naval Shipyards · Princeton Plasma Physics Laboratory · Puget Sound Naval Shipyards · Rockwell-Canoga Park · Rocky Flats · Stanford Linear Accelerator Center · University of California-Davis · University of Utah

PROGRAMS:
Analytical Services · EM-40 · Facility Transitions · Landlord · Liquid Effluent · NP · Offsite · PNNL · RCRA · Solid Waste · SNF · TWRS

CHARACTERISTICS:	CONTAINERS:
CH_LLMW · RH_LLMW · CH_TRU(M) · RH_TRU(M) · GTC III · LLW · HAZ	CH_LLMW · RH_LLMW · CH_TRU(M) · RH_TRU(M) · GTC III · LLW · HAZ

WASTE CLASSES:
CH_LLMW · RH_LLMW · CH_TRU(M) · RH_TRU(M) · *GTC III* · LLW · HAZ

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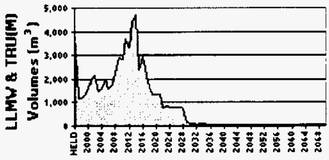
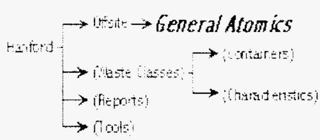


SWIFT Report: FY1997 to FY2070, rev. 1



Site Rev. date:
12/31/96

Data version:
97.1

Data currency:
10/25/96

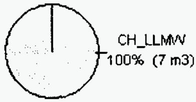
Offsite — General Atomics

Contents

Highlights

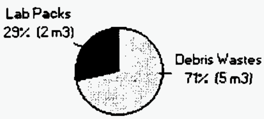
- The forecast life cycle for the General Atomics generator ends in 1999.
- A total of 7 m³ of LLMW is forecast from this generator for 3% of the Offsite total.
- This forecast shows a 133% increase over the FY96 forecast of 3 m³, due to the availability of more definitive information and that General Atomics is under contract with DOE to complete the Hot Cell D&D project in FY2000.
- Only CH_LLMW is included in this forecast of solid waste to be shipped to Hanford.
- This waste is projected to be contained in 208 liter drums only.
- Physical LLMW forms are debris (71%) and lab packs (29%).
- LLMW hazardous constituents are expected to be metals without mercury (63% by volume), organic (22%), corrosive (12%), and PCBs (4%).

Waste Class Distribution



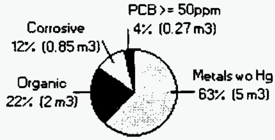
Total = 7 m3

Physical Waste Form Distribution



Total = 7 m3

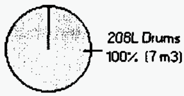
Hazardous Constituent Distribution



Total = 7 m3

Note: Includes LLMW and TRUW only

Container Distribution

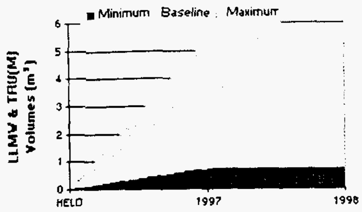


Total = 7 m3

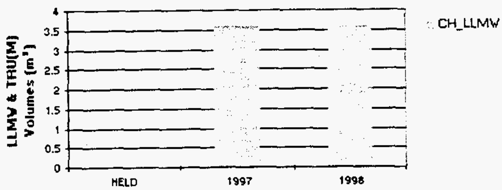
Sum of totals may not add due to rounding: numbers over 10 m³ are rounded to the nearest 10 m³, numbers less than 10 m³ are rounded to integers, non-zero numbers less than 1 are rounded to 1.

Annual Volumes

Annual Baseline Volumes



Annual Baseline by Waste Class



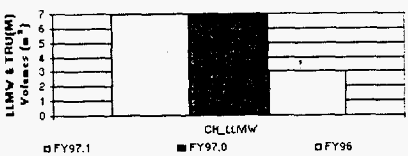
Comparison to Previous Baseline(s)

The FY97 forecast of 7 m³ of LLMW and TRU(M) waste shows a 133% increase over the FY96 forecast of 3 m³. This increase is due to the availability of more definitive information this year for forecast preparation. Additionally, General Atomics is under contract with DOE to complete the Hot Cell D&D project in FY2000, which requires that the last waste shipment is to be made in 1999.

This year, the soil/gravel physical waste form is not expected. In 1996, that portion composed 30% of the volume.

While the 1997 hazardous constituents forecast shows metals without mercury, organic, corrosive, and PCBs, the 1996 forecast only expected metals without mercury constituents.

Comparison to Previous Baseline(s) by Waste Class



General Atomics Comparison: Waste Class	FY97.1 Forecast (m^3)	FY97.0 Forecast (m^3)	FY96 Forecast (m^3)
CH LLMW	7	7	3
Subtotal	*7*	*7*	*3*
LLW	660	660	850
Total	*670*	*670*	*850*

Sum of totals may not add due to rounding: numbers over 10 m^3 are rounded to the nearest 10 m^3, numbers less than 10 m^3 are rounded to integers, non-zero numbers less than 1 are rounded to 1.

Background

The mission of General Atomics is to decontaminate and decommission the Hot Cell. The objective is to remove all radiologic and other contamination prior to the release of the site to unrestricted use.

Forecast Assumptions and Comments

The assumptions for this forecast are continued DOE funding consistent with project completion in FY2000, and the waste definitions will not change from those defined in the Hot Cell Decommissioning Plan.

The minimum and maximum ranges for this waste are 20% and 150%.

Other Forecast Data

- **Low Level Waste**
  - A total of 660 m^3 of LLW is expected from General Atomics.
  - This forecast shows a 22% decrease from the FY96 forecast of 850 m^3, because of availability of more definitive information.
  - 94% of the LLW will be shipped in Small Boxes, while 6% of the volume will be MB-IV boxes and Other drums.
  - 100% of the LLW has the physical form of debris.

- **Hazardous Waste**
  - No hazardous waste is expected from General Atomics for management by the CWC.

GENERATORS:

Ames Laboratory-Ames, Iowa · Argonne National Laboratory-East · Bates Accelerator-Massachusetts · Battelle Columbus Laboratories · Bettis Atomic Power-Laboratory · Bettis Atomic Power-Shipyards · Brookhaven National Laboratory · Fermi National Accelerator Laboratory · *General Atomics* · Knolls Atomic Power-Laboratory · Knolls Atomic Power-Shipyards · Lawrence Berkeley Laboratory · Paducah Energy Systems · Pearl Harbor Naval Shipyards · Portsmouth Energy Systems · Portsmouth Naval Shipyards · Princeton Plasma Physics Laboratory · Puget Sound Naval Shipyards · Rockwell-Canoga Park · Rocky Flats · Stanford Linear Accelerator Center · University of California-Davis · University of Utah

PROGRAMS:

Analytical Services · EM-40 · Facility Transitions · Landlord · Liquid Effluent · NP · Offsite · PNNL · RCRA · Solid Waste · SNF · TWRS

CHARACTERISTICS:	CONTAINERS:
CH_LLMW · RH_LLMW · CH_TRU(M) · RH_TRU(M) · GTC III · LLW · HAZ	CH_LLMW · RH_LLMW · CH_TRU(M) · RH_TRU(M) · GTC III · LLW · HAZ

WASTE CLASSES:

CH_LLMW · RH_LLMW · CH_TRU(M) · RH_TRU(M) · GTC III · LLW · HAZ

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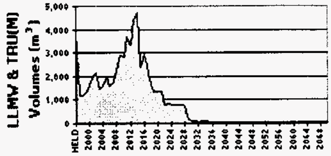


SWIFT Report: FY1997 to FY2070, rev. 1

Hanford → Offsite → *Knolls Atomic Power Laboratory*
→ (Waste Classes) → (Containers) → (Characteristics)
→ (Reports)
→ (Tools)

Site Rev. date: *12/31/96*

Data version: *97.1*

Data currency: *10/25/96*

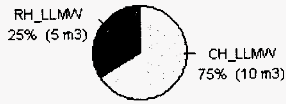
Offsite — Knolls Atomic Power Laboratory

Contents

Highlights

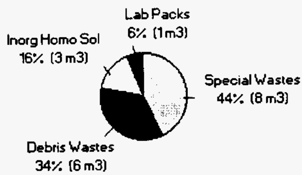
- The forecast life cycle for the Knolls Atomic Power Laboratory generator ends in 2001.
- A total of 20 m^3 of LLMW is forecast from this generator for 10% of the Offsite total.
- This forecast shows a 100% increase over the FY96 forecast of 10 m^3, due to improvements in forecasting accuracy.
- CH_LLMW is the primary waste class generated, representing 75% of the total waste volume.
- Waste is to be contained in 208 liter drums (70% by volume), Small boxes (25%), and Other drums (5%).
- LLMW physical forms will be 44% (by volume) special waste, 34% debris, 16% inorganic solids, and 6% lab packs.
- LLMW hazardous constituents are expected to be metals without mercury (60% by volume), metals with mercury (30%), and several other hazardous constituents (10%).

Waste Class Distribution



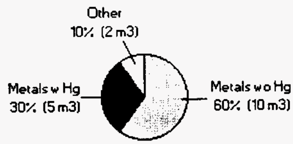
Total = 20 m3

Physical Waste Form Distribution



Total = 20 m3

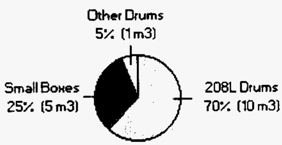
Hazardous Constituent Distribution



Total = 20 m3

Note: Includes LLMW and TRUW only

Container Distribution

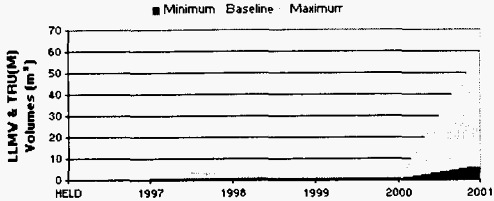


Total = 20 m3

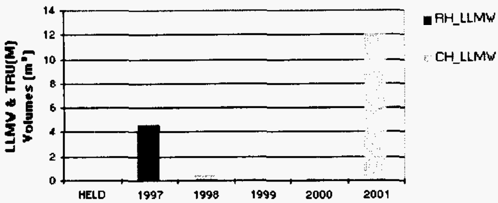
Sum of totals may not add due to rounding: numbers over 10 m^3 are rounded to the nearest 10 m^3, numbers less than 10 m^3 are rounded to integers, non-zero numbers less than 1 are rounded to 1.

Annual Volumes

Annual Baseline Volumes



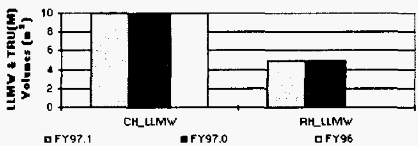
Annual Baseline by Waste Class



Comparison to Previous Baseline(s)

The FY97 forecast of 20 m³ of LLMW waste shows a 100% increase over the FY96 forecast of 10 m³. This increase is due to improvements in forecasting accuracy as a result of past experience regarding the generation of these wastes.

Comparison to Previous Baseline(s) by Waste Class



Knolls Atomic Power-Laboratory Comparison: Waste Class	FY97.1 Forecast (m³)	FY97.0 Forecast (m³)	FY96 Forecast (m³)
CH_LLMW	10	10	10
RH_LLMW	5	5	0
Subtotal	***20***	***20***	***10***
Total	***20***	***20***	***10***

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.

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, a boiler house, and chemistry, physics, and metallurgy laboratories. The activities related to development of naval propulsion systems generates various forms of wastes.

Forecast Assumptions and Comments

The minimum and maximum percentages are 39% and 395% of the baseline volume. This large fluctuation indicates that the shipped volumes may tend to be higher than the baseline forecast. These percentages reflect uncertainty in waste generation rates, possible use of commercial facilities, and uncertain future shipment rates.

Other Forecast Data

- **Low Level Waste**
  - No low level waste is expected from Knolls Atomic Power Laboratory for management by the CWC.
- **Hazardous Waste**
  - No hazardous waste is expected from Knolls Atomic Power Laboratory for management by the CWC.

GENERATORS:
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PROGRAMS:
Analytical Services · EM-40 · Facility Transitions · Landlord · Liquid Effluent · NP · Offsite · PNNL · RCRA · Solid Waste · SNF · TWRS

CHARACTERISTICS:
CH_LLMW · RH_LLMW · CH_TRU(M) · RH_TRU(M) · GTC III · LLW · HAZ

CONTAINERS:
CH_LLMW · RH_LLMW · CH_TRU(M) · RH_TRU(M) · GTC III · LLW · HAZ

WASTE CLASSES:
CH_LLMW · RH_LLMW · CH_TRU(M) · RH_TRU(M) · GTC III · LLW · HAZ

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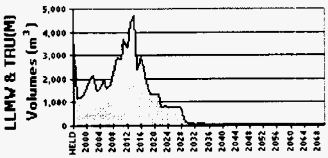

SWIFT Report: FY1997 to FY2070, rev. 1

Hanford → Offsite → *Knolls Atomic Power-Shipyards*
→ (Waste Classes) → (Containers) → (Characteristics)
→ (Reports)
→ (Tools)

Site Rev. date: *12/31/96*

Data version: *97.1*

Data currency: *10/25/96*

Offsite — Knolls Atomic Power – Shipyards

Contents

Highlights

- The forecast life cycle for the Knolls Atomic Power Shipyards generator ends in 2004.
- No LLMW or TRU(M) waste is expected from Knolls Atomic Power Shipyards.
- Only LLW is included in this forecast of solid waste to be shipped to Hanford.

Annual Volumes

Annual Baseline Volumes

No LLMW or TRU(M) waste is expected from this generator.

Annual Baseline by Waste Class

Not applicable.

Comparison to Previous Baseline(s)

As in FY96, there is no LLMW or TRU(M) waste forecast in FY97 or FY97.1.

Comparison to Previous Baseline(s) by Waste Class

Knolls Atomic Power-Shipyards Comparison: Waste Class	FY97.1 Forecast (m^3)	FY97.0 Forecast (m^3)	FY96 Forecast (m^3)
LLW	320	320	240
Total	***320***	***320***	***240***

Sum of totals may not add due to rounding: numbers over 10 m^3 are rounded to the nearest 10 m^3, numbers less than 10 m^3 are rounded to integers, non-zero numbers less than 1 are rounded to 1.

Background

Knolls Atomic Power Shipyards is engaged in defueling and deactivation operations of nuclear vessels.

Forecast Assumptions and Comments

The forecast assumes that the reactor components are removed during defueling and deactivation operations.

Other Forecast Data

- **Low Level Waste**
  - A total of 320 m^3 of LLW is expected from Knolls Atomic Power-Shipyard.
  - This forecast shows a 33% increase over the FY96 forecast of 240 m^3, due to inclusion of some additional waste generating components into the forecast.
  - Extra-Large boxes will hold 47% of this waste, and Large and Medium boxes will split the remaining volume by 27% and 26%, respectively.
  - 100% of the physical LLW form is equally split between activated and contaminated metal debris.

- **Hazardous Waste**
  - No hazardous waste is expected from Knolls Atomic Power-Shipyard for management by the CWC.

GENERATORS:
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PROGRAMS:
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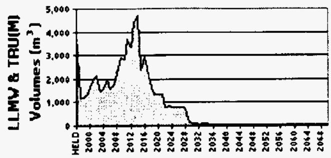
CHARACTERISTICS:	CONTAINERS:
CH_LLMW · RH_LLMW · CH_TRU(M) · RH_TRU(M) · GTC III · LLW · HAZ	CH_LLMW · RH_LLMW · CH_TRU(M) · RH_TRU(M) · GTC III · LLW · HAZ

WASTE CLASSES:
CH_LLMW · RH_LLMW · CH_TRU(M) · RH_TRU(M) · GTC III · LLW · HAZ



SWIFT Report: FY1997 to FY2070, rev. 1

Hanford → Offsite → *Lawrence Berkeley Laboratory*
→ (Waste Classes) → (Containers) → (Characteristics)
→ (Reports)
→ (Tools)

Site Rev. date: *12/31/96*

Data version: *97.1*

Data currency: *10/25/96*

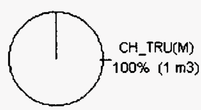
Offsite — Lawrence Berkeley Laboratory

Contents

Highlights

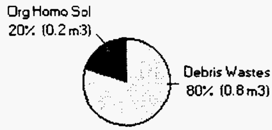
- The solid waste forecast life cycle for the Lawrence Berkeley Laboratory (LBL) generator ends in 2030; however, TRU waste is only expected in 2000.
- A total of 1 m³ of CH_TRU waste is expected from LBL.
- The 1 m³ of TRU waste was not previously forecast in FY96.
- All of the TRU waste is to be shipped in 208 liter drums.
- 80% of the waste has the physical form of debris; organic homogeneous solids account for the balance (20%) of the volume.

Waste Class Distribution



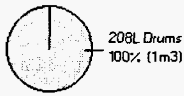
Total = 1 m3

Physical Waste Form Distribution



Total = 1 m3

Container Distribution

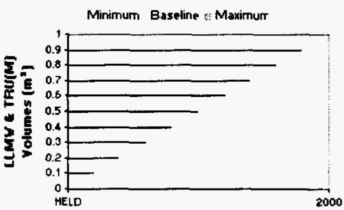


Total = 1 m3

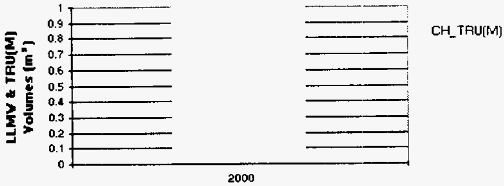
Sum of totals may not add due to rounding: numbers over 10 m³ are rounded to the nearest 10 m³, numbers less than 10 m³ are rounded to integers, non-zero numbers less than 1 are rounded to 1.

Annual Volumes

Annual Baseline Volumes



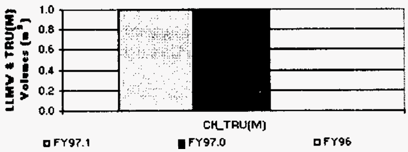
Annual Baseline by Waste Class



Comparison to Previous Baseline(s)

In comparing the LLW for LBL, the FY97 forecast of 11,520 m³ shows a 6% increase over the FY96 forecast of 10,870 m³. This increase is because this year LBL used a four-year average to derive the generation rate of 15 m³ per year. Last year's average of 14 m³ was based on a three-year average. The difference is well within tolerable error margins.

Comparison to Previous Baseline(s) by Waste Class



Lawrence Berkeley Laboratory Comparison: Waste Class	FY97.1 Forecast (m³)	FY97.0 Forecast (m³)	FY96 Forecast (m³)
CH_TRU(M)	1	1	0
Subtotal	***1***	***1***	***0***
LLW	11,520	11,520	10,870
Total	***11,530***	***11,530***	***10,870***

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.

Background

LBL is a multi-purpose science research laboratory with emphasis on energy sciences, general sciences, life sciences, nuclear sciences, environmental sciences, earth sciences, material sciences, and computer sciences. During the research processes, certain types of low level radioactive waste are generated.

Forecast Assumptions and Comments

No variance in volume was forecast (minimum and maximum ranges are both 100%).

Other Forecast Data

- **Low Level Waste**
  - A total of 11,520 m^3 of LLW is expected from LBL.
  - This forecast shows a 6% increase over the FY96 forecast of 10,870 m^3, due a slightly different forecasting method.
  - 93% of the LLW will arrive in Extra-Large boxes; the remaining 7% will be shipped in 208 liter drums and MB-V boxes.
  - LLW forms are nearly all (98%) debris - 86% of which is inorganic nonmetal debris. Lab packs essentially represent the other 2%, with trace amounts of inorganic solids and soil/gravel.

- **Hazardous Waste**
  - No hazardous waste is expected from LBL for management by the CWC.

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PROGRAMS:
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CHARACTERISTICS:
CH_LLMW · RH_LLMW · CH_TRU(M) · RH_TRU(M) · GTC III · LLW · HAZ

CONTAINERS:
CH_LLMW · RH_LLMW · CH_TRU(M) · RH_TRU(M) · GTC III · LLW · HAZ

WASTE CLASSES:
CH_LLMW · RH_LLMW · CH_TRU(M) · RH_TRU(M) · GTC III · LLW · HAZ

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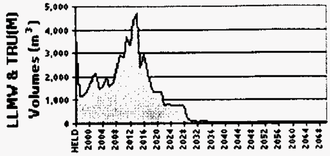

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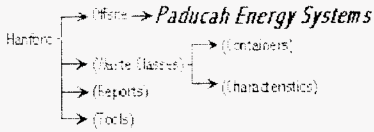


Site Rev. date: *12/31/96*

Data version: *97.1*

Data currency: *10/25/96*

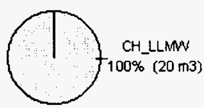
Offsite — Paducah Energy Systems

Contents

Highlights

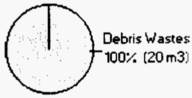
- The solid waste forecast life cycle for the Paducah Energy Systems generator ends in 1998.
- 20 m³ of LLMW of waste is expected from Paducah Energy Systems.
- All of this volume will be contained in 322 liter drums.
- 100% of the LLMW has the physical form of contaminated metal debris.
- The LLMW hazardous constituents are 100% metals without mercury.

Waste Class Distribution



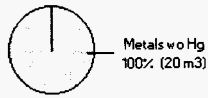
Total = 20 m3

Physical Waste Form Distribution



Total = 20 m3

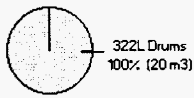
Hazardous Constituent Distribution



Total = 20 m3

Note: Includes LLMW and TRUM only

Container Distribution

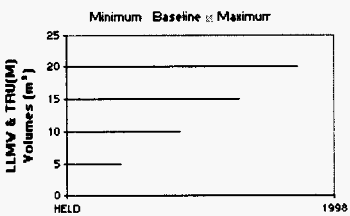


Total = 20 m3

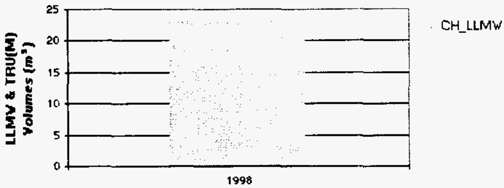
Sum of totals may not add due to rounding: numbers over 10 m^3 are rounded to the nearest 10 m^3, numbers less than 10 m^3 are rounded to integers, non-zero numbers less than 1 are rounded to 1.

Annual Volumes

Annual Baseline Volumes



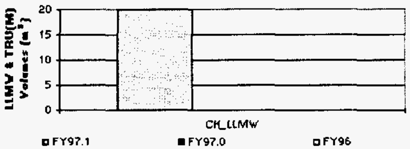
Annual Baseline by Waste Class



Comparison to Previous Baseline(s)

This forecast is a 20 m³ increase from the FY97.0 and FY96 versions due to the inclusion of the contaminated ash receivers to the 97.1 volumes.

Comparison to Previous Baseline(s) by Waste Class



Paducah Energy Systems Comparison: Waste Class	FY97.1 Forecast (m³)	FY97.0 Forecast (m³)	FY96 Forecast (m³)
CH_LLMW	20	0	0
Subtotal	***20***	***0***	***0***
LLW	70	70	710
Total	***90***	***70***	***710***

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.

Background

Paducah Energy Systems is engaged in storage, treatment, and disposal of waste streams generated from Environmental Management and Enrichment Facilities projects at the Paducah Gaseous Diffusion Plant. In meeting the mission, LLW is generated continuously, in the form of ash and uranium precipitate. The LLMW is contaminated ash receivers constructed of carbon steel.

Forecast Assumptions and Comments

The LLMW minimum and maximum was not provided and is assumed to be 100%.

Other Forecast Data

- **Low Level Waste**

- A total of 70 m^3 of LLW is expected from Paducah Energy Systems.
- This LLW forecast shows a 90% decrease from the FY96 forecast of 710 m^3, due primarily to the level of funding and the availability of other treatment and disposal options.
- 208 liter drums are expected to be used for 75% of the LLW, and MB-IV boxes will contain 25%.
- 100% of the LLW has the physical form of organic particulates.

- **Hazardous Waste**

  - No hazardous waste is expected from Paducah Energy Systems for management by the CWC.

GENERATORS:
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PROGRAMS:
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CHARACTERISTICS:
CH_LLMW · RH_LLMW · CH_TRU(M) · RH_TRU(M) · GTC III · LLW · HAZ

CONTAINERS:
CH_LLMW · RH_LLMW · CH_TRU(M) · RH_TRU(M) · GTC III · LLW · HAZ

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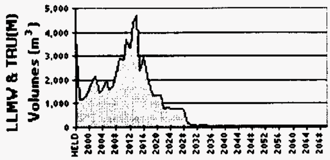


SWIFT Report: FY1997 to FY2070, rev. 1

Hanford → Offsite → Pearl Harbor Naval Shipyards
→ (Waste Classes) → (Containers) / (Characteristics)
→ (Reports)
→ (Tools)

Site Rev. date: *12/31/96*

Data version: *97.1*

Data currency: *10/25/96*

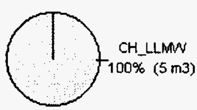
Offsite — Pearl Harbor Naval Shipyards

Contents

Highlights

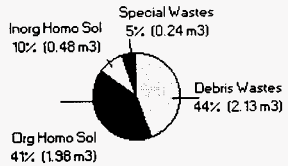
- The solid waste forecast life cycle for the Pearl Harbor generator starts in 2000 and ends in 2001.
- A total of 5 m³ of LLMW is expected from the Pearl Harbor Naval Shipyards.
- Only CH_LLMW is included in this forecast of solid waste to be shipped to Hanford.
- 208 liter drums will contain 100% of the LLMW.
- Two main physical waste forms are forecast: debris at 44% of the volume and organic solids at 41%. Inorganic solids represent 10% of the waste and special waste represent 5%.
- The LLMW hazardous constituents are 100% metals without mercury.

Waste Class Distribution



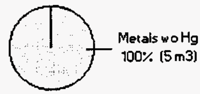
Total = 5 m3

Physical Waste Form Distribution



Total = 5 m3

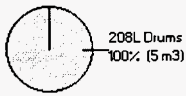
Hazardous Constituent Distribution



Total = 5 m3

Note: Includes LLMW and TRUM only

Container Distribution

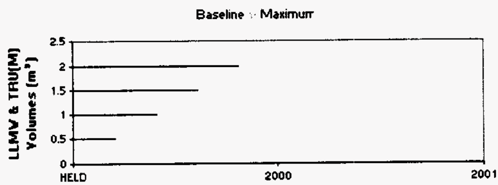


Total = 5 m3

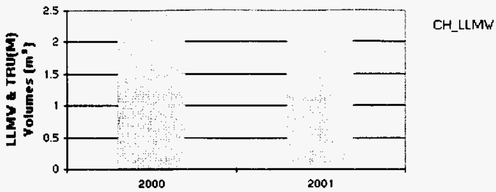
Sum of totals may not add due to rounding: numbers over 10 m³ are rounded to the nearest 10 m³, numbers less than 10 m³ are rounded to integers, non-zero numbers less than 1 are rounded to 1.

Annual Volumes

Annual Baseline Volumes



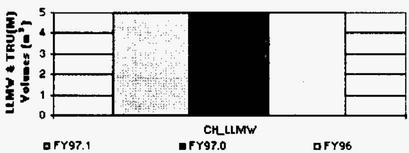
Annual Baseline by Waste Class



Comparison to Previous Baseline(s)

This forecast is similar to the FY96 forecast.

Comparison to Previous Baseline(s) by Waste Class



Pearl Harbor Naval Shipyards Comparison: Waste Class	FY97.1 Forecast (m³)	FY97.0 Forecast (m³)	FY96 Forecast (m³)
CH_LLMW	5	5	5
Subtotal	***5***	***5***	***5***
Total	***5***	***5***	***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.

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

The minimum and maximum percentages are assumed to be 100% of the baseline volume, since ranges were not provided.

This forecast is based on the Site Treatment Plan.

Other Forecast Data

- **Low Level Waste**
  - As in FY96, no low level waste is expected from Pearl Harbor Naval Shipyards for

management by the CWC.

- **Hazardous Waste**
  - No hazardous waste is expected from Pearl Harbor Naval Shipyards for management by the CWC.

GENERATORS:
Ames Laboratory-Ames, Iowa · Argonne National Laboratory-East · Bates Accelerator-Massachusetts · Battelle Columbus Laboratories · Bettis Atomic Power-Laboratory · Bettis Atomic Power-Shipyards · Brookhaven National Laboratory · Fermi National Accelerator Laboratory · General Atomics · Knolls Atomic Power-Laboratory · Knolls Atomic Power-Shipyards · Lawrence Berkeley Laboratory · Paducah Energy Systems · *Pearl Harbor Naval Shipyards* · Portsmouth Energy Systems · Portsmouth Naval Shipyards · Princeton Plasma Physics Laboratory · Puget Sound Naval Shipyards · Rockwell-Canoga Park · Rocky Flats · Stanford Linear Accelerator Center · University of California-Davis · University of Utah

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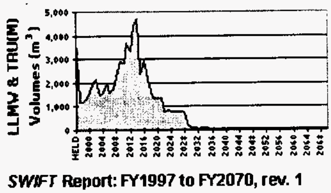

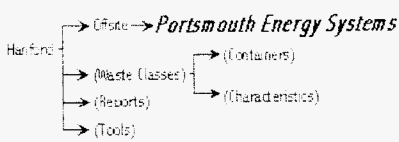

Site Rev. date: *12/31/96*

Data version: *97.1*

Data currency: *10/25/96*

Offsite — Portsmouth Energy Systems

Contents

Highlights

- The solid waste forecast life cycle for the Portsmouth Energy Systems generator ends in 1997.
- No LLMW or TRU(M) waste is expected from Portsmouth Energy Systems.
- Only LLW is included in this forecast of solid waste to be shipped to Hanford.

Annual Volumes

Annual Baseline Volumes

No LLMW or TRU(M) waste is expected from this generator.

Annual Baseline by Waste Class

Not applicable.

Comparison to Previous Baseline(s)

The FY97.1 LLMW and TRU(M) waste forecast is unchanged from FY96; no LLMW or TRU(M) waste was forecast either year.

Comparison to Previous Baseline(s) by Waste Class

Portsmouth Energy Systems Comparison: Waste Class	FY97.1 Forecast (m^3)	FY97.0 Forecast (m^3)	FY96 Forecast (m^3)
LLW	310	310	34,810
Total	***310***	***310***	***34,810***

Sum of totals may not add due to rounding: numbers over 10 m^3 are rounded to the nearest 10 m^3, numbers less than 10 m^3 are rounded to integers, non-zero numbers less than 1 are rounded to 1.

Background

The mission of Waste Management Division (WMD) at Lockheed Martin Energy Systems Portsmouth Site is to manage the Environmental Management and Enrichment Facilities treatment, storage, and disposal (TSD) of all wastes.

Forecast Assumptions and Comments

The LLW minimum and maximum percentages are 10% and 100% of the baseline volume. These percentages are based on known waste stream volume. Only the amount shipped in FY97 is variable, as some or all of that waste stream may be shipped to CWC in FY96.

The assumptions used for this forecast are based on information provided by the Portsmouth Waste Treatment & Disposal Department, based on current waste stream characterization and future treatment and disposal planning.

Other Forecast Data

- **Low Level Waste**
  - A total of 310 m^3 LLW is expected from Portsmouth Energy Systems.
  - This LLW forecast shows a 99% decrease from the FY96 forecast of 34,810 m^3, because 7 out of 8 waste streams are no longer expected to be shipped to CWC.
  - FY97.0 volumes were changed from Category I to Category III for FY97.1
  - This waste will be shipped in Other drums (74% by volume), MB-IV boxes (19%), and Medium boxes (7%).
  - 100% of the LLW has the physical form of inorganic absorbed liquid/sludge.

- **Hazardous Waste**
  - No hazardous waste is expected from Portsmouth Energy Systems for management by the CWC.

GENERATORS:

Ames Laboratory-Ames, Iowa · Argonne National Laboratory-East · Bates Accelerator-Massachusetts · Battelle Columbus Laboratories · Bettis Atomic Power-Laboratory · Bettis Atomic Power-Shipyards · Brookhaven National Laboratory · Fermi National Accelerator Laboratory · General Atomics · Knolls Atomic Power-Laboratory · Knolls Atomic Power-Shipyards · Lawrence Berkeley Laboratory · Paducah Energy Systems · Pearl Harbor Naval Shipyards · *Portsmouth Energy Systems* · Portsmouth Naval Shipyards · Princeton Plasma Physics Laboratory · Puget Sound Naval Shipyards · Rockwell-Canoga Park · Rocky Flats · Stanford Linear Accelerator Center · University of California-Davis · University of Utah

PROGRAMS:

Analytical Services · EM-40 · Facility Transitions · Landlord · Liquid Effluent · NP · Offsite · PNNL · RCRA · Solid Waste · SNF · TWRS

CHARACTERISTICS:	CONTAINERS:
CH_LLMW · RH_LLMW · CH_TRU(M) · RH_TRU(M) · GTC III · LLW · HAZ	CH_LLMW · RH_LLMW · CH_TRU(M) · RH_TRU(M) · GTC III · LLW · HAZ

WASTE CLASSES:

CH_LLMW · RH_LLMW · CH_TRU(M) · RH_TRU(M) · GTC III · LLW · HAZ

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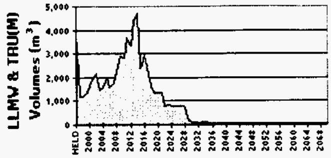
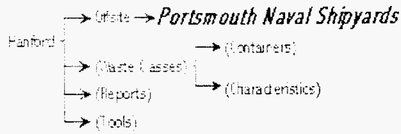


SWIFT Report: FY1997 to FY2070, rev. 1



Site Rev. date: *12/31/96*

Data version: *97.1*

Data currency: *10/25/96*

Offsite — Portsmouth Naval Shipyards

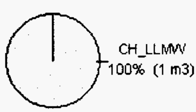
Contents

- » Highlights
- » Annual Volumes
- » Comparison to Previous Baseline(s)
- » Background
- » Forecast Assumptions and Comments
- » Other Portsmouth Naval Shipyards Forecast Data
- » Detailed Forecast Data

Highlights

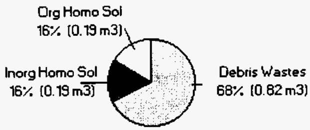
- The solid waste forecast life cycle for the Portsmouth Naval Shipyards generator ends in 2001.
- A total of 1 m³ of LLMW is expected from Portsmouth Naval Shipyards.
- Only CH_LLMW is included in this forecast of solid waste to be shipped to Hanford.
- The 208 liter drum is the one container type projected to be used.
- The physical forms of the LLMW are equal volumes of inorganic and organic solids (16% each), and 68% debris.
- The LLMW hazardous constituents are 100% metals without mercury.

Waste Class Distribution



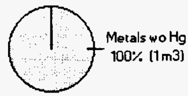
Total = 1 m3

Physical Waste Form Distribution



Total = 1 m3

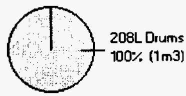
Hazardous Constituent Distribution



Total = 1 m3

Note: Includes LLMW and TRUM only

Container Distribution

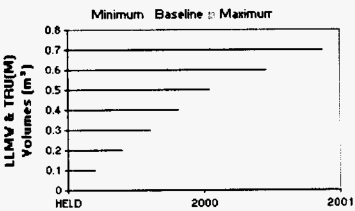


Total = 1 m3

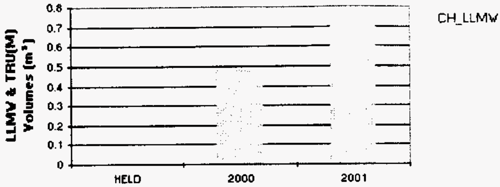
Sum of totals may not add due to rounding: numbers over 10 m³ are rounded to the nearest 10 m³, numbers less than 10 m³ are rounded to integers, non-zero numbers less than 1 are rounded to 1.

Annual Volumes

Annual Baseline Volumes



Annual Baseline by Waste Class

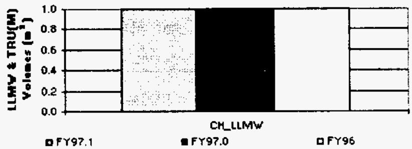


Comparison to Previous Baseline(s)

Forecast volumes are similar to those of the FY96 forecast.

The current hazardous constituent forecast of 100% metals without mercury is different from the 1996 forecast. For 1996, 45% of the volume was expected to be metals without mercury, 2% was organic and corrosive, and 53% was other constituents.

Comparison to Previous Baseline(s) by Waste Class



Portsmouth Naval Shipyards Comparison: Waste Class	FY97.1 Forecast (m^3)	FY97.0 Forecast (m^3)	FY96 Forecast (m^3)
CH_LLMW	1	1	1
Subtotal	***1***	***1***	***1***
Total	***1***	***1***	***1***

Sum of totals may not add due to rounding: numbers over 10 m^3 are rounded to the nearest 10 m^3, numbers less than 10 m^3 are rounded to integers, non-zero numbers less than 1 are rounded to 1.

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 minimum and maximum percentages were not collected from Portsmouth Naval Shipyards, since the data are based on the Site Treatment Plan which does not collect ranges; therefore, 100% was assumed for the minimum and maximum.

Other Forecast Data

- **Low Level Waste**
  - No low level waste is expected from Portsmouth Naval Shipyards for management by the CWC.
- **Hazardous Waste**
  - No hazardous waste is expected from Portsmouth Naval Shipyards for management by the CWC.

GENERATORS:
Ames Laboratory-Ames, Iowa · Argonne National Laboratory-East · Bates Accelerator-Massachusetts · Battelle Columbus Laboratories · Bettis Atomic Power-Laboratory · Bettis Atomic Power-Shipyards · Brookhaven National Laboratory · Fermi National Accelerator Laboratory · General Atomics · Knolls Atomic Power-Laboratory · Knolls Atomic Power-Shipyards · Lawrence Berkeley Laboratory · Paducah Energy Systems · Pearl Harbor Naval Shipyards · Portsmouth Energy Systems · *Portsmouth Naval Shipyards* · Princeton Plasma Physics Laboratory · Puget Sound Naval Shipyards · Rockwell-Canoga Park · Rocky Flats · Stanford Linear Accelerator Center · University of California-Davis · University of Utah

PROGRAMS:
Analytical Services · EM-40 · Facility Transitions · Landlord · Liquid Effluent · NP · Offsite · PNNL · RCRA · Solid Waste · SNF · TWRS

CHARACTERISTICS:
CH_LLMW · RH_LLMW · CH_TRU(M) · RH_TRU(M) · GTC III · LLW · HAZ

CONTAINERS:
CH_LLMW · RH_LLMW · CH_TRU(M) · RH_TRU(M) · GTC III · LLW · HAZ

WASTE CLASSES:
CH_LLMW · RH_LLMW · CH_TRU(M) · RH_TRU(M) · GTC III · LLW · HAZ

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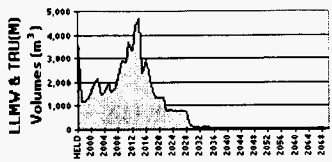


SWIFT Report: FY1997 to FY2070, rev. 1

Hanford → Offsite → *Princeton Plasma Physics Laboratory*

(Waste Classes) → (Containers), (Characteristics)

(Reports)

(Tools)

Site Rev. date: *12/31/96*

Data version: *97.1*

Data currency: *10/25/96*

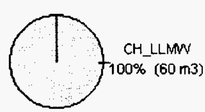
Offsite — Princeton Plasma Physics Laboratory

Contents

Highlights

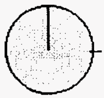
- The solid waste forecast life cycle for the Princeton Plasma Physics Laboratory generator ends in 2025.
- A total of 60 m³ of CH_LLMW is expected from Princeton Plasma Physics Laboratory, for 28% of the Offsite total.
- Waste will arrive in Other drums (33% by volume) and 67% in MB-IV boxes.
- Organic solids represent 100% of the CH_LLMW volume.
- The CH_LLMW hazardous constituents are 100% state regulated.

Waste Class Distribution



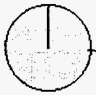
Total = 60 m3

Physical Waste Form Distribution



Total = 60 m3

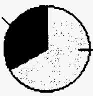
Hazardous Constituent Distribution



Total = 60 m3

Note: Includes LLMW and TRUM only

Container Distribution

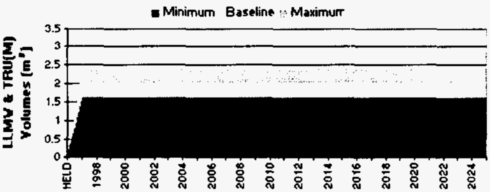


Total = 60 m3

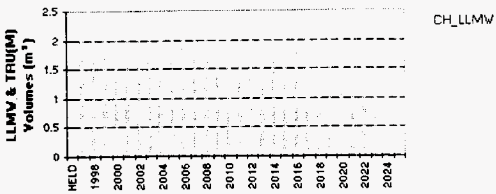
Sum of totals may not add due to rounding: numbers over 10 m³ are rounded to the nearest 10 m³, numbers less than 10 m³ are rounded to integers, non-zero numbers less than 1 are rounded to 1.

Annual Volumes

Annual Baseline Volumes



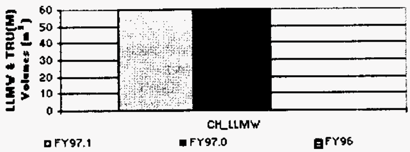
Annual Baseline by Waste Class



Comparison to Previous Baseline(s)

This is an increase, since no LLMW or TRU(M) waste was forecast by the Princeton Plasma Physics Laboratory in FY96.

Comparison to Previous Baseline(s) by Waste Class



Princeton Plasma Physics Lab Comparison: Waste Class	FY97.1 Forecast (m³)	FY97.0 Forecast (m³)	FY96 Forecast (m³)
CH_LLMW	60	60	0
Subtotal	***60***	***60***	***0***
LLW	4,030	4,030	18,000
Total	***4,090***	***4,090***	***18,000***

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.

Background

The Princeton Plasma Physics Laboratory is an Energy Research project dedicated to providing data to support the use of Magnetically Confined Fusion as an environmentally attractive energy alternative. 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 minimum and maximum percentages are 80% and 120% of the baseline volume. These percentages are based on the most recent Energy Research funding schedule for magnetic confinement fusion research.

Other Forecast Data

- **Low Level Waste**

  - A total of 4,030 m^3 of LLW is expected for Princeton Plasma Physics Laboratory.
  - This LLW forecast shows a 78% decrease from the FY96 forecast of 18,000 m^3, primarily because the life cycle has decreased from 2070 to 2025, and the CWC is not the first option for Princeton Plasma Physics Laboratory to ship the waste.
  - 55% of the LLW will be sent in MB-IV boxes, 40% will be in 208 liter drums, and Other drums will contain the remaining 5%.
  - LLW physical forms are nearly all (98%) debris - of which plastic/rubber is 66% of the volume. The other 2% is composed of organic solids.

- **Hazardous Waste**

  - No hazardous waste is expected from the Princeton Plasma Physics Laboratory for management by the CWC.

GENERATORS:
Ames Laboratory-Ames, Iowa · Argonne National Laboratory-East · Bates Accelerator-Massachusetts · Battelle Columbus Laboratories · Bettis Atomic Power-Laboratory · Bettis Atomic Power-Shipyards · Brookhaven National Laboratory · Fermi National Accelerator Laboratory · General Atomics · Knolls Atomic Power-Laboratory · Knolls Atomic Power-Shipyards · Lawrence Berkeley Laboratory · Paducah Energy Systems · Pearl Harbor Naval Shipyards · Portsmouth Energy Systems · Portsmouth Naval Shipyards · *Princeton Plasma Physics Laboratory* · Puget Sound Naval Shipyards · Rockwell-Canoga Park · Rocky Flats · Stanford Linear Accelerator Center · University of California-Davis · University of Utah

PROGRAMS:
Analytical Services · EM-40 · Facility Transitions · Landlord · Liquid Effluent · NP · Offsite · PNNL · RCRA · Solid Waste · SNF · TWRS

CHARACTERISTICS:
CH_LLMW · RH_LLMW · CH_TRU(M) · RH_TRU(M) · GTC III · LLW · HAZ

CONTAINERS:
CH_LLMW · RH_LLMW · CH_TRU(M) · RH_TRU(M) · GTC III · LLW · HAZ

WASTE CLASSES:
CH_LLMW · RH_LLMW · CH_TRU(M) · RH_TRU(M) · GTC III · LLW · HAZ

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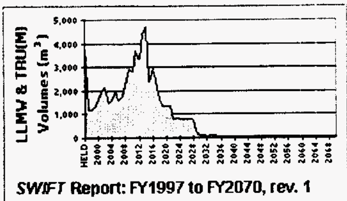


→ Offsite → Puget Sound Naval Shipyards
Hanford
→ (Waste Classes) → (Containers)
→ (Characteristics)
→ (Reports)
→ (Tools)

Site Rev. date: *12/31/96*

Data version: *97.1*

Data currency: *10/25/96*

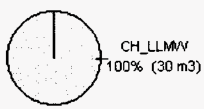
Offsite — Puget Sound Naval Shipyards

Contents

Highlights

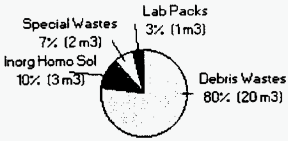
- The solid waste forecast life cycle for the Puget Sound Naval Shipyards generator ends in 2001.
- A total of 30 m³ of LLMW is expected from Puget Sound Naval Shipyards, for 14% of the Offsite total.
- Only CH_LLMW is included in this forecast of solid waste to be shipped to Hanford.
- This generator projects all of the waste to be sent in 208 liter containers.
- CH_LLWM physical forms vary from 80% of the waste as debris to 3% as lab packs. Special waste is expected to be 7% of the volume, and 10% should be inorganic solids.
- CH_LLMW hazardous constituents are 100% metals without mercury.

Waste Class Distribution



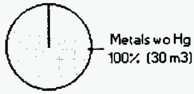
Total = 30 m3

Physical Waste Form Distribution



Total = 30 m3

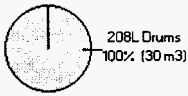
Hazardous Constituent Distribution



Total = 30 m3

Note: Includes LLMW and TRUM only

Container Distribution

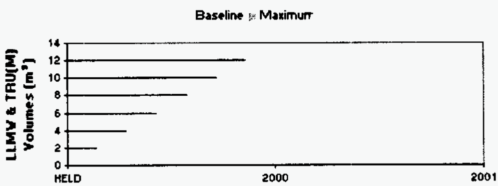


Total = 30 m3

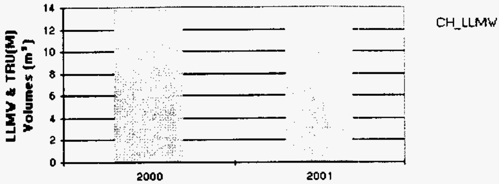
Sum of totals may not add due to rounding: numbers over 10 m^3 are rounded to the nearest 10 m^3, numbers less than 10 m^3 are rounded to integers, non-zero numbers less than 1 are rounded to 1.

Annual Volumes

Annual Baseline Volumes



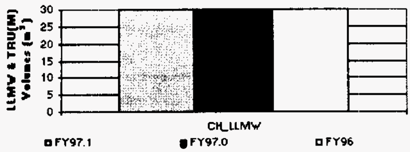
Annual Baseline by Waste Class



Comparison to Previous Baseline(s)

This forecast is similar to the FY96 forecast.

Comparison to Previous Baseline(s) by Waste Class



Puget Sound Naval Shipyards Comparison: Waste Class	FY97.1 Forecast (m³)	FY97.0 Forecast (m³)	FY96 Forecast (m³)
CH_LLMW	30	30	30
Subtotal	***30***	***30***	***30***
Total	***30***	***30***	***30***

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.

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 US Navy facility that repairs, overhauls, and maintains Navy ships, including nuclear-powered ships.

Forecast Assumptions and Comments

The minimum and maximum percentages were not collected from Puget Sound Naval Shipyards, since the data are based on the Site Treatment Plan, which does not collect ranges; therefore, 100% was assumed for the minimum and maximum.

Other Forecast Data

- **Low Level Waste**
  - No low level waste is expected from Puget Sound Naval Shipyards for management by the

CWC.

- **Hazardous Waste**

  - No hazardous waste is expected from Puget Sound Naval Shipyards for management by the CWC.

GENERATORS: Ames Laboratory-Ames, Iowa · Argonne National Laboratory-East · Bates Accelerator-Massachusetts · Battelle Columbus Laboratories · Bettis Atomic Power-Laboratory · Bettis Atomic Power-Shipyards · Brookhaven National Laboratory · Fermi National Accelerator Laboratory · General Atomics · Knolls Atomic Power-Laboratory · Knolls Atomic Power-Shipyards · Lawrence Berkeley Laboratory · Paducah Energy Systems · Pearl Harbor Naval Shipyards · Portsmouth Energy Systems · Portsmouth Naval Shipyards · Princeton Plasma Physics Laboratory · *Puget Sound Naval Shipyards* · Rockwell-Canoga Park · Rocky Flats · Stanford Linear Accelerator Center · University of California-Davis · University of Utah	
PROGRAMS: *Analytical Services* · *EM-40* · *Facility Transitions* · Landlord · Liquid Effluent · NP · Offsite · PNNL · RCRA · Solid Waste · SNF · TWRS	
CHARACTERISTICS: CH_LLMW · RH_LLMW · CH_TRU(M) · RH_TRU(M) · GTC III · LLW · HAZ	CONTAINERS: CH_LLMW · RH_LLMW · CH_TRU(M) · RH_TRU(M) · GTC III · LLW · HAZ
WASTE CLASSES: CH_LLMW · RH_LLMW · CH_TRU(M) · RH_TRU(M) · GTC III · LLW · HAZ	
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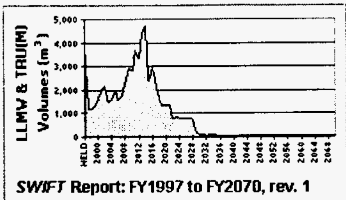
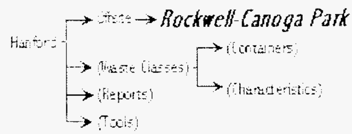




Site Rev. date: *12/31/96*

Data version: *97.1*

Data currency: *10/25/96*

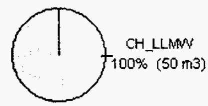
Offsite — Rockwell-Canoga Park

Contents

Highlights

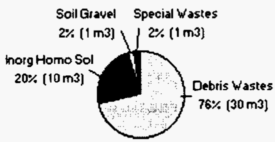
- The solid waste forecast life cycle for the Rockwell-Canoga Park generator ends in 2000.
- A total of 50 m^3 of LLMW is expected from Rockwell-Canoga Park for 24% of the offsite total.
- This forecast shows a 100% increase over the FY96 forecast of 0 m^3.
- Only CH_LLMW is included in this forecast of solid waste to be shipped to Hanford.
- MB-IV boxes should constitute 72% of the CH_LLMW, with Small boxes and 208 liter drums holding the rest of this LLMW.
- The soil/gravel and special waste physical waste forms represent 4% of the CH_LLMW. Inorganic solids account for 20% of the volume, and the majority (76%) is debris.
- CH_LLMW hazardous constituents are nearly all organic (92%), corrosive and state regulated are 4% and metals without mercury and reactive metals are also forecast.

Waste Class Distribution



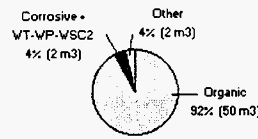
Total = 50 m3

Physical Waste Form Distribution



Total = 50m3

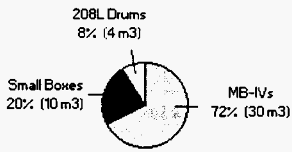
Hazardous Constituent Distribution



Total = 50 m3

Note: Includes LLMW and TRUM only

Container Distribution

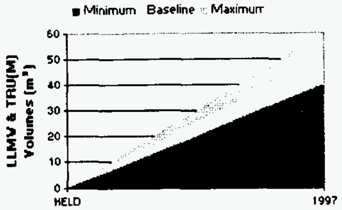


Total = 50 m3

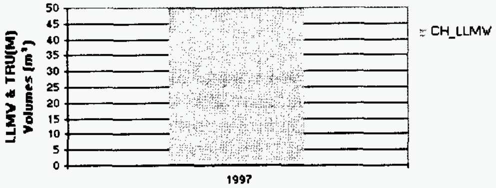
Sum of totals may not add due to rounding: numbers over 10 m^3 are rounded to the nearest 10 m^3, numbers less than 10 m^3 are rounded to integers, non-zero numbers less than 1 are rounded to 1.

Annual Volumes

Annual Baseline Volumes



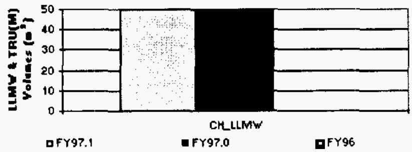
Annual Baseline by Waste Class



Comparison to Previous Baseline(s)

The FY97 forecast of 50 m³ LLMW is an increase over the FY96 forecast of 0 m³ LLMW and TRU(M) waste. This increase of expected waste is due to the potential of a Site Treatment Plan being negotiated with Rockwell that allows shipment to Hanford.

Comparison to Previous Baseline(s) by Waste Class



Rockwell-Canoga Park Comparison: Waste Class	FY97.1 Forecast (m³)	FY97.0 Forecast (m³)	FY96 Forecast (m³)
CH_LLMW	50	50	0
Subtotal	***50***	***50***	***0***
LLW	1,150	1,150	930
Total	***1,200***	***1,200***	***930***

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.

Background

The mission of Rockwell-Canoga Park is the decontamination and decommissioning of old nuclear laboratories. LLW from Rockwell is mostly associated with these activities.

Forecast Assumptions and Comments

The minimum and maximum percentages are 80% and 120% of the baseline volume. These percentages account for uncertainty in the waste generation.

Forecast assumption is based on planned activities for D&D operations that are within the budget and schedule in place at this time, and approval of a Site Treatment Plan for shipment to Hanford.

Other Forecast Data

- **Low Level Waste**
  - A total of 1,150 m^3 of LLW is expected from Rockwell-Canoga Park.
  - This forecast shows a 24% increase over the FY96 forecast of 930 m^3.
  - More than two-thirds of the LLW will be contained in Small boxes, while MB-IV and Large boxes will hold 21% and 11%, respectively.
  - All of the LLW has the physical form of debris, except for 1% of shielding.

- **Hazardous Waste**
  - No hazardous waste is expected from Rockwell-Canoga Park for management by the CWC.

GENERATORS:
Ames Laboratory-Ames, Iowa · Argonne National Laboratory-East · Bates Accelerator-Massachusetts · Battelle Columbus Laboratories · Bettis Atomic Power-Laboratory · Bettis Atomic Power-Shipyards · Brookhaven National Laboratory · Fermi National Accelerator Laboratory · General Atomics · Knolls Atomic Power-Laboratory · Knolls Atomic Power-Shipyards · Lawrence Berkeley Laboratory · Paducah Energy Systems · Pearl Harbor Naval Shipyards · Portsmouth Energy Systems · Portsmouth Naval Shipyards · Princeton Plasma Physics Laboratory · Puget Sound Naval Shipyards · *Rockwell-Canoga Park* · Rocky Flats · Stanford Linear Accelerator Center · University of California-Davis · University of Utah

PROGRAMS:
Analytical Services · EM-40 · Facility Transitions · Landlord · Liquid Effluent · NP · Offsite · PNNL · RCRA · Solid Waste · SNF · TWRS

CHARACTERISTICS:
CH_LLMW · RH_LLMW · CH_TRU(M) · RH_TRU(M) · GTC III · LLW · HAZ

CONTAINERS:
CH_LLMW · RH_LLMW · CH_TRU(M) · RH_TRU(M) · GTC III · LLW · HAZ

WASTE CLASSES:
CH_LLMW · RH_LLMW · CH_TRU(M) · RH_TRU(M) · GTC III · LLW · HAZ

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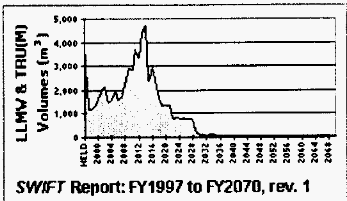

Site Rev. date:
12/31/96

Data version:
97.1

Data currency:
10/25/96

Offsite — Rocky Flats

Contents

Highlights

- The solid waste forecast life cycle for Rocky Flats generator ends in 2000.
- No LLMW or TRU(M) waste is expected from Rocky Flats.
- Only LLW is included in this forecast of solid waste to be shipped to Hanford.

Annual Volumes

Annual Baseline Volumes

No LLMW or TRU(M) waste is expected from this generator.

Annual Baseline by Waste Class

Not applicable.

Comparison to Previous Baseline(s)

Similar to FY96, this generator did not forecast any LLMW or TRU(M) waste for FY97.

Comparison to Previous Baseline(s) by Waste Class

Rocky Flats Comparison: Waste Class	FY97.1 Forecast (m³)	FY97.0 Forecast (m³)	FY96 Forecast (m³)
LLW	180	180	220
Total	***180***	***180***	***220***

Sum of totals may not add due to rounding: numbers over 10 m^3 are rounded to the nearest 10 m^3, numbers less than 10 m^3 are rounded to integers, non-zero numbers less than 1 are rounded to 1.

Background

The mission of Rocky Flats is to manage waste and materials, clean up and convert the Rocky Flats Environmental Technology Site to beneficial use in a manner that is safe, environmentally and socially responsible, physically secure, and cost effective.

Forecast Assumptions and Comments

The LLW minimum and maximum percentages are 100% and 200% of the baseline volume. Maximum waste % is based upon Rocky Flats obtaining additional approvals from DOE and Hanford for waste disposal at Hanford.

Forecast is based on the assumption that DOE and Hanford will continue their approval of shipping LLW from Rocky Flats to CWC.

Other Forecast Data

- **Low Level Waste**
  - A total of 180 m^3 of LLW is expected from Rocky Flats.
  - This forecast shows a 20% decrease from the FY96 forecast of 220 m^3.
  - All of the LLW will utilize 208 liter drums for shipment.
  - 100% of the LLW is debris.
- **Hazardous Waste**
  - No hazardous waste is expected from Rocky Flats for management by the CWC.

GENERATORS:
Ames Laboratory-Ames, Iowa · Argonne National Laboratory-East · Bates Accelerator-Massachusetts · Battelle Columbus Laboratories · Bettis Atomic Power-Laboratory · Bettis Atomic Power-Shipyards · Brookhaven National Laboratory · Fermi National Accelerator Laboratory · General Atomics · Knolls Atomic Power-Laboratory · Knolls Atomic Power-Shipyards · Lawrence Berkeley Laboratory · Paducah Energy Systems · Pearl Harbor Naval Shipyards · Portsmouth Energy Systems · Portsmouth Naval Shipyards · Princeton Plasma Physics Laboratory · Puget Sound Naval Shipyards · Rockwell-Canoga Park · *Rocky Flats* · Stanford Linear Accelerator Center · University of California-Davis · University of Utah

PROGRAMS:
Analytical Services · EM-40 · Facility Transitions · Landlord · Liquid Effluent · NP · Offsite · PNNL · RCRA · Solid Waste · SNF · TWRS

CHARACTERISTICS:	CONTAINERS:
CH_LLMW · RH_LLMW · CH_TRU(M) · RH_TRU(M) · GTC III · LLW · HAZ	CH_LLMW · RH_LLMW · CH_TRU(M) · RH_TRU(M) · GTC III · LLW · HAZ

WASTE CLASSES:
CH_LLMW · RH_LLMW · CH_TRU(M) · RH_TRU(M) · GTC III · LLW · HAZ

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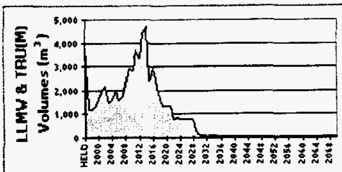

SWIFT Report: FY1997 to FY2070, rev. 1

Hanford → Offsite → *Stanford Linear Accelerator Center*
→ (Waste Classes) → (Containers)
→ (Characteristics)
→ (Reports)
→ (Tools)

Site Rev. date: *12/31/96*

Data version: *97.1*

Data currency: *10/25/96*

Offsite — Stanford Linear Accelerator Center

Contents

Highlights

- The solid waste forecast life cycle for the Stanford Linear Accelerator Center (Stanford) generator ends in 2070.
- No LLMW and TRU(M) waste is expected from Stanford.
- Only LLW is included in this forecast of solid waste to be shipped to Hanford.

Annual Volumes

Annual Baseline Volumes

No LLMW or TRU(M) waste is expected from this generator.

Annual Baseline by Waste Class

Not applicable.

Comparison to Previous Baseline(s)

As in FY96, this generator did not forecast any LLMW or TRU(M) waste for FY97 or for FY97.1.

Comparison to Previous Baseline(s) by Waste Class

Stanford Linear Accelerator Center Comparison: Waste Class	FY97.1 Forecast (m^3)	FY97.0 Forecast (m^3)	FY96 Forecast (m^3)
LLW	1,170	1,170	1,750
Total	*1,170*	*1,170*	*1,750*

Sum of totals may not add due to rounding: numbers over 10 m^3 are rounded to the nearest 10 m^3, numbers less than 10 m^3 are rounded to integers, non-zero numbers less than 1 are rounded to 1.

Background

The Stanford Linear Accelerator Center (SLAC) is a National Laboratory involved in high energy particle physics. 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

The LLW minimum and maximum percentages are 50% and 150% of the baseline volume. These percentages are based on process knowledge, and the amount of waste that is being received per documented records.

The forecast estimates are based on the following assumptions:

- No major modifications in the facility.
- The large activated shielding blocks may be declared waste.
- No closure of the facility.

Other Forecast Data

- **Low Level Waste**
    - A total of 1,170 m^3 is expected from the Stanford Linear Accelerator Center.
    - This forecast shows a 33% decrease from the FY96 forecast of 1,750 m^3.
    - The MB-V box is forecast to hold all of this LLW.
    - LLW physical forms are forecast to be concrete shielding (16% by volume) and debris (84%).

- **Hazardous Waste**
    - No hazardous waste is expected from Stanford for management by the CWC.

GENERATORS:
Ames Laboratory-Ames, Iowa · Argonne National Laboratory-East · Bates Accelerator-Massachusetts · Battelle Columbus Laboratories · Bettis Atomic Power-Laboratory · Bettis Atomic Power-Shipyards · Brookhaven National Laboratory · Fermi National Accelerator Laboratory · General Atomics · Knolls Atomic Power-Laboratory · Knolls Atomic Power-Shipyards · Lawrence Berkeley Laboratory · Paducah Energy Systems · Pearl Harbor Naval Shipyards · Portsmouth Energy Systems · Portsmouth Naval Shipyards · Princeton Plasma Physics Laboratory · Puget Sound Naval Shipyards · Rockwell-Canoga Park · Rocky Flats · *Stanford Linear Accelerator Center* · University of California-Davis · University of Utah

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CHARACTERISTICS:
CH_LLMW · RH_LLMW · CH_TRU(M) · RH_TRU(M) · GTC III · LLW · HAZ

CONTAINERS:
CH_LLMW · RH_LLMW · CH_TRU(M) · RH_TRU(M) · GTC III · LLW · HAZ

WASTE CLASSES:
CH_LLMW · RH_LLMW · CH_TRU(M) · RH_TRU(M) · GTC III · LLW · HAZ

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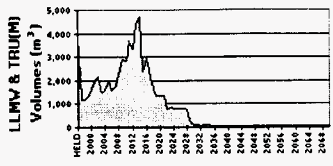

SWIFT Report: FY1997 to FY2070, rev. 1

Hanford → Offsite → *University of California-Davis*
Hanford → (Waste Classes) → (Containers)
Hanford → (Waste Classes) → (Characteristics)
Hanford → (Reports)
Hanford → (Tools)

Site Rev. date: *12/31/96*

Data version: *97.1*

Data currency: *10/25/96*

Offsite — University of California-Davis

Contents

Highlights

- The solid waste forecast life cycle for the University of California - Davis generator ends in 2003.
- No LLMW and TRU(M) waste is forecast from this generator.
- Only LLW is included in this forecast of solid waste to be shipped to Hanford.

Annual Volumes

Annual Baseline Volumes

No LLMW or TRU(M) waste is expected from this generator.

Annual Baseline by Waste Class

Not applicable.

Comparison to Previous Baseline(s)

As in FY96, this generator did not forecast any LLMW or TRU(M) waste for FY97 or for 97.1.

Comparison to Previous Baseline(s) by Waste Class

University of California-Davis Comparison: Waste Class	FY97.1 Forecast (m^3)	FY97.0 Forecast (m^3)	FY96 Forecast (m^3)
LLW	980	980	1,870
Total	*980*	*980*	*1,870*

Sum of totals may not add due to rounding: numbers over 10 m^3 are rounded to the nearest 10 m^3, numbers less than 10 m^3 are rounded to integers, non-zero numbers less than 1 are rounded to 1.

Background

The current mission of University of California, Davis, generator is to remediate the site and turn it back over to the landlord by 2003. LLW is a result of the remediation, and decontamination and decommissioning activities.

Forecast Assumptions and Comments

The assumption for this forecast is that DOE will maintain the level of funding indicated in the FYP ADSs for the site.

Other Forecast Data

- **Low Level Waste**
  - A total of 980 m^3 of LLW is expected from the University of California at Davis.
  - This forecast shows a 48% decrease from the FY96 forecast of 1,870 m^3, due mainly to more current information.
  - 99% of this volume is to be contained in MB-IV boxes. 208 liter drums will contain the other 1%.
  - Most of the waste has the physical form of debris (62%). Some of the volume is expected to be soil and soil/gravel (37%), and organic solids are also forecast (1%).
- **Hazardous Waste**
  - No hazardous waste is expected from University of California-Davis for management by the CWC.

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WASTE CLASSES:
CH_LLMW · RH_LLMW · CH_TRU(M) · RH_TRU(M) · GTC III · LLW · HAZ

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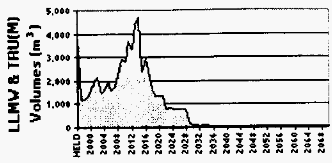
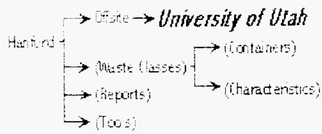




Site Rev. date: *12/31/96*

Data version: *97.1*

Data currency: *10/25/96*

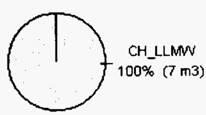
Offsite — University of Utah

Contents

Highlights

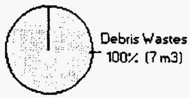
- The solid waste forecast life cycle for the University of Utah generator ends in 1997.
- A total of 7 m^3 of LLMW waste is expected from University of Utah.
- Only CH_LLMW is included in this forecast of solid waste to be shipped to Hanford.
- 208 liter drums are the only LLMW container projected by the University.
- Heterogeneous debris is the physical waste form accounting for 100% of the LLMW.
- LLMW hazardous constituents are 100% ignitable.

Waste Class Distribution



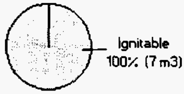
Total = 7 m3

Physical Waste Form Distribution



Total = 7 m3

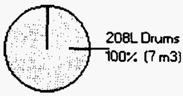
Hazardous Constituent Distribution



Total = 7 m3

Note: Includes LLMW and TRUM only

Container Distribution

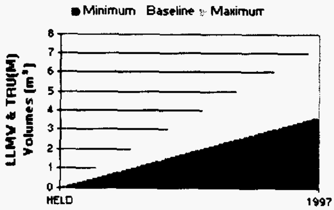


Total = 7 m3

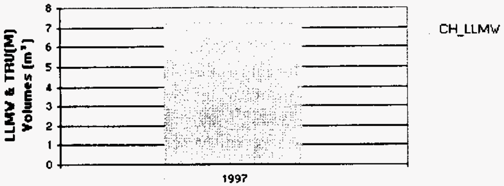
Sum of totals may not add due to rounding: numbers over 10 m³ are rounded to the nearest 10 m³, numbers less than 10 m³ are rounded to integers, non-zero numbers less than 1 are rounded to 1.

Annual Volumes

Annual Baseline Volumes



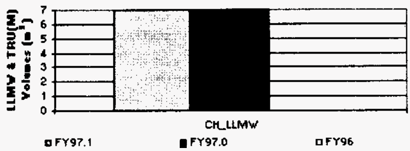
Annual Baseline by Waste Class



Comparison to Previous Baseline(s)

The entire amount of 7 m³ of LLMW is an increase over the FY96 forecast of 0 m³, primarily because analytical samples are being designated as waste.

Comparison to Previous Baseline(s) by Waste Class



University of Utah Comparison: Waste Class	FY97.1 Forecast (m³)	FY97.0 Forecast (m³)	FY96 Forecast (m³)
CH_LLMW	7	7	0
Subtotal	*7*	*7*	*0*
LLW	7	7	20
Total	*10*	*10*	*20*

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.

Background

The University of Utah is involved in the disposal of laboratory wastes and biological samples from the Beagle study.

Forecast Assumptions and Comments

The minimum and maximum percentages are 50% and 100% of the baseline volume. The minimum percentage is based on the non-radioactive wastes being sent for incineration.

The forecast is based on the assumption that all animal samples will be designated as waste by the DOE.

Other Forecast Data

- **Low Level Waste**
  - A total of 7 m^3 of LLW is expected from the University of Utah.
  - This forecast shows a 65% decrease from the FY96 forecast of 20 m^3, because some waste has been recharacterized as LLMW, and because CWC is not the first option for waste disposal.
  - 208 liter drums are also the only container expected for LLW shipments.
  - Heterogeneous debris is the physical waste form which accounts for 100% of the LLW.

- **Hazardous Waste**
  - No hazardous waste is expected from University of Utah for management by the CWC.

GENERATORS:
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PROGRAMS:
Analytical Services · EM-40 · Facility Transitions · Landlord · Liquid Effluent · NP · Offsite · PNNL · RCRA · Solid Waste · SNF · TWRS

CHARACTERISTICS:
CH_LLMW · RH_LLMW · CH_TRU(M) · RH_TRU(M) · GTC III · LLW · HAZ

CONTAINERS:
CH_LLMW · RH_LLMW · CH_TRU(M) · RH_TRU(M) · GTC III · LLW · HAZ

WASTE CLASSES:
CH_LLMW · RH_LLMW · CH_TRU(M) · RH_TRU(M) · GTC III · LLW · HAZ

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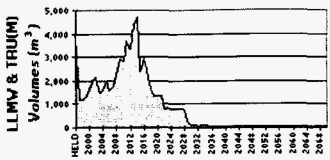


SWIFT **Report: FY1997 to FY2070, rev. 1**

Hanford → **PNNL** → (Generators)
→ (Waste Classes) → (Containers)
→ (Characteristics)
→ (Reports)
→ (Tools)

Site Rev. date: *12/31/96*

Data version: *97.1*

Data currency: *10/25/96*

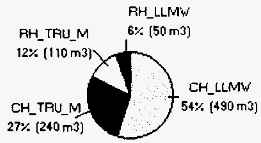
PNNL

Contents

Highlights

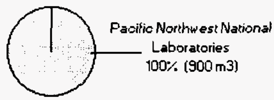
- The forecast life cycle for the PNNL Program Area ends in 2010.
- The life cycle total of LLMW and TRU(M) waste for PNNL is 900 m³, or 1% of the Hanford total.
- This forecast shows a 76% decrease from the FY96 forecast of 3,740 m³, due to a reduction in the forecast PNNL life cycle (from 2070 to 2010) as well as updated planning assumptions.
- This forecast shows a 70 m³ decrease from FY97.0 since the 324 and 327 Buildings have been transferred to Facility Transitions.
- CH_LLMW is the primary waste class generated, representing 54% (490 m³) of the waste volume.
- 208 liter drums compose 67% of the LLMW and TRU(M) waste volume, SWBs are used for 20%, and 13% is in MB-IV boxes.
- Many physical waste forms are expected from PNNL. Most of the volume should be debris (56%), lab packs (20%), and shielding (13%). Smaller volumes represent special waste (4%), organic solids (4%), and inorganic solids (3%).
- The LLMW and TRUM waste hazardous constituents are very diverse. Mixed corrosive, metals without mercury, state regulated constituents are the most common at 24% of the volume. Organic constituents account for 18% of the volume, metals without mercury are 13%, mixed metals without mercury, organic, state regulated is 11%. Various other hazardous constituents compose the remaining 34%.

Waste Class Distribution



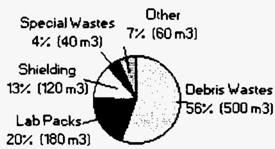
Total = 900 m3

Generator Distribution



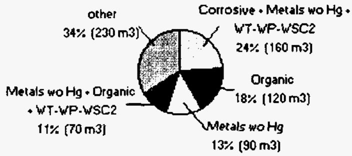
Total = 900 m3

Physical Waste Form Distribution



Total = 900 m3

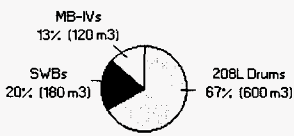
Hazardous Constituent Distribution



Total = 165 m3

Note: Includes LLMW and TRUM only

Container Distribution



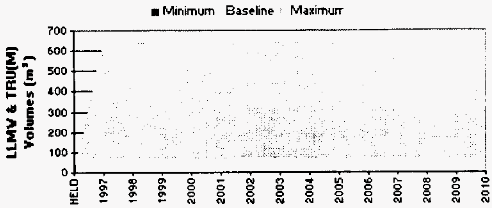
Total = 900 m3

Sum of totals may not add due to rounding: numbers over 10 m^3 are rounded to the nearest 10 m^3, numbers less than 10 m^3 are rounded to integers, non-zero numbers less than 1 are rounded to 1.

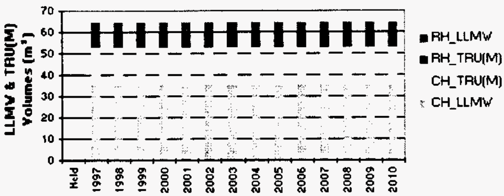
Annual Waste Class Volumes

PNNL will generate waste at a constant rate throughout the remainder of the life cycle.

Annual Baseline Volumes



Annual Baseline by Waste Class



Summary Table (Volumes in m³)

Pacific Northwest National Laboratories Summary: Generator	CH_LLMW	RH_LLMW	CH_TRU(M)	RH_TRU(M)	Subtotal	PCT
Pacific Northwest National Laboratories	490	50	240	110	900	100%
Total	***490***	***50***	***240***	***110***	***900***	100%
PCT	54%	6%	27%	12%	99%	

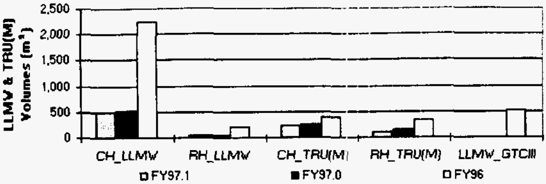
Sum of totals may not add due to rounding: numbers over 10 m³ are rounded to the nearest 10 m³, numbers less than 10 m³ are rounded to integers, non-zero numbers less than 1 are rounded to 1.

Comparison to Previous Baseline(s)

The FY97.1 forecast shows a significant decrease from the FY96 forecast of 3,740 m³. One key reason for this reduction is the change in life cycle from 2070 to 2010. This change in life cycle is a result of the following new assumptions: 1) the 300 Area will be closed down by 2010, and 2) PNNL will be sending any subsequent radioactive solid waste to a disposal site other than Hanford.

In addition to overall reductions in waste estimates, LLMW greater-than-category III shows a significant reduction from 530 m³ to 0 m³. This reduction arises because PNNL only included that waste or potential waste for which a disposal pathway exists.

Comparison to Previous Baseline(s) by Waste Class



PNNL Comparison: Waste Class	FY97.1 Forecast (m^3)	FY97.0 Forecast (m^3)	FY96 Forecast (m^3)
CH_LLMW	490	510	2,250
RH_LLMW	50	50	220
CH_TRU(M)	240	250	390
RH_TRU(M)	110	150	350
LLMW_GTCIII	0	0	530
Subtotal	***900***	***970***	***3,740***
LLW	7,880	8,780	53,280
LLW GTCIII	0	0	350
Total	***8,780***	***9,750***	***57,370***

Sum of totals may not add due to rounding: numbers over 10 m^3 are rounded to the nearest 10 m^3, numbers less than 10 m^3 are rounded to integers, non-zero numbers less than 1 are rounded to 1.

Background

PNNL is a national research laboratory that conducts research for DOE, 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 324 and 327 facilities were transferred from PNNL to the M&I contractor on 11/1/96; these facilities are no longer included as separate generators in this forecast but are included in the Facility Transitions program.

The minimum and maximum ranges for this waste are 1% and 1,000% respectively, and are based on the variability in Research and Development projects.

Other Forecast Data

- **Low Level Waste**
  - A total of 7,880 m^3 of LLW is expected from PNNL.
  - This forecast shows an 85% decrease from the FY96 forecast of 53,630 m^3, again due to a reduction in life cycle as well as changes in planning assumptions. There is also a 900 m^3 decrease from the FY97.0 volume of 8,780 due to the transition of 324 and 327 to Facility Transitions.
  - LLW containers include MB-IV boxes (61%), MB-V boxes (18%), 208 liter drums (15%), and 322 liter drums (6%).

- Physical LLW forms are 100% debris (heterogeneous debris totals 89% of the forecast).

- **Hazardous Waste**

  - No hazardous waste is expected from PNNL for management by the CWC.

GENERATORS: Pacific Northwest National Laboratories	
PROGRAMS: Analytical Services · EM-40 · Facility Transitions · Landlord · Liquid Effluent · NP · Offsite · *PNNL* · RCRA · Solid Waste · SNF · TWRS	
CHARACTERISTICS: CH_LLMW · RH_LLMW · CH_TRU(M) · RH_TRU(M) · GTC III · LLW · HAZ	CONTAINERS: CH_LLMW · RH_LLMW · CH_TRU(M) · RH_TRU(M) · GTC III · LLW · HAZ
WASTE CLASSES: CH_LLMW · RH_LLMW · CH_TRU(M) · RH_TRU(M) · GTC III · LLW · HAZ	

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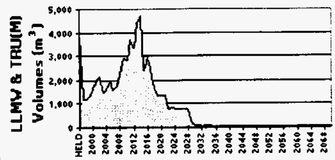

***SWIFT* Report: FY1997 to FY2070, rev. 1**

Hanford → PNNL → *Pacific Northwest National Laboratories*
→ (Waste Classes) → (Containers) / (Characteristics)
→ (Reports)
→ (Tools)

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PNNL — Pacific Northwest National Laboratories

Because Pacific Northwest National Laboratories is the only generator within the PNNL program that will ship waste to the CWC, waste information for this generator is identical to that found on the program page.

GENERATORS:
Pacific Northwest National Laboratories

PROGRAMS:
Analytical Services · EM-40 · Facility Transitions · Landlord · Liquid Effluent · NP · Offsite · PNNL · RCRA · Solid Waste · SNF · TWRS

CHARACTERISTICS:	CONTAINERS:
CH_LLMW · RH_LLMW · CH_TRU(M) · RH_TRU(M) · GTC III · LLW · HAZ	CH_LLMW · RH_LLMW · CH_TRU(M) · RH_TRU(M) · GTC III · LLW · HAZ

WASTE CLASSES:
CH_LLMW · RH_LLMW · CH_TRU(M) · RH_TRU(M) · GTC III · LLW · HAZ

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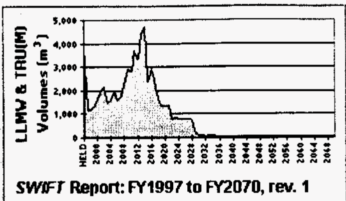

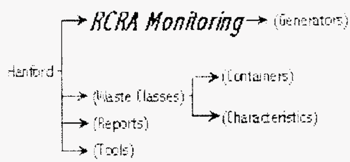

Site Rev. date:	*12/31/96*
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Data currency:	*10/25/96*

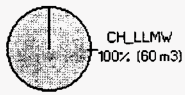
RCRA Monitoring

Contents

Highlights

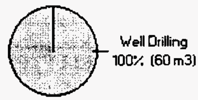
- The forecast life cycle for RCRA Monitoring activities ends in 2070. However, due to the planned breakup of Hanford Technical Services, the present forecast only extends until 2001.
- The life cycle total of LLMW waste for RCRA Monitoring until 2001 is 60 m³, or <1% of the Hanford total.
- This forecast shows a 97% decrease from the FY96 forecast of 2,030 m³, primarily due to the reduction in forecast life cycle.
- All RCRA Monitoring waste is CH_LLMW.
- The only waste generator for this program is Well Drilling (RFSH_WELL_DRL).
- This program is forecasting their LLMW and TRU(M) waste to be shipped in 208 (83%) and 322 liter drums (17%).
- LLMW physical forms are mostly (85%) soil and soil/gravel; in addition, the forecast expects 10% of the waste as debris and 5% as shielding.
- LLMW hazardous constituents are mostly organic (80% by volume), while 15% is state regulated and 5% is metals without mercury.

Waste Class Distribution



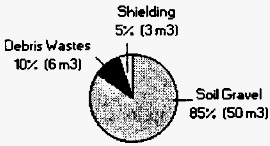
Total = 60 m3

Generator Distribution



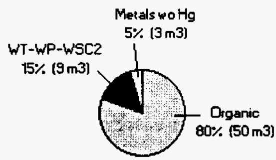
Total = 60 m3

Physical Waste Form Distribution



Total = 60 m3

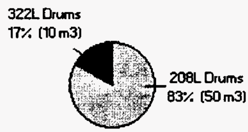
Hazardous Constituent Distribution



Total = 60 m3

Note: includes LLMW and TRUW only

Container Distribution



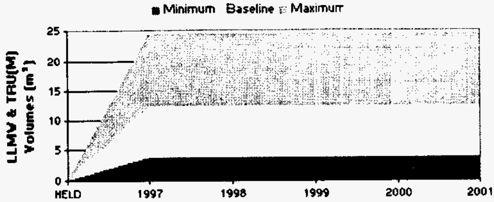
Total = 60 m3

Sum of totals may not add due to rounding: numbers over 10 m^3 are rounded to the nearest 10 m^3, numbers less than 10 m^3 are rounded to integers, non-zero numbers less than 1 are rounded to 1.

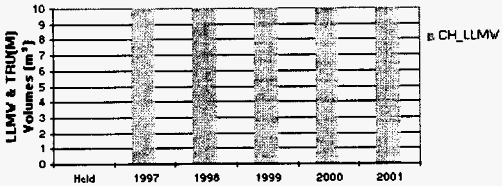
Annual Waste Class Volumes

RCRA Monitoring waste will be generated on a steady basis from 1997 to 2001, as a result of yearly well drilling operations. Waste generated for this activity after 2001 will be the responsibility of a new (currently unidentified) generator.

Annual Baseline Volumes



Annual Baseline by Waste Class



Summary Table (Volumes in m³)

RCRA Summary: Generator	CH_LLMW	*Subtotal*	PCT
Well Drilling	60	60	100%
Total	**60**	**60**	*100%*
PCT	100%	*100%*	

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.

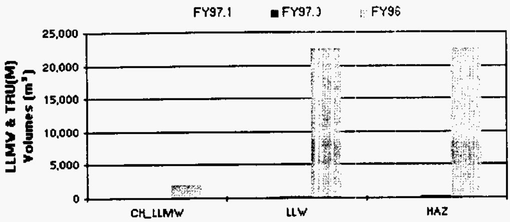
Comparison to Previous Baseline(s)

The FY97.1 waste forecast for RCRA Monitoring of 60 m³ shows a 97% decrease from the FY96 forecast of 2,030 m³. This program has limited the life cycle to 5 years due to uncertain programmatic responsibility as a result of the PHMC transition.

An additional reason for the reduction in forecast is that the generator this year has forecast a reduction in well drilling work scope (only 1 well is currently planned to be drilled per year while last year's forecast included estimates based on drilling 5 wells per year).

The 1996 hazardous constituents forecast showed that most of the LLMW was state regulated (89%) and that organics represented 7%. The current forecast expects organic constituents to be the majority (80%) and state regulated to be second. Also, last year's forecast had relatively less metals without mercury, but had corrosives forecast, which are not expected for 1997.

Comparison to Previous Baseline(s) by Waste Class



RCRA Monitoring Comparison: Waste Class	FY97.1 Forecast (m^3)	FY97.0 Forecast (m^3)	FY96 Forecast (m^3)
CH_LLMW	60	60	2,030
Subtotal	**60**	**60**	**2,030**
LLW	130	130	22,500
HAZ	150	150	22,500
Total	**330**	**330**	**47,020**

Sum of totals may not add due to rounding: numbers over 10 m^3 are rounded to the nearest 10 m^3, numbers less than 10 m^3 are rounded to integers, non-zero numbers less than 1 are rounded to 1.

Background

The mission of RCRA Monitoring Well Drilling is to monitor groundwater for potential contamination and to ensure that radioactive and hazardous materials are not leaving the site. There is only one generator within the RCRA Monitoring program: Well Drilling (RFSH_WELL_DRL).

Waste generating activities include well installation, well remediation, well decommissioning, well maintenance, and some sampling and analysis work. Other than the non-regulated waste category and hazardous waste, Well Drilling operations generate drilling spills that are radioactive or mixed in nature, debris generated during facility renovation, and some laboratory wastes. These wastes may contain any of the radioactive and/or hazardous contaminants found on and under the Hanford site, however generation of TRU(M) waste is unlikely since RCRA monitoring wells are not expected to be located in highly contaminated areas.

Forecast Assumptions and Comments

The main assumption of the forecast on 6/96 was that Hanford Technical Services would be broken up and distributed to various contractors prior to the PHMC transition.

Estimates are based on past experiences and represent the confidence levels inherent in estimating uncertain quantities.

The minimum and maximum range for this waste is 30% and 200% of the baseline.

Other Forecast Data

- **Low Level Waste**
  - A total of 130 m^3 of LLW is expected from RCRA Monitoring until 2001.
  - This forecast shows a 99% decrease from the FY96 forecast of 22,500 m^3, primarily due to the reduction in forecast lifecycle.
  - All RCRA Monitoring LLW is contact-handled.
  - 76% of the LLW will be shipped in 208 liter drums. MB-V boxes will be used for 16%, and 322 liter drums will be used for 8%.
  - LLW forms are mostly (77%) soil and soil/gravel while the rest is debris (23%).

- **Hazardous Waste**
  - A total of 150 m^3 of hazardous waste is expected from RCRA Monitoring until 2001 for management by the CWC.

<table>
<tr><td colspan="2">GENERATORS:
Well Drilling</td></tr>
<tr><td colspan="2">PROGRAMS:
Analytical Services · EM-40 · Facility Transitions · Landlord · Liquid Effluent · NP · Offsite · PNNL · RCRA · Solid Waste · SNF · TWRS</td></tr>
<tr><td>CHARACTERISTICS:
CH_LLMW · RH_LLMW · CH_TRU(M) · RH_TRU(M) · GTC III · LLW · HAZ</td><td>CONTAINERS:
CH_LLMW · RH_LLMW · CH_TRU(M) · RH_TRU(M) · GTC III · LLW · HAZ</td></tr>
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CH_LLMW · RH_LLMW · CH_TRU(M) · RH_TRU(M) · GTC III · LLW · HAZ</td></tr>
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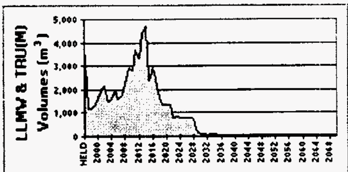

SWIFT **Report: FY1997 to FY2070, rev. 1**

Hanford → RCRA Monitoring → ***Well Drilling***
→ (Waste Classes) → (Containers)
→ (Characteristics)
→ (Reports)
→ (Tools)

Site Rev. date:	*12/31/96*
Data version:	*97.1*
Data currency:	*10/25/96*

RCRA Monitoring — Well Drilling

Because Well Drilling is the only generator within the RCRA Monitoring program that will ship waste to the CWC, waste information for this generator is identical to that found on the program page.

GENERATORS: *Well Drilling*	
PROGRAMS: Analytical Services · EM-40 · Facility Transitions · Landlord · Liquid Effluent · NP · Offsite · PNNL · RCRA · Solid Waste · SNF · TWRS	
CHARACTERISTICS: CH_LLMW · RH_LLMW · CH_TRU(M) · RH_TRU(M) · GTC III · LLW · HAZ	CONTAINERS: CH_LLMW · RH_LLMW · CH_TRU(M) · RH_TRU(M) · GTC III · LLW · HAZ
WASTE CLASSES: CH_LLMW · RH_LLMW · CH_TRU(M) · RH_TRU(M) · GTC III · LLW · HAZ	

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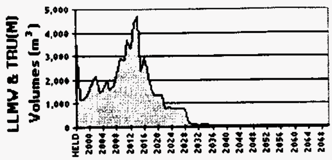


SWIFT Report: FY1997 to FY2070, rev. 1

Hanford → **Solid Waste** → (Generators)
→ (Waste Classes) → (Containers)
→ (Characteristics)
→ (Reports)
→ (Tools)

Site Rev. date: *12/31/96*

Data version: *97.1*

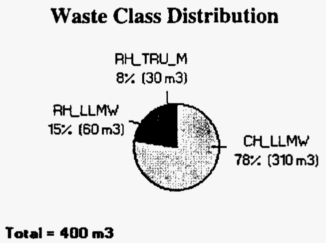
Data currency: *10/25/96*

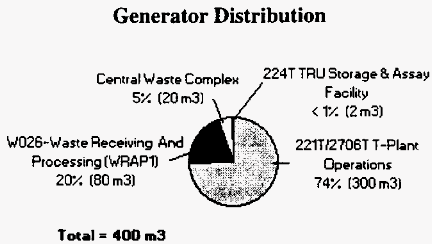
Solid Waste

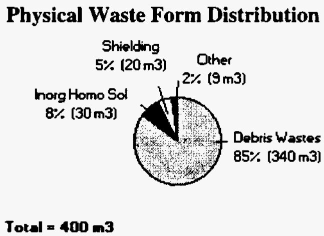
Contents

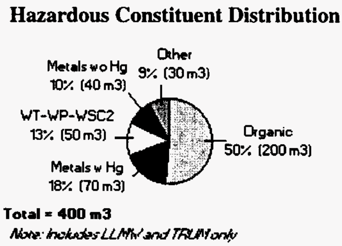
Highlights

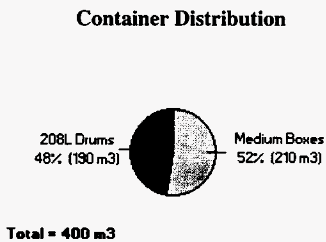
- The forecast life cycle for Solid Waste ends in 2070.
- The life cycle generation total of LLMW and TRU(M) waste for Solid Waste is 400 m^3, or 1% of the Hanford total.
- This forecast shows a 4% decrease from the FY96 forecast of 420 m^3.
- CH_LLMW is the primary waste class generated, representing 78% (310 m^3) of the Solid Waste volume.
- T Plant is the major source of waste, generating 74% (300 m^3) of the waste volume.
- 52% of the LLMW and TRU(M) waste will be shipped in Medium boxes, with 48% in 208 liter drums.
- Physical waste forms are forecast to be mainly debris (85% of the volume). Inorganic solids account for 8%, and shielding accounts for 5%. The remaining 2% is composed of lab pack, soil/gravel, special waste, and organic solids.
- LLMW and TRU(M) waste hazardous constituents are 50% (by volume) organic, 18% metals with mercury, 13% state regulated, and 10% metals without mercury. Corrosive constituents represent 5% of the waste, while ignitable and reactive metals each represent 2%.









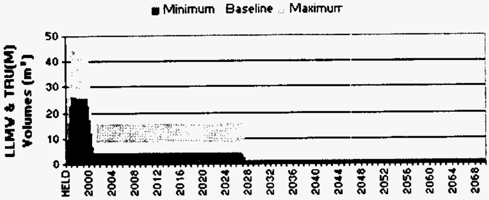


Sum of totals may not add due to rounding: numbers over 10 m³ are rounded to the nearest 10 m³, numbers less than 10 m³ are rounded to integers, non-zero numbers less than 1 are rounded to 1.

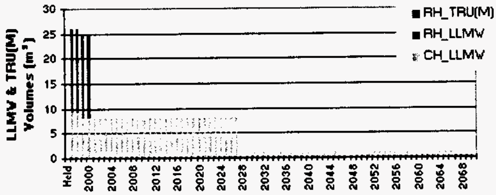
Annual Waste Class Volumes

Solid Waste will be generating waste from 1997 to the end of life cycle in 2070. An initial peak of waste (about 25 m³ per year) will be generated from 1997 to 2000, during T Plant canyon clean-up and upgrades. From 2001 to 2027, the major source of the waste will be ongoing activities at T Plant (about 7 m³ per year). As of 2028, waste generation will drop to around 1 m³ per year, arising from general waste management activities.

Annual Baseline Volumes



Annual Baseline by Waste Class



Summary Table (Volumes in m³)

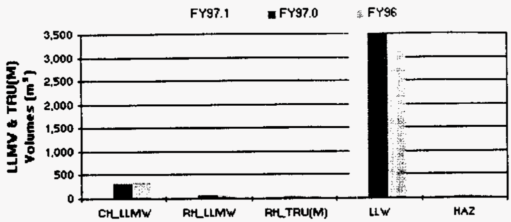
Solid Waste Summary: Generator	CH_LLMW	RH_LLMW	RH_TRU(M)	Subtotal	PCT
221T/2706T T-Plant Operations	220	60	30	300	74%
W026-Waste Receiving And Processing (WRAP1)	80	0	0	80	20%
Central Waste Complex	20	0	0	20	5%
224T TRU Storage & Assay Facility	2	0	0	2	<1%
Totals	***310***	***60***	***30***	***400***	100%
PCT	77%	15%	8%	100%	

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.

Comparison to Previous Baseline(s)

The FY97.1 forecast for Solid Waste of 400 m³ shows a 4% decrease from the FY96 forecast of 420 m³. While this overall volume change is relatively insignificant, there have been several changes to the mix of waste being generated. In particular, one major change to the baseline results from the fact that HEPA filters previously classified by the Low Level Burial Grounds as LLMW have been reclassified as LLW. In addition, 2 new generators have been added: the CWC and WRAP1. They will generate about 100 m³ of waste over their life cycle.

Comparison to Previous Baseline(s) by Waste Class



Summary Table (Volumes in m³)

Solid Waste Comparison: Waste Class	FY97.1 Forecast (m^3)	FY97.0 Forecast (m^3)	FY96 Forecast (m^3)
CH_LLMW	310	310	320
RH_LLMW	60	60	70
RH_TRU(M)	30	30	30
Subtotal	***400***	***400***	***420***
LLW	3,500	3,500	3,090
HAZ	30	30	40
Total	***3,930***	***3,930***	***3,560***

Sum of totals may not add due to rounding: numbers over 10 m^3 are rounded to the nearest 10 m^3, numbers less than 10 m^3 are rounded to integers, non-zero numbers less than 1 are rounded to 1.

Background

Solid Waste's mission is to receive, store, treat, decontaminate, and dispose of solid radioactive and nonradioactive hazardous waste in a safe, cost-effective and environmentally compliant manner. Secondary solid waste will be generated to achieve this mission.

The Solid Waste program has 4 LLMW and TRU(M) waste generators within its program: T Plant, the TRU Storage and Assay Facility (TRUSAF), Waste Receiving and Processing (WRAP1), and the Central Waste Complex (CWC). Additional waste volumes are expected from future treatment facilities; however, forecasts for these facilities are not available.

Forecast Assumptions and Comments

The minimum range reported for the Solid Waste program is 69% of baseline, and the maximum is 169% of baseline. The wide range in minimum to maximum volumes is primarily due to uncertainty in T Plant operations.

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

- **Low Level Waste**
  - A total of 3,500 m^3 of LLW is expected from Solid Waste.

- This forecast shows a 13% increase from the FY96 forecast of 3,090 m^3, primarily due to an increase in the T Plant estimate.
- MB-V boxes are expected to contain most LLW (82%), followed by 322 liter drums (13%) and 208 liter drums.
- Physical forms for LLW vary from 3% organic solids to 88% debris. Inorganic solids and soil/gravel are also forecast - in similar amounts (5% and 4% respectively).

- **Hazardous Waste**

  - A total of 30 m^3 of hazardous waste was reported by Solid Waste for management at the CWC.

GENERATORS:
218E/W Low Level Burial Grounds · 221T/2706T T Plant Operations · 224T TRU Storage & Assay Facility · Central Waste Complex · W026-Waste Receiving and Processing (WRAP1)

PROGRAMS:
Analytical Services · EM-40 · Facility Transitions · Landlord · Liquid Effluent · NP · Offsite · PNNL · RCRA · *Solid Waste* · SNF · TWRS

CHARACTERISTICS:
CH_LLMW · RH_LLMW · CH_TRU(M) · RH_TRU(M) · GTC III · LLW · HAZ

CONTAINERS:
CH_LLMW · RH_LLMW · CH_TRU(M) · RH_TRU(M) · GTC III · LLW · HAZ

WASTE CLASSES:
CH_LLMW · RH_LLMW · CH_TRU(M) · RH_TRU(M) · GTC III · LLW · HAZ

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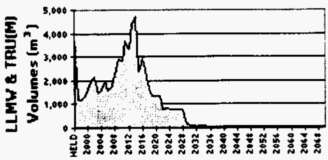


SWIFT Report: FY1997 to FY2070, rev. 1

Hanford → Solid Waste → *218E/W Low Level Burial Grounds*
→ (Waste Classes) → (Containers)
→ (Characteristics)
→ (Reports)
→ (Tools)

Site Rev. date: *12/31/96*

Data version: *97.1*

Data currency: *10/25/96*

Solid Waste — 218E/W Low Level Burial Grounds

Contents

Highlights

- The Low Level Burial Grounds (LLBG) estimate that no LLMW or TRU(M) waste will be generated during its life cycle.
- LLW is the only waste class generated.
- The LLBG forecast life cycle ends in 2070.

Annual Volumes

Annual Baseline Volumes

No LLMW or TRU(M) waste is expected from this generator.

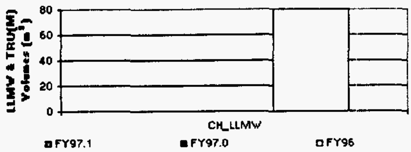
Annual Baseline by Waste Class

Not applicable.

Comparison to Previous Baseline(s)

The LLBG waste forecast has decreased significantly from the 80 m³ of LLMW forecast in FY96. This decrease is a result of the fact that previous forecasts included CH_LLMW from HEPA filter changeout. HEPA filters are no longer considered mixed waste due to changes in WAC-173-303.

Comparison to Previous Baseline(s) by Waste Class



218E/W Low Level Burial Grounds Comparison: Waste Class	FY97.1 Forecast (m³)	FY97.0 Forecast (m³)	FY96 Forecast (m³)
CH_LLMW	0	0	80
Subtotal	*0*	*0*	*80*
LLW	40	40	460
Total	*40*	*40*	*540*

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.

Background

The Low-Level Burial Grounds (RFSH_LLBG) forecasts only operational waste that results from disposing of LLW received by the CWC by burying the waste in trenches. Disposal of LLMW and TRU waste has occurred in the past; future disposal of mixed waste is planned in lined trenches.

Forecast Assumptions and Comments

It is assumed that LLBG operations in future years will be similar to current operations.

The planned TRU-retrieval project (W-113) may generate waste; it has not been forecasted.

The minimum waste range is 0% of the baseline, indicating the possibility that no waste will be generated. The maximum range of 100% is based on engineering judgment.

Other Forecast Data

- **Low Level Waste**
  - A total of 40 m³ of LLW is expected from the LLBG.
  - This forecast shows a 91% decrease from the FY96 forecast of 460 m³; revised estimates are based on operating experience.
  - All of the LLW is to be contained in 208 liter drums.
  - Physical LLW forms from the LLBG split the volume equally between soil/gravel and plastic/rubber debris.

- **Hazardous Waste**
  - No hazardous waste is expected from LLBG for management by the CWC.

GENERATORS:
218E/W Low Level Burial Grounds · 221T/2706T T Plant Operations · 224T TRU Storage & Assay Facility · Central Waste Complex · W026-Waste Receiving and Processing (WRAP1)

PROGRAMS:
Analytical Services · EM-40 · Facility Transitions · Landlord · Liquid Effluent · NP · Offsite · PNNL · RCRA · Solid Waste · SNF · TWRS

CHARACTERISTICS:
CH_LLMW · RH_LLMW · CH_TRU(M) · RH_TRU(M) · GTC III · LLW · HAZ

CONTAINERS:
CH_LLMW · RH_LLMW · CH_TRU(M) · RH_TRU(M) · GTC III · LLW · HAZ

WASTE CLASSES:
CH_LLMW · RH_LLMW · CH_TRU(M) · RH_TRU(M) · GTC III · LLW · HAZ

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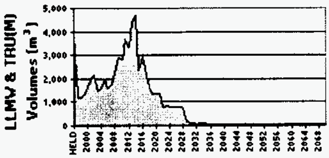


SWIFT Report: FY1997 to FY2070, rev. 1

Hanford → Solid Waste → *221T/2706T T-Plant Operations*
→ (Waste Classes) → (Containers) → (Characteristics)
→ (Reports)
→ (Tools)

Site Rev. date: *12/31/96*

Data version: *97.1*

Data currency: *10/25/96*

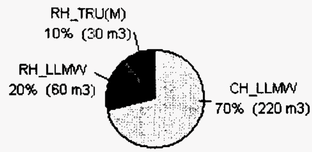
Solid Waste — 221T/2706T T Plant Operations

Contents

Highlights

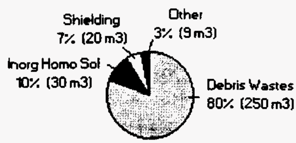
- T Plant contributes 300 m³ (75%) of the Solid Waste program's solid waste forecast.
- CH_LLMW is the primary waste class generated, representing 70% of the waste (220 m³).
- T Plant's forecast life cycle ends in 2027.
- LLMW and TRU(M) waste will be sent using Medium boxes for 70% of the volume, and 208 liter drums for 30% of the waste.
- Physical waste forms will mostly be debris, accounting for 80% of the volume. Inorganic solids and shielding account for 10% and 7%, respectively. The last 3% of the waste is composed of lab packs, organic solids, soil/gravel, and special waste.
- LLMW and TRU(M) waste hazardous constituents are organic (55% by volume), metals with mercury (23%), and metals without mercury (13%). Corrosive constituents account for 3% of the waste, ignitable and reactive metals each represent 2%, and 2% is state regulated.

Waste Class Distribution



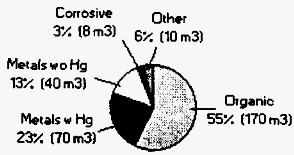
Total = 300 m3

Physical Waste Form Distribution



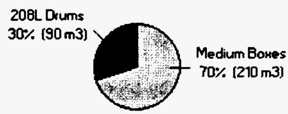
Total = 300 m3

Hazardous Constituent Distribution



Total = 300 m3
Note: includes LLMW and TRUM only

Container Distribution

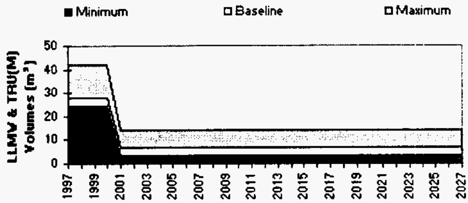


Total = 300 m3

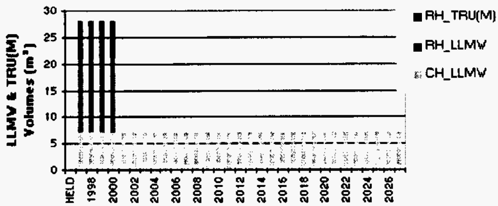
Sum of totals may not add due to rounding: numbers over 10 m^3 are rounded to the nearest 10 m^3, numbers less than 10 m^3 are rounded to integers, non-zero numbers less than 1 are rounded to 1.

Annual Volumes

Annual Baseline Volumes



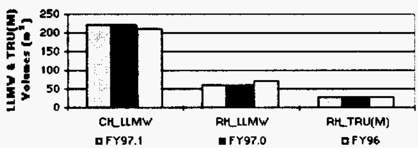
Annual Baseline by Waste Class



Comparison to Previous Baseline(s)

The T Plant waste forecast has decreased only marginally from the 310 m³ forecast in FY96 and is based on new estimates of waste generation.

Comparison to Previous Baseline(s) by Waste Class



221T/2706T T Plant Operations Comparison: Waste Class	FY97.1 Forecast (m³)	FY97.0 Forecast (m³)	FY96 Forecast (m³)
CH_LLMW	220	220	210
RH_LLMW	60	60	70
RH_TRU(M)	30	30	30
Subtotal	***300***	***300***	***310***
LLW	3,070	3,070	2,620
HAZ	30	30	40
Total	***3,400***	***3,400***	***2,970***

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.

Background

T Plant (RFSH_T_PLANT) is a canyon building used to decontaminate equipment and sort and package waste from other onsite facilities. The T Plant forecast includes both operational and transitional wastes. Operational activities include maintenance, decontamination, and routine clean-up. The transitional waste includes T Plant canyon clean-up and upgrades and will occur from 1997 to 2000. After canyon clean-up, it is not expected that significant waste generation would be required to decommission T Plant. The average waste generation rate of the period should account for Terminal Cleanout and Stabilization waste and D&D waste.

Wastes will be in various forms, including waste produced during decontamination activities, equipment and material that has been in RCA's, and other waste from routine maintenance.

Forecast Assumptions and Comments

Assumptions going into the forecast include:

1. Only waste actually generated at T Plant is included. Other waste brought there for repackaging or decontamination is included in the originating facilities' forecast.
2. Some RH_LLW and RH_LLMW may be generated during T Plant canyon clean up.
3. Some RH_TRUM may be generated during canyon clean up. This waste will be removed under Project W-259 during 1997 - 2000.
4. Physical waste distributions are estimates based on best available knowledge.
5. Waste will be segregated as much as practicable, although segregation may not be possible in all cases.
6. Radiation types are estimated based on the T Plant Waste Characterization Plan. It is assumed the radioactive contamination will be evenly distributed throughout the waste.
7. Routine generation—based on routine maintenance, decontamination, and clean-up—will not vary significantly over the period.
8. LLW volumes will be reduced through the use of a compactor.

The TPA Milestone M-32 Dangerous Waste Tank Upgrades is on schedule and is accounted for in the forecast. The upgrades will be completed under Project W-259 and is scheduled for completion in 1999.

The minimum and maximum ranges of 64% and 181% are based on general historical knowledge of T Plant operating practices.

Other Forecast Data

- **Low Level Waste**
  - A total of 3,070 m³ of LLW is expected from T Plant.
  - This forecast shows a 17% increase from the FY96 forecast of 2,620 m³, primarily due to revised estimates of waste from clean-up and decontamination.
  - MB-V boxes will be used for 95% of the LLW, while 208 liter drums will contain the last 5%.
  - Physical forms for the LLW will be largely (87%) debris. Three other forms are forecast: inorganic solids (6%), soil/gravel (4%), and organic solid (3%).
- **Hazardous Waste**
  - A total of 30 m³ of hazardous waste was reported by T Plant for management at the CWC.

GENERATORS:
218E/W Low Level Burial Grounds · *221T/2706T T Plant Operations* · 224T TRU Storage & Assay Facility · Central Waste Complex · W026-Waste Receiving and Processing (WRAP1)

PROGRAMS:
Analytical Services · EM-40 · Facility Transitions · Landlord · Liquid Effluent · NP · Offsite · PNNL · RCRA · Solid Waste · SNF · TWRS

CHARACTERISTICS:
CH_LLMW · RH_LLMW · CH_TRU(M) · RH_TRU(M) · GTC III · LLW · HAZ

CONTAINERS:
CH_LLMW · RH_LLMW · CH_TRU(M) · RH_TRU(M) · GTC III · LLW · HAZ

WASTE CLASSES:
CH_LLMW · RH_LLMW · CH_TRU(M) · RH_TRU(M) · GTC III · LLW · HAZ

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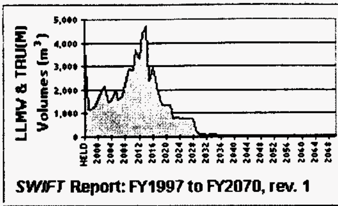


Hanford → Solid Waste → *224T TRU Storage & Assay Facility*
→ (Waste Classes) → (Containers) → (Characteristics)
→ (Reports)
→ (Tools)

Site Rev. date: *12/31/96*

Data version: *97.1*

Data currency: *10/25/96*

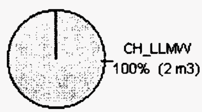
Solid Waste — 224T TRU Storage & Assay Facility

Contents

Highlights

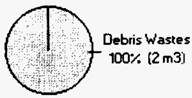
- The TRU Storage and Assay Facility (TRUSAF) contributes 2 m³ (<1%) of the Solid Waste program's solid waste forecast.
- CH_LLMW is the only waste class generated, representing 100% of the waste (2 m³).
- TRUSAF's forecast life cycle ends in 1998.
- The only container to be used for this waste is the 208 liter drum.
- 100% of the LLMW will have the physical form of debris.
- State regulated hazardous constituents represent 100% of the LLMW.

Waste Class Distribution



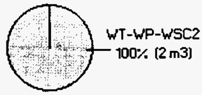
Total = 2 m3

Physical Waste Form Distribution



Total = 2 m3

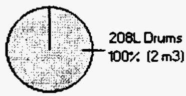
Hazardous Constituent Distribution



Total = 2 m3

Note: Includes LLMW and TRUM only

Container Distribution

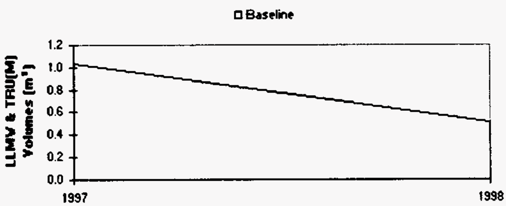


Total = 2 m3

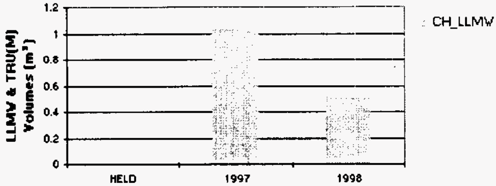
Sum of totals may not add due to rounding: numbers over 10 m³ are rounded to the nearest 10 m³, numbers less than 10 m³ are rounded to integers, non-zero numbers less than 1 are rounded to 1.

Annual Volumes

Annual Baseline Volumes



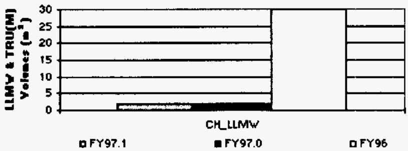
Annual Baseline by Waste Class



Comparison to Previous Baseline(s)

The TRUSAF waste forecast has decreased 93% from the 30 m³ forecast in FY96. This decrease is based on more recent estimates which include waste minimization activities.

Comparison to Previous Baseline(s) by Waste Class



224T TRU Storage & Assay Facility Comparison: Waste Class	FY97.1 Forecast (m³)	FY97.0 Forecast (m³)	FY96 Forecast (m³)
CH_LLMW	2	2	30
Subtotal	*2*	*2*	*30*
LLW	2	2	10
Total	*2*	*2*	*40*

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.

Background

The current mission of TRUSAF is storage of TRU waste prior to repackaging and / or WIPP certification. An additional mission is the use of RTR for verification of LLW, LLMW, and TRU waste.

Forecast Assumptions and Comments

It is assumed that TRUSAF transition will remove waste from TRUSAF to CWC in FY1997. It is also assumed that a cell entry will be required in preparation for transition.

Transition to decommissioning and decontamination will occur soon thereafter. Waste generated from actual D&D of the facility has not been forecasted.

The minimum waste range is 0% of the baseline, indicating the possibility that no waste will be generated. The maximum range of 100% is based on engineering judgement.

Other Forecast Data

- **Low Level Waste**
  - A total of 2 m^3 of LLW is expected from TRUSAF.
  - This forecast shows an 80% decrease from the FY96 forecast of 10 m^3, primarily due to waste minimization activities.
  - LLW is to be contained only in the 208 liter drum.
  - 100% of the LLW will have the physical form of debris.

- **Hazardous Waste**
  - No hazardous waste was reported by TRUSAF for management by the CWC.

GENERATORS:
218E/W Low Level Burial Grounds · 221T/2706T T Plant Operations · *224T TRU Storage & Assay Facility* · Central Waste Complex · W026-Waste Receiving and Processing (WRAP1)

PROGRAMS:
Analytical Services · EM-40 · Facility Transitions · Landlord · Liquid Effluent · NP · Offsite · PNNL · RCRA · Solid Waste · SNF · TWRS

CHARACTERISTICS:
CH_LLMW · RH_LLMW · CH_TRU(M) · RH_TRU(M) · GTC III · LLW · HAZ

CONTAINERS:
CH_LLMW · RH_LLMW · CH_TRU(M) · RH_TRU(M) · GTC III · LLW · HAZ

WASTE CLASSES:
CH_LLMW · RH_LLMW · CH_TRU(M) · RH_TRU(M) · GTC III · LLW · HAZ

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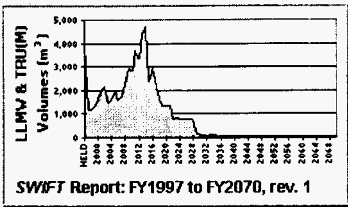
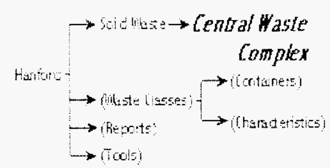




Site Rev. date: *12/31/96*

Data version: *97.1*

Data currency: *10/25/96*

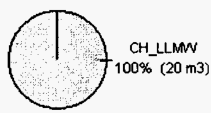
Solid Waste — Central Waste Complex

Contents

Highlights

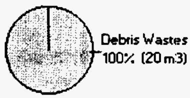
- The Central Waste Complex (CWC) contributes 20 m³ (5%) to the Solid Waste program's solid waste forecast.
- CH_LLMW is the only waste class generated, representing 100% of the waste (20 m³).
- CWC's forecast life cycle ends in 2070.
- 208 liter drums are the only forecast containers expected from the CWC.
- 100% of the LLMW will have the physical form of debris.
- State regulated and corrosive hazardous constituents split the LLMW volume 50/50.

Waste Class Distribution



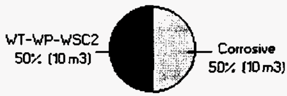
Total = 20 m3

Physical Waste Form Distribution



Total = 20 m3

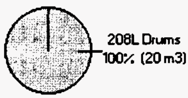
Hazardous Constituent Distribution



Total = 20 m3

Note: Includes LLMW and TRUM only

Container Distribution

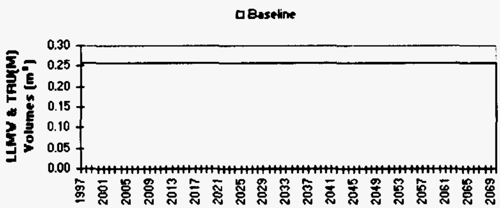


Total = 20 m3

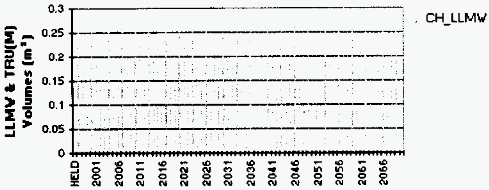
Sum of totals may not add due to rounding: numbers over 10 m^3 are rounded to the nearest 10 m^3, numbers less than 10 m^3 are rounded to integers, non-zero numbers less than 1 are rounded to 1.

Annual Volumes

Annual Baseline Volumes



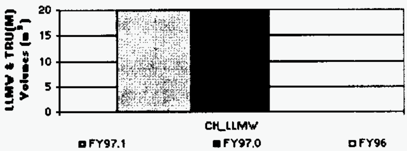
Annual Baseline by Waste Class



Comparison to Previous Baseline(s)

This is a new forecast, no waste has previously been forecast for CWC.

Comparison to Previous Baseline(s) by Waste Class



Central Waste Complex Comparison: Waste Class	FY97.1 Forecast (m³)	FY97.0 Forecast (m³)	FY96 Forecast (m³)
CH_LLMW	20	20	0
Subtotal	***20***	***20***	***0***
Total	***20***	***20***	***0***

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.

Background

CWC's mission is the storage of mixed waste for eventual treatment and disposal. Waste may be generated from spill response or operational activities which require the use of PPE.

Forecast Assumptions and Comments

CWC operations in future years will be similar to current operations.

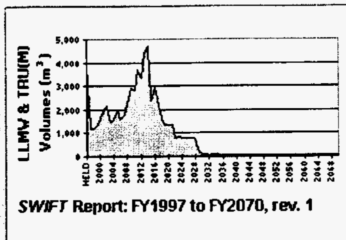
Although some Class III and TRU wastes are stored in CWC, it is expected that any waste that is generated will be Class I.

The minimum waste range is 0% of the baseline, indicating the possibility that no waste will be generated. The maximum range of 100% indicates that the forecast volume is at the maximum potential level.

Other Forecast Data

- **Low Level Waste**
  - No low level waste was reported by CWC for management by the CWC.
  - No comparison with FY96 data is possible, since this generator was previously combined with other generators.

- **Hazardous Waste**
  - No hazardous waste was reported by CWC for management by the CWC.



Hanford → Solid Waste → **W026-Waste Receiving and Processing (WRAP1)**
→ (Waste Classes) → (Containers), (Characteristics)
→ (Reports)
→ (Tools)

Site Rev. date: *12/31/96*
Data version: *97.1*
Data currency: *10/25/96*

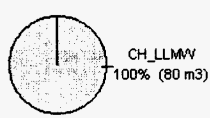
Solid Waste — W026-Waste Receiving and Processing (WRAP1)

Contents

Highlights

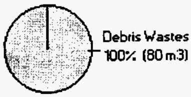
- W026 Waste Receiving and Processing (WRAP1) contributes 80 m^3 (20%) of the forecast Solid Waste program's solid waste.
- CH_LLMW is the only waste class generated, representing 100% of the waste (80 m^3).
- WRAP1's forecast life cycle ends in 2070.
- This generator plans only to use 208 liter drums for LLMW.
- 100% of the LLMW will have the physical form of heterogeneous debris.
- Organic and state regulated hazardous constituents essentially split the LLMW volume 50/50, but metals with mercury are also reported (less than 1% by volume).

Waste Class Distribution



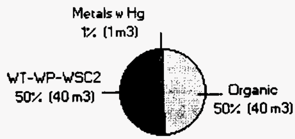
Total = 80 m3

Physical Waste Form Distribution



Total = 80 m3

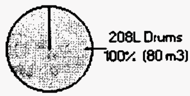
Hazardous Constituent Distribution



Total = 80 m3

Note: Includes LLMW and TRUM only

Container Distribution

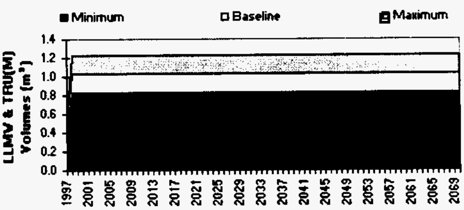


Total = 80 m3

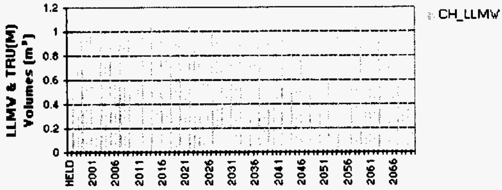
Sum of totals may not add due to rounding: numbers over 10 m³ are rounded to the nearest 10 m³, numbers less than 10 m³ are rounded to integers, non-zero numbers less than 1 are rounded to 1.

Annual Volumes

Annual Baseline Volumes



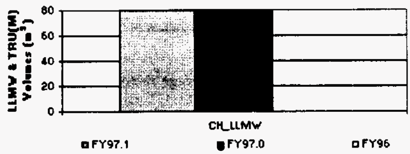
Annual Baseline by Waste Class



Comparison to Previous Baseline(s)

This is a new forecast; no waste has previously been forecast for WRAP1.

Comparison to Previous Baseline(s) by Waste Class



W026-Waste Receiving and Processing (WRAP1) Comparison: Waste Class	FY97.1 Forecast (m³)	FY97.0 Forecast (m³)	FY96 Forecast (m³)
CH_LLMW	80	80	0
Subtotal	*80*	*80*	*0*
LLW	390	390	0
Total	*470*	*470*	*0*

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.

Background

WRAP1 will process CH_LLMW, CH_TRU(M) waste, and CH_LLW for verification and repackaging to meet disposal requirements.

Forecast Assumptions and Comments

The waste which is processed through WRAP1 is already included in the forecast of the originating generators. The waste that is part of this WRAP1 forecast is limited to secondary waste generated as part of the facility operations.

The majority of the waste generated by WRAP1 consists of PPE used during repackaging.

Although WRAP1 will process Class III and TRU wastes, it is expected that any waste generated will be Class I.

Minimum and maximum ranges for the waste are 80% and 120% respectively, and are based on engineering judgment of the variabilities of the process.

Other Forecast Data

- **Low Level Waste**
  - A total of 390 m³ of LLW is expected from WRAP1.
  - No comparison with FY96 data is possible, since this generator was previously combined with other generators.
  - All of the LLW is to come in 322 liter drums.
  - 100% of the LLW will have the physical form of heterogeneous debris.

- **Hazardous Waste**
  - No hazardous waste was reported by WRAP1 for management by the CWC.

GENERATORS:
218E/W Low Level Burial Grounds · 221T/2706T T Plant Operations · 224T TRU Storage & Assay Facility · Central Waste Complex · *W026-Waste Receiving and Processing (WRAP1)*

PROGRAMS:
Analytical Services · EM-40 · Facility Transitions · Landlord · Liquid Effluent · NP · Offsite · PNNL · RCRA · Solid Waste · SNF · TWRS

CHARACTERISTICS:
CH_LLMW · RH_LLMW · CH_TRU(M) · RH_TRU(M) · GTC III · LLW · HAZ

CONTAINERS:
CH_LLMW · RH_LLMW · CH_TRU(M) · RH_TRU(M) · GTC III · LLW · HAZ

WASTE CLASSES:
CH_LLMW · RH_LLMW · CH_TRU(M) · RH_TRU(M) · GTC III · LLW · HAZ

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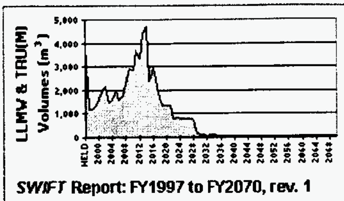


Hanford → Spent Nuclear Fuel → (Generators)
→ (Waste Classes) → (Containers) → (Characteristics)
→ (Reports)
→ (Tools)

Site Rev. date: *12/31/96*

Data version: *97.1*

Data currency: *10/25/96*

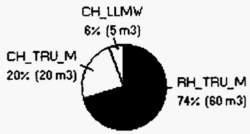
Spent Nuclear Fuel

Contents

Highlights

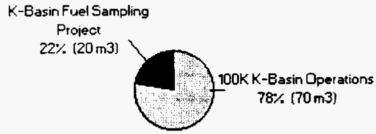
- The forecast life cycle for Spent Nuclear Fuels ends in 2000.
- The life cycle total of LLMW and TRU(M) waste for Spent Nuclear Fuels is 80 m³, or <1% of the Hanford total.
- This forecast shows a 66% decrease from the FY96 forecast of 250 m³, primarily due to a change in classification; some waste previously estimated to be CH_TRU(M) waste is now estimated to be LLW.
- RH_TRU(M) waste is the primary waste class generated, representing 74% of the waste (60 m³).
- K-Basin Operations is the major source of waste, generating 78% of the waste (70 m³).
- The most common LLMW and TRU(M) waste container will be the Extra-Large box (69%), then the Small box (25%) and the 208 liter drum (6%).
- The physical waste forms from this program cover a broad range. Three significant waste forms are expected: organic solids at 45% of the volume, debris at 25%, and 25% shielding. Inorganic and special waste compose the remaining 4% and 1%, respectively.
- State regulated hazardous constituents compose 48% of the mixed waste volume, while ignitable and metals without mercury account for 31% and 20%, respectively. In addition, less than 1% of the volume is reported as metals with mercury.

Waste Class Distribution



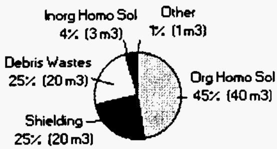
Total = 80 m3

Generator Distribution



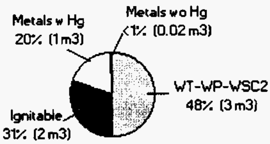
Total = 80 m3

Physical Waste Form Distribution



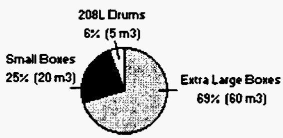
Total = 80 m3

Hazardous Constituent Distribution



Total = 5 m3
Note: Includes LLMW and TRUM only

Container Distribution



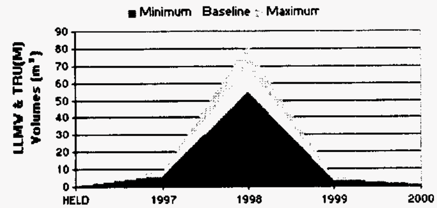
Total = 80 m3

Sum of totals may not add due to rounding: numbers over 10 m^3 are rounded to the nearest 10 m^3, numbers less than 10 m^3 are rounded to integers, non-zero numbers less than 1 are rounded to 1.

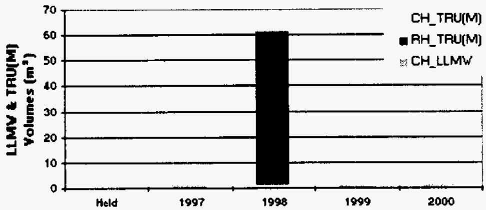
Annual Waste Class Volumes

Spent Nuclear Fuel waste will be generated from 1997 to the end of life cycle in 2000. The major amount of waste will occur in 1998, corresponding to the shipment of ion exchange columns classified as RH_TRU waste.

Annual Baseline Volumes



Annual Baseline by Waste Class



Summary Table (Volumes in m³)

Spent Nuclear Fuel Summary: Generator	CH_LLMW	CH_TRU(M)	RH_TRU(M)	Subtotal	PCT
100K K-Basin Operations	5	0	60	70	78%
K-Basin Fuel Sampling Project	0	20	0	20	22%
Totals	**5**	**20**	**60**	**80**	100%
PCT	6%	25%	69%	100%	

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.

Comparison to Previous Baseline(s)

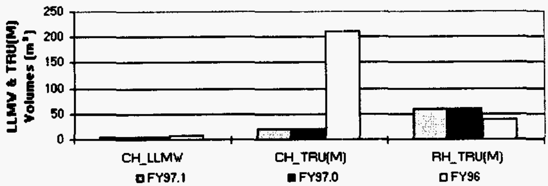
The FY97.1 waste forecast shows a 66% decrease from the FY96 forecast of 250 m³. The primary reason for this decrease is a change in classification in which some waste previously estimated to be CH_TRU is now estimated to be LLW.

Other changes in the forecast from FY96 include the following: 1) this program's life cycle has been changed from 2001 to 2000; 2) waste estimated as HELD waste last year has been determined to be equipment; 3) RH_TRU(M) waste will be managed in FY97 rather than in FY98.

One scenario considered for K-Basin sludge in FY96 was the option to grout the waste for shipment to the CWC, which would have resulted in much larger amounts of waste generation. This scenario is no longer considered viable as of the FY97 forecast.

The 1996 hazardous constituents forecast reported organic (3% by volume) and corrosive (9%) constituents while the 1997 data expects ignitable and metals with mercury. State regulated and metals without mercury constituents are common to both forecasts, but state regulated currently contributes to a larger percent of the whole.

Comparison to Previous Baseline(s) by Waste Class



Spent Nuclear Fuel Comparison: Waste Class	FY97.1 Forecast (m³)	FY97.0 Forecast (m³)	FY96 Forecast (m³)
CH_LLMW	5	5	7
CH_TRU(M)	20	20	210
RH_TRU(M)	60	60	40
Subtotal	**80**	**80**	**250**
LLW	1,990	1,990	1,520
HAZ	0	0	10
Total	**2,070**	**2,070**	**1,790**

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.

Background

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. The current program mission, as defined in the Multi-Year Program Plan, addresses the SNF stored at the K-Basin only.

There are 2 generators included in the Spent Nuclear Fuel program (both within the K-Basin area): K-Basin Operations (DESH_K_OPER) and K-Basin Fuel Sampling Project (DESH_K_PROJ). 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. Main categories of waste include housekeeping refuse and other debris; debris, piping, scrap metal from basin clean-up; spent ion exchange columns and water filters used to maintain water quality inside the basins.

Forecast Assumptions and Comments

In preparation of this forecast, known waste was addressed, and estimates were calculated according to waste shipped so far this year and/or expected waste streams.

The K-Basins major milestone: "Remove all Fuel and Sludge from both K-East and K-West Basins in an Encapsulated Form." (M-34-00-T08) is not reflected in this forecast, given the uncertainty in the basin clean-out.

The minimum and maximum range for this waste is 80% and 120% of the baseline.

Other Forecast Data

- **Low Level Waste**
  - A total of 1,990 m³ of LLW is expected from Spent Nuclear Fuel until 2000.
  - This forecast shows a 31% increase from the FY96 forecast of 1,520 m³, primarily due to a reclassification of certain waste streams as LLW rather than TRU waste.
  - All Spent Nuclear Fuel LLW is CH_LLW.
  - Medium boxes will be used for 36% of the LLW, while MB-V boxes and 322 liter drums will be used for 28% and 24% respectively, and MB-IV boxes will hold 12%.
  - The physical form of the LLW is composed by 68% debris, 31% concrete shielding, and 1% organic particulates.
- **Hazardous Waste**
  - No hazardous waste was reported by Spent Nuclear Fuel for management at the CWC.

GENERATORS:
100K K-Basin Operations · K-Basin Fuel Sampling Project

PROGRAMS:
Analytical Services · EM-40 · Facility Transitions · Landlord · Liquid Effluent · NP · Offsite · PNNL · RCRA · Solid Waste · *SNF* · TWRS

CHARACTERISTICS:
CH_LLMW · RH_LLMW · CH_TRU(M) · RH_TRU(M) · GTC III · LLW · HAZ

CONTAINERS:
CH_LLMW · RH_LLMW · CH_TRU(M) · RH_TRU(M) · GTC III · LLW · HAZ

WASTE CLASSES:
CH_LLMW · RH_LLMW · CH_TRU(M) · RH_TRU(M) · GTC III · LLW · HAZ

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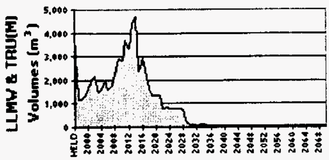


SWIFT Report: FY1997 to FY2070, rev. 1

Hanford → Spent Nuclear Fuel → 100K K-Basin Operations
→ (Waste Classes) → (Containers)
→ (Characteristics)
→ (Reports)
→ (Tools)

Site Rev. date: *12/31/96*

Data version: *97.1*

Data currency: *10/25/96*

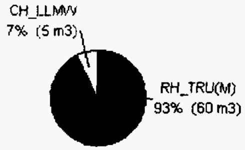
Spent Nuclear Fuel — 100K K-Basin Operations

Contents

Highlights

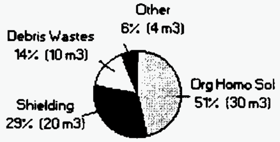
- K-Basin Operations contributes 70 m³ (78%) of the Spent Nuclear Fuels solid waste forecast.
- The K-Basin Operations waste is composed primarily of RH_TRU waste (93% or 60 m³).
- K-Basin Operations forecast life cycle ends in 2000.
- Extra-Large boxes are expected to contain nearly all (93%) of this waste, and 208 liter drums will cover the remaining 7%.
- The physical waste forms are varied: 51% of the volume is organic solids, 29% is concrete shielding, 14% is debris, 5% is inorganic solids, and special waste accounts for 1%.
- State regulated hazardous constituents (WT-WP-WSC2) comprise 50% of the LLMW volume, while ignitable and metals without mercury account for 30% and 20%, respectively. In addition, less than 1% of the volume is reported as metals with mercury.

Waste Class Distribution



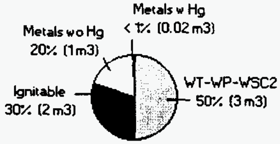
Total = 70 m3

Physical Waste Form Distribution



Total = 70 m3

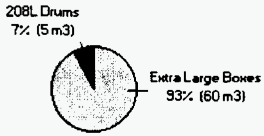
Hazardous Constituent Distribution



Total = 5 m3

Note: Includes LLMW and TRUM only

Container Distribution

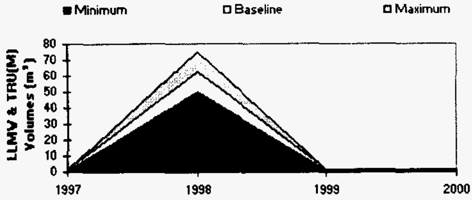


Total = 70 m3

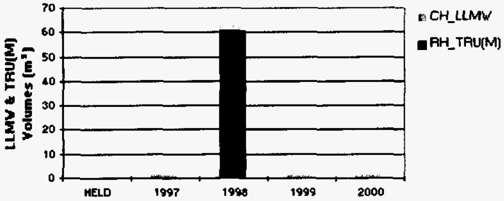
Sum of totals may not add due to rounding: numbers over 10 m^3 are rounded to the nearest 10 m^3, numbers less than 10 m^3 are rounded to integers, non-zero numbers less than 1 are rounded to 1.

Annual Volumes

Annual Baseline Volumes



Annual Baseline by Waste Class

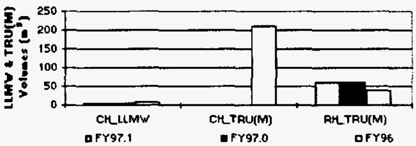


Comparison to Previous Baseline(s)

The K-Basin Operations waste forecast has decreased significantly from the 250 m³ forecast in FY96. This decrease is a result of the fact that a significant amount of waste was determined to be LLW and to be the responsibility of the K-Basin Fuel Sampling Project.

The 1996 hazardous constituents forecast reported organic (3% by volume) and corrosive (9%) constituents while the 1997 data expects ignitable and metals with mercury. State regulated and metals without mercury constituents are common to both forecasts, but state regulated currently contributes to a larger percent of the whole.

Comparison to Previous Baseline(s) by Waste Class



100K K-Basin Operations Comparison: Waste Class	FY97.1 Forecast (m³)	FY97.0 Forecast (m³)	FY96 Forecast (m³)
CH_LLMW	5	5	7
CH_TRU(M)	0	0	210
RH_TRU(M)	60	60	40
Subtotal	*70*	*70*	*250*
LLW	960	960	1,210
HAZ	0	0	10
Total	*1,020*	*1,020*	*1,470*

Sum of totals may not add due to rounding: numbers over 10 m^3 are rounded to the nearest 10 m^3, numbers less than 10 m^3 are rounded to integers, non-zero numbers less than 1 are rounded to 1.

Background

K-Basin Operations is responsible for 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.

Forecast Assumptions and Comments

In preparation of this forecast, known waste was addressed, and estimates were calculated according to waste shipped so far this year. Upcoming revisions to plant configuration were also considered and forecast, including expected waste generation due to routine maintenance and housekeeping.

The K-Basin major milestone: "Remove all Fuel and Sludge from both K-East and K-West Basins in an Encapsulated Form." (M-34-00-T08) is not reflected in this forecast, given the uncertainty in the basin clean-out.

The K-Basin Operations baseline waste estimate may vary from 80% to 120%. The minimum value is based on the uncertainty of actual volume to be generated by basin clean-out and the long-term status of the facility after the stored fuel has either been contained or removed. The maximum value is based in the short term on not knowing the precise amount of waste to be generated by basin clean-out and pilot project. Long term expectations are that, regardless of chosen interim fuel storage method, waste generation in general should not exceed predicted amounts.

Other Forecast Data

- **Low Level Waste**
  - A total of 960 m^3 of LLW is expected from K-Basin Operations.
  - This represents a 21% decrease from the FY96 estimate of 1,210 m^3 due to reassignment of some LLW to the K-Basin Fuel Sampling Project.
  - LLW will be shipped in MB-V boxes (51%) and 322 liter drums (49%).
  - 100% of the LLW has the physical form of debris.
- **Hazardous Waste**

- No hazardous waste is expected from K-Basin Operations for management by the CWC.

GENERATORS: *100K K-Basin Operations* · K-Basin Fuel Sampling Project	
PROGRAMS: Analytical Services · EM-40 · Facility Transitions · Landlord · Liquid Effluent · NP · Offsite · PNNL · RCRA · Solid Waste · SNF · TWRS	
CHARACTERISTICS: CH_LLMW · RH_LLMW · CH_TRU(M) · RH_TRU(M) · GTC III · LLW · HAZ	CONTAINERS: CH_LLMW · RH_LLMW · CH_TRU(M) · RH_TRU(M) · GTC III · LLW · HAZ
WASTE CLASSES: CH_LLMW · RH_LLMW · CH_TRU(M) · RH_TRU(M) · GTC III · LLW · HAZ	

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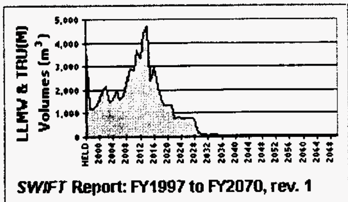
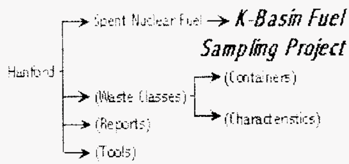




Site Rev. date: *12/31/96*

Data version: *97.1*

Data currency: *10/25/96*

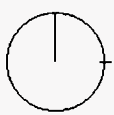
Spent Nuclear Fuel — K-Basin Fuel Sampling Project

Contents

Highlights

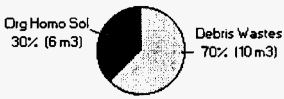
- K-Basin Fuel Sampling Project contributes 20 m^3 (22%) of the Spent Nuclear Fuels solid waste forecast.
- The K-Basin Project waste is composed entirely of CH_TRU waste (20 m^3).
- K-Basin Project's forecast life cycle ends in 2000.
- Small boxes will contain all of the forecast TRU waste for this generator.
- The physical TRU waste forms are debris (70% by volume) and organic solids (30%).

Waste Class Distribution



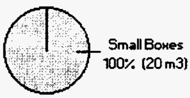
Total = 20 m3

Physical Waste Form Distribution **Hazardous Constituent Distribution**



Total = 20 m3

Container Distribution

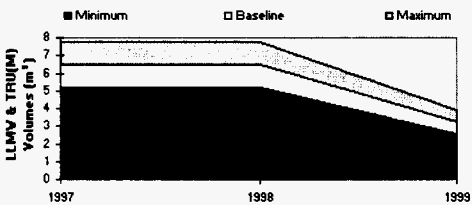


Total = 20 m3

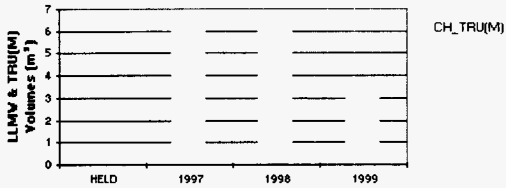
Sum of totals may not add due to rounding: numbers over 10 m³ are rounded to the nearest 10 m³, numbers less than 10 m³ are rounded to integers, non-zero numbers less than 1 are rounded to 1.

Annual Volumes

Annual Baseline Volumes



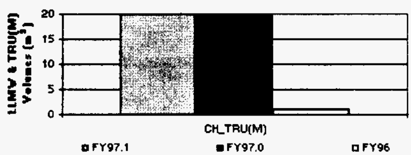
Annual Baseline by Waste Class



Comparison to Previous Baseline(s)

The K-Basin Project waste forecast has increased significantly from the 0.3 m³ forecast in FY96. This is a result of accounting for CH_TRU spent cartridge filters used to maintain basin water quality.

Comparison to Previous Baseline(s) by Waste Class



K-Basin Fuel Sampling Project Comparison: Waste Class	FY97.1 Forecast (m³)	FY97.0 Forecast (m³)	FY96 Forecast (m³)
CH_TRU(M)	20	20	1
Subtotal	***20***	***20***	***1***
LLW	1,030	1,030	310
Total	***1,050***	***1,050***	***310***

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.

Background

K-Basin Project is responsible for maintenance and preparation of the K-Basin 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.

Forecast Assumptions and Comments

In preparation of this forecast, known waste was addressed, and estimates were calculated according to Projects and expected waste streams.

The K-Basin major milestone: "Remove all Fuel and Sludge from both K-East and K-West Basins in an Encapsulated Form." (M-34-00-T08) is not reflected in this forecast, given the uncertainty in the basin clean-out.

The K-Basin Project baseline waste estimate may vary from 80% to 120%. The minimum value is based on the uncertainty of actual volume to be generated by basin clean-out and the long-term status of the facility after the stored fuel has either been contained or removed. The maximum value is based in the short term on not knowing the precise amount of waste to be generated by basin clean-out and pilot project. Long term expectations are that, regardless of chosen interim fuel storage method, waste generation in general should not exceed predicted amounts.

Other Forecast Data

- **Low Level Waste**
  - A total of 1,030 m^3 of LLW is expected from K-Basin Project.
  - This represents an increase of 232% from the FY96 estimate of 310 m^3 due to addition of spent ion exchange modules to the forecast, as well as the reassignment of some LLW from K-Basin Operations.
  - Medium boxes will contain 70% of the LLW, 24% will come in MB-IV boxes, and MB-V boxes will hold the remaining 6%.
  - The major LLW physical form is concrete shielding at 60% of the volume, debris at 38%, and 2% organic particulates.

- **Hazardous Waste**
  - No hazardous waste is expected from K-Basin Project for management by the CWC.

GENERATORS: 100K K-Basin Operations · *K-Basin Fuel Sampling Project*	
PROGRAMS: Analytical Services · EM-40 · Facility Transitions · Landlord · Liquid Effluent · NP · Offsite · PNNL · RCRA · Solid Waste · SNF · TWRS	
CHARACTERISTICS: CH_LLMW · RH_LLMW · CH_TRU(M) · RH_TRU(M) · GTC III · LLW · HAZ	CONTAINERS: CH_LLMW · RH_LLMW · CH_TRU(M) · RH_TRU(M) · GTC III · LLW · HAZ
WASTE CLASSES: CH_LLMW · RH_LLMW · CH_TRU(M) · RH_TRU(M) · GTC III · LLW · HAZ	
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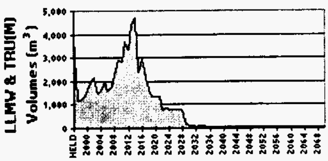
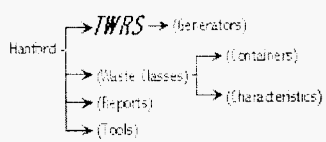


SWIFT Report: FY1997 to FY2070, rev. 1



Site Rev. date: *12/31/96*

Data version: *97.1*

Data currency: *10/25/96*

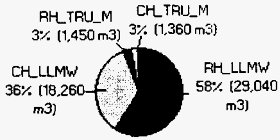
Tank Waste Remediation System (TWRS)

Contents

Highlights

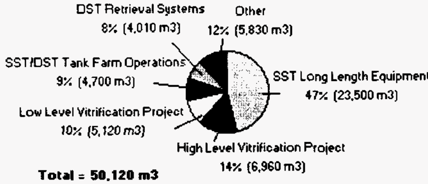
- The forecast life cycle for TWRS ends in 2032, although most activities will be completed by 2028.
- The life cycle total of LLMW and TRU(M) waste for TWRS is 50,120 m³, or 74% of the Hanford total.
- This forecast shows a 22% decrease from the FY96 forecast of 64,170 m³ due to revised programmatic assumptions that reduced the volume of long length equipment being retrieved.
- RH_LLMW is the primary waste class generated, representing 58% (29,040 m³) of the TWRS waste volume.
- SST Long Length Equipment is the major source of waste, generating 47% (23,500 m³) of the waste volume.
- The TWRS program uses more container types than any other program. LECs are expected to contain a little more than half of the LLMW and TRU(M) waste volume. 208 liter drums is the other substantial container, responsible for 30% of the volume.
- The physical waste forms forecast are almost entirely debris, corresponding to 94% of the volume. Shielding is the only other significant form, equal to 4%. The remaining 2% of the waste is expected to be soil/gravel (1%), organic solids, special waste, and inorganic solids.
- Essentially all of the LLMW and TRU(M) waste hazardous constituents are state regulated (73% by volume) and organic (25%). The remaining 2% is composed of other miscellaneous hazardous constituents.

Waste Class Distribution



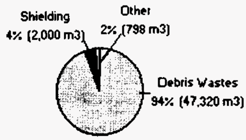
Total = 50,120 m3

Generator Distribution



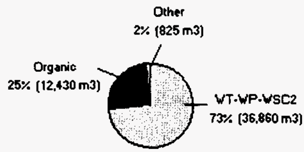
Total = 50,120 m3

Physical Waste Form Distribution



Total = 50,120 m3

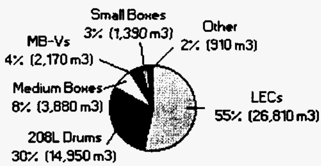
Hazardous Constituent Distribution



Total = 50,120 m3

Note: Includes LLMW and TRUM only

Container Distribution



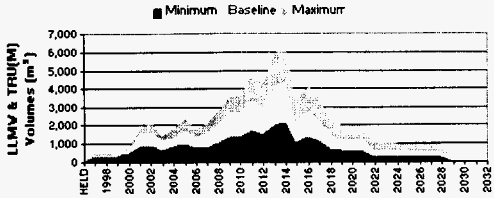
Total = 50,120 m3

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.

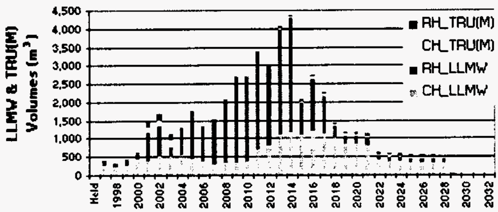
Annual Waste Class Volumes

TWRS will be generating waste from 1997 to the end of life cycle in 2032. Major waste generation will occur during the period 2001 to 2021 with a peak of about 4,307 m³ in 2014. The main activity during this period is the retrieval of the high level waste from the tanks (including removal of the long-length contaminated equipment). Other important sources of waste include the High Level and Low Level Vitrification Projects, which will generate waste during the general time period from 2011 to 2028.

Annual Baseline Volumes



Annual Baseline by Waste Class



Summary Table (Volumes in m³)

TWRS Summary: Generator	CH_LLMW	RH_LLMW	CH_TRU(M)	RH_TRU(M)	Subtotal	PCT
SST Long Length Equipment	0	22,520	490	490	23,500	47%
High Level Vitrification Project	5,220	0	870	870	6,960	14%
Low Level Vitrification Project	5,120	0	0	0	5,120	10%
SST/DST Tank Farm Operations	3,760	940	0	0	4,700	9%
DST Retrieval Systems (10 tanks)	870	3,050	0	90	4,010	8%
W343 DST Retrieval (17 Tanks)	1,480	1,760	0	0	3,240	6%
SST Retrieval (149 tanks)	890	390	0	0	1,280	3%
Tank Farm Restoration	880	380	0	0	1,260	3%
Tank Farm Ventilation Upgrade	40	0	0	0	40	0%
Cross-Site Transfer System	5	0	0	0	5	0%
Totals	***18,260***	***29,040***	***1,360***	***1,450***	***50,120***	100%
PCT	36%	58%	3%	3%	100%	

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.

Comparison to Previous Baseline(s)

The FY97.1 waste forecast for TWRS of 50,120 m³ shows a 22% decrease from the FY96 forecast of 64,170 m³.

This change primarily stems from new estimates by the SST Long-Length Equipment generator of the amount of existing equipment and the amount of equipment used for retrieval. In particular, as previously documented in *Hanford's Remote-Handled Transuranic and Transuranic Mixed Waste Volume Assessment*, PNNL-11206 (1996), there has been a revision to the programmatic baseline for the disposition of the long-length equipment. The new programmatic baseline assumes that only long-length equipment retrieved prior to 2003 will be managed by the Waste Management Project prior to disposal at the WIPP; the remaining long-length equipment will be disposed on site in a similar manner as the underground tanks. Decontamination is expected to occur so that most of the equipment is not considered transuranic waste.

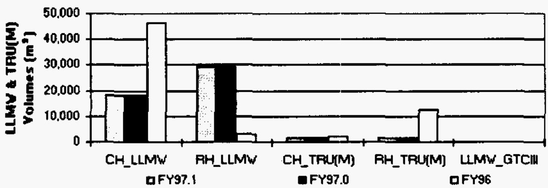
It should be noted that the decrease in SST Long-Length Equipment waste volume estimates is somewhat balanced by increases in other waste generators' estimates. Major sources of waste estimate increases include W343 DST Retrieval, DST 101AZ Retrieval, and the Low Level Vitrification Project, all of which are based on new operational baselines.

An additional key change in the FY97.1 forecast is the significant decrease from the FY96 forecast in the level of RH_TRU(M) waste generated (from 12,490 m^3 to 1,450 m^3). This decrease is again largely due to the change in baseline for SST Long-Length Equipment, but also arises from decreases in RH_TRU estimates by W343 DST Retrieval and the High Level Vitrification Project.

Another change in the forecast is that there is no longer any waste forecast as greater-than-category III waste.

The 1997 hazardous constituents forecast shows state regulated constituents accounting for most of the waste, and organics representing the rest. Last year's forecast showed organic constituents as accounting for almost all of the volume, and state regulated composing the next largest portion. Also, the current forecast does not include corrosive constituents as did the previous.

Comparison to Previous Baseline(s) by Waste Class



TWRS Comparison: Waste Class	FY97.1 Forecast (m^3)	FY97.0 Forecast (m^3)	FY96 Forecast (m^3)
CH_LLMW	18,260	18,260	46,310
RH_LLMW	29,040	29,040	3,080
CH_TRU(M)	1,360	1,360	2,180
RH_TRU(M)	1,450	1,450	12,490
LLMW_GTCIII	0	0	110
Subtotal	***50,120***	***50,120***	***64,170***
LLW	63,600	63,600	59,110
HAZ	2,380	2,380	790
Total	***116,100***	***116,100***	***124,070***

Sum of totals may not add due to rounding: numbers over 10 m^3 are rounded to the nearest 10 m^3, numbers less

than 10 m³ are rounded to integers, non-zero numbers less than 1 are rounded to 1.

Background as of 9/96

The TWRS program mission is to store, treat, and immobilize highly radioactive Hanford waste in an environmentally sound, safe, and cost-effective manner. Tank waste includes current tank waste, future tank waste, and the Cs/Sr capsules currently stored at the Waste Encapsulation and Storage Facility (WESF) (Valero, et al., 1995).

Completion of this mission will be performed by the maintenance and integration (M&I) contractor and a private contractor, currently not determined. Privatization will be performed in two phases. The scope in Phase 1 includes privatization of pretreatment, low-level waste immobilization, and an optional high-level waste immobilization to the extent that proof of concept is established. Phase 2 will include privatization of tank waste retrieval, interim storage of wastes, pretreatment, LLW/HLW immobilization, disposition of Cs/Sr capsules, and interim storage of immobilized wastes. Decontaminating and decommissioning equipment and treatment facilities is also the responsibility of the private contractor. All secondary waste disposition is the responsibility of M&I contractor; however, the secondary waste generated during D&D has not been estimated.

The TWRS 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. The tasks included under each of these primary activities are listed below. Each of these primary activities is expected to generate solid waste that could potentially be managed at the CWC.

Manage Tank Waste:

This activity includes tank farm operations and upgrades, waste tank safety and characterization, waste transfer, and waste concentration. This activity will be performed by the M&I contractor. All potential solid waste that could be generated from this activity has been forecast.

Retrieve Tank Waste:

This activity will hydraulically retrieve waste from the single-shell tanks and double-shell tanks. The retrieval method for the miscellaneous underground storage tanks will be determined by the private contractor. This activity will be performed by the M&I contractor during the proof-of concept phase (Phase 1) and the private contractor during Phase 2. The solid waste generated during this activity includes primarily the long-length contaminated equipment (LLE). The volume of LLE shipped to the CWC is dependent on the retrieval technology and may vary once the final technologies are selected.

Process Waste:

This activity includes preparing the Cs/Sr capsules for disposal, tank waste pretreatment, LLW immobilization, HLW immobilization, and storage of in-process waste. The private contractor is responsible for designing the pretreatment and immobilization technologies. Solid waste resulting from operations and interim storage has been adequately forecast; however, the volumes may fluctuate once the final technology has been determined. Potential solid waste generated during the disposition of the Cs/Sr capsules has not been forecast.

Dispose of Waste:

The main tasks associated with this primary activity are interim storage of solidified high level waste, disposal of immobilized LLW, and closure of the MUSTs. The M&I contractor is responsible for completing these tasks. Large volumes of solid waste are not expected from these activities; therefore, forecasts have not been provided.

Forecast Assumptions and Comments

As mentioned previously, there has been a revision to the programmatic baseline for the disposition of the long-length equipment. The new programmatic baseline assumes that only long-length equipment retrieved prior to 2003 will be managed by the Waste Management Program prior to disposal at the WIPP; the remaining long-length equipment will be disposed on site in a similar manner as the underground tanks. Decontamination is expected to occur so that most of the equipment is not considered transuranic waste.

The minimum range reported for the TWRS program is 54% of baseline, and the maximum is 145% of baseline. This range is based largely on uncertainties in estimates provided by SST Long-Length Equipment, High Level Vitrification Project (HLVP), and Low Level Vitrification Project (LLVP).

Other Forecast Data

- **Low Level Waste**
  - A total of 63,600 m^3 of LLW is expected from TWRS.
  - This forecast shows an 8% increase from the FY96 forecast of 59,110 m^3, with various generators showing decreases and others showing increases, based on new baselines.
  - 93% of the LLW is to be contained by MB-V boxes. Other drums and boxes contain the remaining 7%.
  - Essentially 100% of the LLW has the physical form of debris; however, organic and inorganic forms are reported, but in negligible volumes.
- **Hazardous Waste**
  - A total of 2,380 m^3 of hazardous waste was reported by TWRS for management by the CWC.

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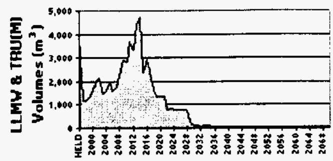
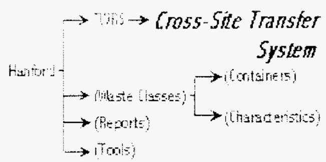


SWIFT Report: FY1997 to FY2070, rev. 1



Site Rev. date: *12/31/96*

Data version: *97.1*

Data currency: *10/25/96*

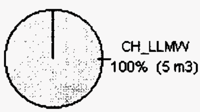
TWRS — Cross-Site Transfer System

Contents

Highlights

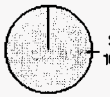
- Cross Site Transfer System (W-058) (NHC_TWP_W058) contributes 5 m³ (<1%) of the TWRS program's solid waste forecast.
- The W-058 forecast life cycle extends only through 1997.
- CH_LLMW is the only waste class generated, representing 100% of the waste (5 m³).
- The 208 liter drum container will hold 100% of the LLMW.
- 100% of the LLMW has the physical form of soil and soil/gravel.
- Mixed organic and PCB hazardous constituents represent 100% of the LLMW.

Waste Class Distribution



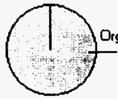
Total = 5 m3

Physical Waste Form Distribution



Total = 5 m3

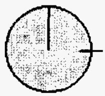
Hazardous Constituent Distribution



Total = 5 m3

Note: Includes LLMW and TRUM only

Container Distribution

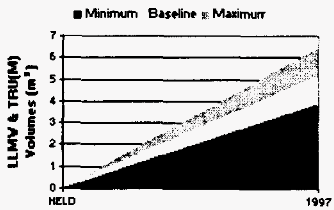


Total = 5 m3

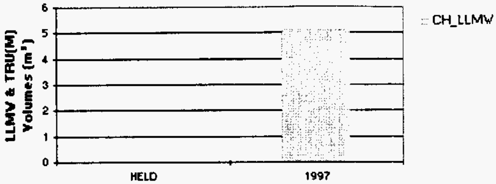
Sum of totals may not add due to rounding: numbers over 10 m³ are rounded to the nearest 10 m³, numbers less than 10 m³ are rounded to integers, non-zero numbers less than 1 are rounded to 1.

Annual Volumes

Annual Baseline Volumes



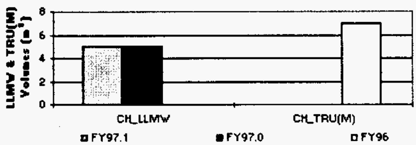
Annual Baseline by Waste Class



Comparison to Previous Baseline(s)

The W-058 FY97.1 waste forecast is essentially the same as the FY96 forecast of 7 m³, with the slight reduction based on favorable experiences in excavating within the SY tank farm. Additionally, it has been determined that the waste is LLMW rather than TRU(M) waste as previously forecasted.

Comparison to Previous Baseline(s) by Waste Class



Cross-Site Transfer System Comparison: Waste Class	FY97.1 Forecast (m³)	FY97.0 Forecast (m³)	FY96 Forecast (m³)
CH_LLMW	5	5	0
CH_TRU(M)	0	0	7
Subtotal	***5***	***5***	***7***
LLW	0	0	120
Total	***5***	***5***	***130***

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.

Background

The mission of the W-058 project is the construction of a replacement cross-site transfer system. Waste results from excavation of soil within contaminated areas, including the SY tank farm and the 244A lift station. Generated waste consists of LLMW in the form of soil and gravel.

Forecast Assumptions and Comments

Volumes were originally estimated during conceptual design of the project. They have been revised as a result of pre-construction surveys and actual construction experience to date.

Waste will be packaged in its "as-found" state.

Minimum and maximum ranges for the waste are 75% and 125% respectively, and are based on engineering judgment and the current status of excavation activities.

Other Forecast Data

- **Low Level Waste**
  - No low level waste is expected from W-058 for management by the CWC; which reflects a 100% decrease from the FY96 Forecast of 120 m³.
- **Hazardous Waste**
  - No hazardous waste is expected from W-058 for management by the CWC.

GENERATORS:
Cross-Site Transfer System · DST Retrieval Systems · High Level Vitrification Project · Low Level Vitrification Project · SST Long Length Equipment · SST Retrieval · SST/DST Tank Farm Operations · Tank Farm Restoration · Tank Farm Ventilation Upgrade · W343 DST Retrieval

PROGRAMS:
Analytical Services · EM-40 · Facility Transitions · Landlord · Liquid Effluent · NP · Offsite · PNNL · RCRA · Solid Waste · SNF · TWRS

CHARACTERISTICS:
CH_LLMW · RH_LLMW · CH_TRU(M) · RH_TRU(M) · GTC III · LLW · HAZ

CONTAINERS:
CH_LLMW · RH_LLMW · CH_TRU(M) · RH_TRU(M) · GTC III · LLW · HAZ

WASTE CLASSES:
CH_LLMW · RH_LLMW · CH_TRU(M) · RH_TRU(M) · GTC III · LLW · HAZ

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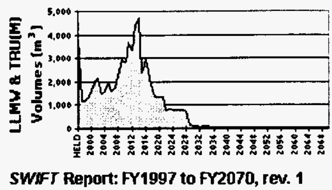
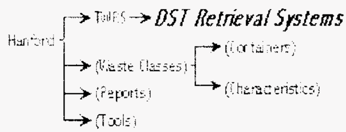




Site Rev. date: *12/31/96*

Data version: *97.1*

Data currency: *10/25/96*

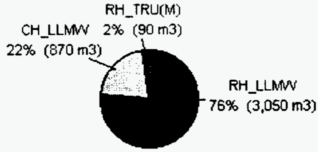
TWRS — DST Retrieval Systems (10 tanks)

Contents

Highlights

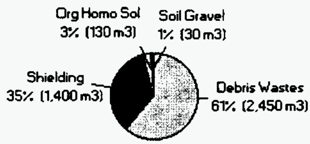
- DST Retrieval Systems (W-211) contributes 4,010 m^3 (8%) of the TWRS program's solid waste forecast.
- The W-211 forecast life cycle extends to 2028.
- RH_LLMW is the primary waste class generated, representing 76% of the waste (3,050 m^3).
- This generator expects to use a variety of containers: LECs at 64% by volume, boxes at 33%, and 3% in drums.
- Physical waste forms are forecast as 61% (by volume) debris, 35% shielding, 3% organic solids, and 1% soil and soil/gravel.
- Organic hazardous constituents account for 90% of the LLMW and TRU(M) waste, and metals without mercury is 10%.

Waste Class Distribution



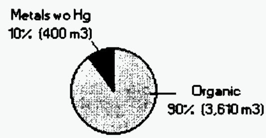
Total = 4,010 m3

Physical Waste Form Distribution



Total = 4,010 m3

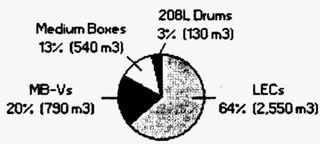
Hazardous Constituent Distribution



Total = 4,010 m3

Note: includes LLMW and TRUM only

Container Distribution

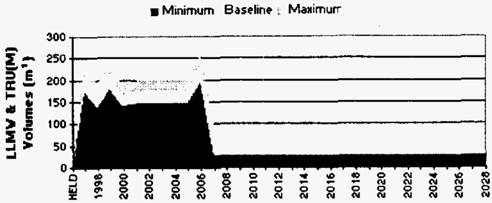


Total = 4,010 m3

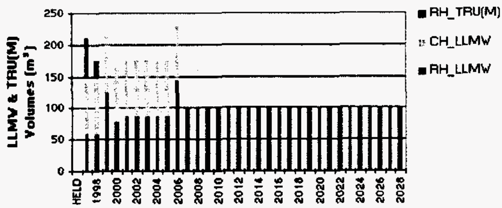
Sum of totals may not add due to rounding: numbers over 10 m³ are rounded to the nearest 10 m³, numbers less than 10 m³ are rounded to integers, non-zero numbers less than 1 are rounded to 1.

Annual Volumes

Annual Baseline Volumes



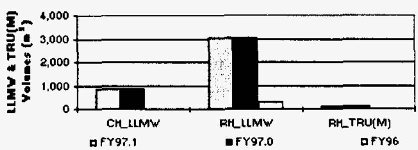
Annual Baseline by Waste Class



Comparison to Previous Baseline(s)

The FY97.1 forecast for W-211 is significantly greater than the FY96 estimate of 260 m³. This increase is due to the fact that the FY97.1 forecast is based on current project information and a completed Title I report. For example, the schedule has been compressed so that all ten W-211 tanks are complete by 2008 instead of 2010. Also, tanks 102-SY and 105-AW replaced 106-AN and 101-AP in the project scope. The anticipated waste volume generated during construction is better defined.

Comparison to Previous Baseline(s) by Waste Class



DST Retrieval Systems (10 tanks) Comparison: Waste Class	FY97.1 Forecast (m³)	FY97.0 Forecast (m³)	FY96 Forecast (m3)
CH_LLMW	870	870	0
RH_LLMW	3,050	3,050	260
RH_TRU(M)	90	90	0
Subtotal	***4,010***	***4,010***	***260***
LLW	0	0	1,980
Total	***4,010***	***4,010***	***2,240***

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.

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_LLMW will be generated from excavation and demolition of non in-tank equipment/structures and from work in such areas as pits. RH_LLMW will result from removing components that have been exposed to tank waste. RH_TRU waste will result from removing components from high TRU tanks 102-SY and 105-AW.

Forecast Assumptions and Comments

Solid waste generated during the facility life cycle (only for project related upgrades) has been included in the FY97.1 forecast.

Ten DST retrieval systems will be installed and operated from 1998 through 2009. Most removed in-tank components are assumed to be LLW based on decontamination by a high pressure spray wash system during removal. All waste is assumed to be mixed.

There are no assumptions in the W-211 forecast related to commercial disposal of solid radioactive mixed waste.

Average annual minimum and maximum ranges for the waste are 55% and 107% respectively. In early years, the minimum/maximum values are based on uncertainties in the assumed waste generation volumes. In the outyears, they are based on uncertainties about pump replacement durations.

Other Forecast Data

- **Low Level Waste**
  - No LLW is expected from W-211 for management by the CWC.
  - This forecast shows a 100% decrease from the FY96 forecast of 1,980 m³, due to a new baseline.
- **Hazardous Waste**
  - No hazardous waste is expected from W-211 for management by the CWC.

GENERATORS:
Cross-Site Transfer System · *DST Retrieval Systems* · High Level Vitrification Project · Low Level Vitrification Project · SST Long Length Equipment · SST Retrieval · SST/DST Tank Farm Operations · Tank Farm Restoration · Tank Farm Ventilation Upgrade · W343 DST Retrieval

PROGRAMS:
Analytical Services · EM-40 · Facility Transitions · Landlord · Liquid Effluent · NP · Offsite · PNNL · RCRA · Solid Waste · SNF · TWRS

CHARACTERISTICS:
CH_LLMW · RH_LLMW · CH_TRU(M) · RH_TRU(M) · GTC III · LLW · HAZ

CONTAINERS:
CH_LLMW · RH_LLMW · CH_TRU(M) · RH_TRU(M) · GTC III · LLW · HAZ

WASTE CLASSES:
CH_LLMW · RH_LLMW · CH_TRU(M) · RH_TRU(M) · GTC III · LLW · HAZ

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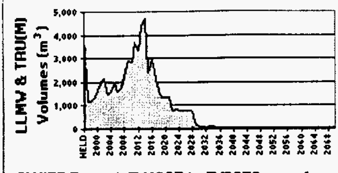


Hanford → TWRS → *High Level Vitrification Project*
→ (Waste Classes) → (Containers), (Characteristics)
→ (Reports)
→ (Tools)

Site Rev. date:	Data version:	Data currency:
12/31/96	*97.1*	*10/25/96*

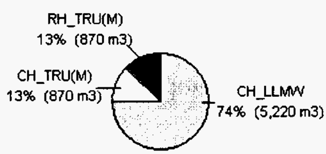
TWRS — High Level Vitrification Project

Contents

Highlights

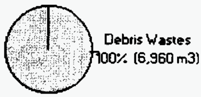
- The High Level Vitrification Project (HLVP) contributes 6,960 m^3 (14%) of the TWRS program's solid waste forecast.
- The HLVP forecast life cycle is 2002 to 2028.
- CH_LLMW is the primary waste class generated, representing 74% of the waste (5,220 m^3).
- Two container types are used for LLMW and TRU(M) waste: 208 liter drums (87% of the volume) and SWBs (13%).
- 100% of the waste will have the physical form of debris.
- State regulated hazardous constituents represent 100% of the LLMW and TRU(M) waste.

Waste Class Distribution



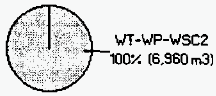
Total = 6,960 m3

Physical Waste Form Distribution



Total = 6,960 m3

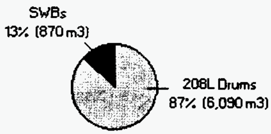
Hazardous Constituent Distribution



Total = 6,960 m3

Note: Includes LLMW and TRUM only

Container Distribution

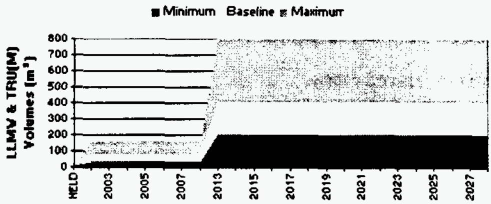


Total = 6,960 m3

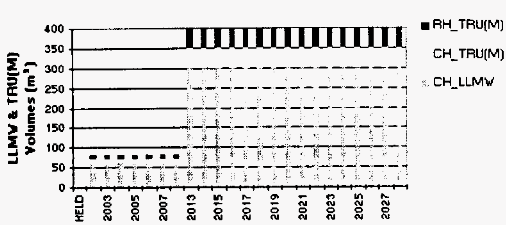
Sum of totals may not add due to rounding: numbers over 10 m³ are rounded to the nearest 10 m³, numbers less than 10 m³ are rounded to integers, non-zero numbers less than 1 are rounded to 1.

Annual Volumes

Annual Baseline Volumes



Annual Baseline by Waste Class



Comparison to Previous Baseline(s)

The overall FY97.1 forecast is 41% greater than the FY96 forecast of 4,920 m^3. This change is due to the fact that current estimates are based on the new baseline of privatization that uses PUREX as a model for waste generation.

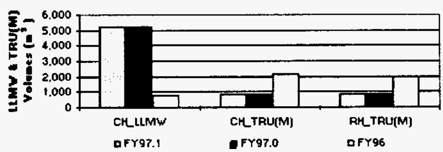
In addition, this year's forecast includes estimates that were previously reported by the TWRS Pretreatment Facility (WHC_PRETRT_TW). This year, pretreatment estimates are no longer being reported separately, but instead have been folded into the HLVP and LLVP forecasts.

Both CH_TRU and RH_TRU waste estimates have decreased from the FY96 forecast. This is based on an examination of historical waste data for PUREX, which indicated that high-TRU waste feeds did not lead to high-TRU waste.

Physical waste forms forecast last year included 40 cubic meters of inorganic solids and 200 cubic meters of lead shielding. Only debris has been forecast for 1997.

The 1996 forecast expected several hazardous constituents, unlike the current forecast. Metals without mercury, organic, corrosive, and ignitable constituents were all reported along with state regulated, the only constituent reported this year.

Comparison to Previous Baseline(s) by Waste Class



High Level Vitrification Project Comparison: Waste Class	FY97.1 Forecast (m³)	FY97.0 Forecast (m³)	FY96 Forecast (m³)
CH_LLMW	5,220	5,220	800
CH_TRU(M)	870	870	2,170
RH_TRU(M)	870	870	1,960
Subtotal	***6,960***	***6,960***	***4,920***
LLW	20,880	20,880	25,650
HAZ	870	870	90
Total	***28,710***	***28,710***	***30,660***

Sum of totals may not add due to rounding: numbers over 10 m^3 are rounded to the nearest 10 m^3, numbers less

than 10 m³ are rounded to integers, non-zero numbers less than 1 are rounded to 1.

Background

HLVP is a planned treatment/ processing facility for high activity tank waste, and waste volumes associated with the HLVP are based on preconceptual design criteria and best engineering judgment. Secondary waste will be generated from activities such as spill clean-up and decontamination, general maintenance and housekeeping, and laboratory activities. The waste will generally consist of contaminated failed equipment (not including melters), metals, paper, plastic, rubber, and other miscellaneous debris. The interim storage of in-process waste is also included for this waste generator.

Forecast Assumptions and Comments

Current estimates are based on the new baseline of privatization which consists of two phases. The first phase is a demonstration (2002-2008) and the second phase is full scale (2013-2028). The waste volume during the demonstration is one fifth of the volume generated during the full scale operation. The full scale operation is expected to generate about the same amount of waste annually as the PUREX plant generated annually during the 1980s. The schedule for activities is based on the TWRS Disposal Program OWVP for March 1,1996, updated May 14, 1996.

Again, it is assumed that high-TRU waste feeds will not lead to high-TRU waste, as was the experience at PUREX.

The current forecast does not include terminal clean-out and D&D of this facility.

Minimum and maximum ranges for the waste are 50% and 200% respectively, and are primarily due to the uncertainty of dealing with preliminary facility and processing concepts.

Other Forecast Data

- **Low Level Waste**
  - A total of 20,880 m³ of LLW is expected from HLVP.
  - This forecast shows a 19% decrease from the FY96 forecast of 25,650 m³, primarily due to the new baseline.
  - The LLW will be shipped in MB-V boxes.
  - 100% of the LLW will have the physical form of debris.

- **Hazardous Waste**
  - A total of 870 m³ of hazardous waste was reported by HLVP for management by the CWC.

GENERATORS: Cross-Site Transfer System · DST Retrieval Systems · *High Level Vitrification Project* · Low Level Vitrification Project · SST Long Length Equipment · SST Retrieval · SST/DST Tank Farm Operations · Tank Farm Restoration · Tank Farm Ventilation Upgrade · W343 DST Retrieval
PROGRAMS: Analytical Services · EM-40 · Facility Transitions · Landlord · Liquid Effluent · NP · Offsite · PNNL · RCRA · Solid Waste · SNF · TWRS

CHARACTERISTICS: CH_LLMW · RH_LLMW · CH_TRU(M) · RH_TRU(M) · GTC III · LLW · HAZ	CONTAINERS: CH_LLMW · RH_LLMW · CH_TRU(M) · RH_TRU(M) · GTC III · LLW · HAZ

WASTE CLASSES: CH_LLMW · RH_LLMW · CH_TRU(M) · RH_TRU(M) · GTC III · LLW · HAZ
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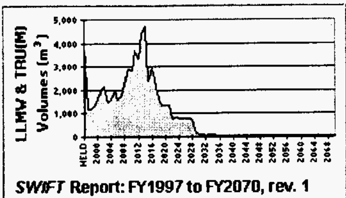
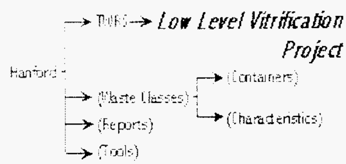




Site Rev. date: 12/31/96

Data version: 97.1

Data currency: 10/25/96

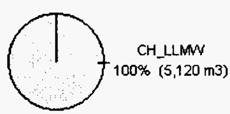
TWRS — Low Level Vitrification Project

Contents

Highlights

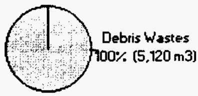
- The Low Level Vitrification Project (LLVP) contributes 5,120 m³ (10%) of the TWRS program's solid waste forecast.
- The LLVP forecast life cycle is 2002 to 2021.
- CH_LLMW is the only waste class generated (5,120 m³).
- The sole LLMW waste container forecasted is the 208 liter drum.
- 100% of the LLMW will have the physical form of debris.
- State regulated hazardous constituents represent 100% of the LLMW.

Waste Class Distribution



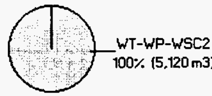
Total = 5,120 m3

Physical Waste Form Distribution



Total = 5,120 m3

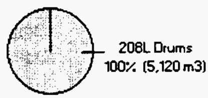
Hazardous Constituent Distribution



Total = 5,120 m3

Note: Includes LLMW and TRUM only

Container Distribution

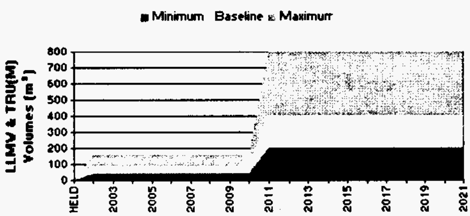


Total = 5,120 m3

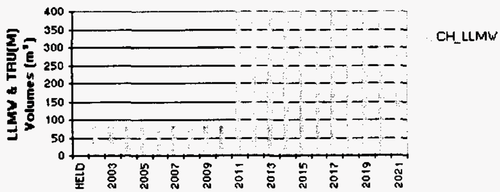
Sum of totals may not add due to rounding: numbers over 10 m³ are rounded to the nearest 10 m³, numbers less than 10 m³ are rounded to integers, non-zero numbers less than 1 are rounded to 1.

Annual Volumes

Annual Baseline Volumes



Annual Baseline by Waste Class



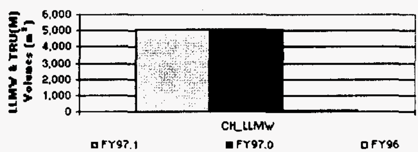
Comparison to Previous Baseline(s)

The overall FY97.1 forecast is significantly greater than the FY96 forecast of 60 m³. This change is due to the fact that current estimates are based on the new baseline of privatization that uses PUREX as a model for waste generation.

In addition, this year's forecast includes estimates that were previously reported by the TWRS Pretreatment Facility (WHC_PRETRT_TW). This year, pretreatment estimates are no longer being reported separately, but instead have been folded into the HLVP and LLVP forecasts.

Unlike the 1996 forecast, the current forecast expects only one kind of hazardous constituent: state regulated. Last year, organic, state regulated, metals without mercury, corrosive, and other constituents were all reported in similar volumes.

Comparison to Previous Baseline(s) by Waste Class



Low Level Vitrification Project Comparison: Waste Class	FY97.1 Forecast (m³)	FY97.0 Forecast (m³)	FY96 Forecast (m³)
CH_LLMW	5,120	5,120	60
Subtotal	***5,120***	***5,120***	***60***
LLW	34,560	34,560	13,250
HAZ	1,280	1,280	80
Total	***40,960***	***40,960***	***13,330***

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.

Background

LLVP is a planned treatment/ processing facility for low activity tank waste, and waste volumes associated with the LLVP are based on preconceptual design criteria and best engineering judgment. It should be noted that the LLVP is planned to be significantly larger than the HLVP.

Secondary waste will be generated from activities such as spill clean-up and decontamination, general maintenance and housekeeping, and laboratory activities. The waste will generally consist of contaminated failed equipment (not including melters), metals, paper, plastic, rubber, and other miscellaneous debris. The interim storage of in-process waste is also included for this waste generator.

Forecast Assumptions and Comments

Current estimates are based on the new baseline of privatization which consists of two phases. The first phase is a demonstration (2002-2011) and the second phase is full scale (2011-2021). The waste volume during the demonstration is one fifth of the volume generated during the full scale operation. The full scale operation is expected to generate about 2x the amount of waste annually as the PUREX plant generated annually during the 1980s. The schedule for activities is based on the TWRS Disposal Program OWVP for March 1,1996, updated May 14, 1996.

The current forecast does not include terminal clean-out and D&D of this facility.

Minimum and maximum ranges for the waste are 50% and 200% respectively, and are primarily due to the uncertainty of dealing with preliminary facility and processing concepts.

Other Forecast Data

- **Low Level Waste**
  - A total of 34,560 m^3 of LLW is expected from LLVP.
  - This forecast shows a 161% increase from the FY96 forecast of 13,250 m^3, due to the new baseline.
  - MB-V boxes will be used for 100% of the volume.
  - 100% of the LLW will have the physical form of debris.

- **Hazardous Waste**
  - A total of 1,280 m^3 of hazardous waste was reported by LLVP for management by the CWC.

GENERATORS:
Cross-Site Transfer System · DST Retrieval Systems · High Level Vitrification Project · *Low Level Vitrification Project* · SST Long Length Equipment · SST Retrieval · SST/DST Tank Farm Operations · Tank Farm Restoration · Tank Farm Ventilation Upgrade · W343 DST Retrieval

PROGRAMS:
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CHARACTERISTICS:
CH_LLMW · RH_LLMW · CH_TRU(M) · RH_TRU(M) · GTC III · LLW · HAZ

CONTAINERS:
CH_LLMW · RH_LLMW · CH_TRU(M) · RH_TRU(M) · GTC III · LLW · HAZ

WASTE CLASSES:
CH_LLMW · RH_LLMW · CH_TRU(M) · RH_TRU(M) · GTC III · LLW · HAZ

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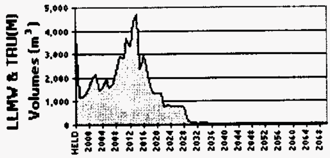


SWIFT Report: FY1997 to FY2070, rev. 1

Hanford → TWRS → *SST Long Length Equipment*
→ (Waste Classes) → (Containers) → (Characteristics)
→ (Reports)
→ (Tools)

Site Rev. date: *12/31/96*

Data version: *97.1*

Data currency: *10/25/96*

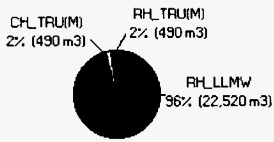
TWRS — SST Long Length Equipment

Contents

Highlights

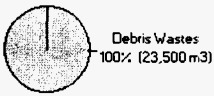
- The SST Long Length Equipment generator (SST_LLE) contributes 23,500 m^3 (47%) of the TWRS program's solid waste forecast.
- The SST_LLE forecast life cycle is 2001 to 2017.
- RH_LLMW is the primary waste class generated, representing 96% of the waste (22,520 m^3).
- The only container to be used is the LEC.
- 100% of the waste will have the physical form of debris.
- State regulated hazardous constituents represent 100% of the LLMW and TRU(M) waste.

Waste Class Distribution



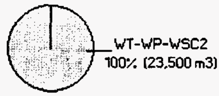
Total = 23,500 m3

Physical Waste Form Distribution



Total = 23,500 m3

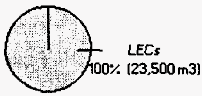
Hazardous Constituent Distribution



Total = 23,500 m3

Note: Includes LLMW and TRUM only

Container Distribution

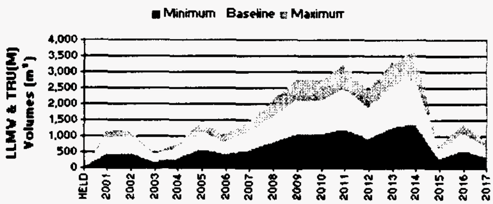


Total = 23,500 m3

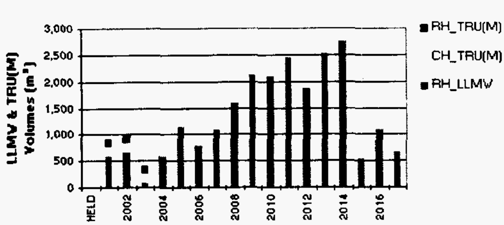
Sum of totals may not add due to rounding: numbers over 10 m³ are rounded to the nearest 10 m³, numbers less than 10 m³ are rounded to integers, non-zero numbers less than 1 are rounded to 1.

Annual Volumes

Annual Baseline Volumes



Annual Baseline by Waste Class



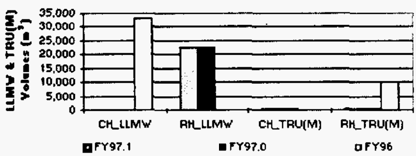
Comparison to Previous Baseline(s)

The overall FY97.1 forecast is significantly (46%) less than the FY96 forecast of 43,260 m³. This change is due to a new estimate of the amount of existing equipment and the amount of equipment used for retrieval. In addition, an agreement was reached with DOE for the eventual disposal of the long-length equipment (see Assumptions below).

RH_TRU waste estimates have decreased significantly from the FY96 forecast, based on a new analysis of the amount of waste which will be TRU.

The 1996 hazardous constituents forecast showed only organic and metals without mercury constituents, while this year only state regulated waste is forecast.

Comparison to Previous Baseline(s) by Waste Class



SST Long Length Equipment Comparison: Waste Class	FY97.1 Forecast (m³)	FY97.0 Forecast (m³)	FY96 Forecast (m³)
CH_LLMW	0	0	32,980
RH_LLMW	22,520	22,520	0
CH_TRU(M)	490	490	0
RH_TRU(M)	490	490	10,280
Subtotal	***23,500***	***23,500***	***43,260***
Total	***23,500***	***23,500***	***43,260***

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.

Background

The single-shell tanks contain radioactive waste generated by Hanford operations starting in 1944. This waste will be retrieved for disposal from 2004 through 2018. Retrieval will require some (but not all) long-length equipment to be removed from the tanks. The equipment used for retrieval will also be long-length equipment, and some will require disposal.

The long-length equipment in the tanks is greater than 12 feet in length, with some pieces in excess of 60 feet. Because of the unusual configuration of these wastes, special storage and handling requirements will be necessary for any long-length equipment that is removed. In addition to the equipment currently in the tanks, estimates have been included for pumps and other miscellaneous equipment that will be used for retrieval of tank waste. The retrieval pumps and equipment are also expected to be sent to the CWC for processing and will have many of the same storage and handling requirements as the equipment currently in the tanks.

Forecast Assumptions and Comments

As previously documented in *Hanford's Remote-Handled Transuranic and Transuranic Mixed Waste Volume Assessment*, PNNL-11206 (1996), there has been a revision to the programmatic baseline for the disposition of the long-length equipment. The new programmatic baseline assumes that only long-length equipment retrieved prior to 2003 will be managed by the Waste Management project prior to disposal at the WIPP; the remaining long-length equipment will be disposed on site in a similar manner as the underground tanks. Decontamination is expected to occur so that most of the equipment is not considered transuranic waste.

Other forecast assumptions include:

1. The forecast is based on the worst case removal of equipment from the SST. The removal of existing equipment occurs about three years before retrieval is scheduled to begin based on the latest retrieval sequence.
2. Retrieval is expected to use an average of two pumps and two sluicers per tank. One half of this equipment is included in the forecast. Disposal of this equipment occurs during the retrieval years. The other equipment is disposed in the same manner as the tanks and is not included in the forecast.

Finally, it should be noted that the LLMW that is generated during long-length equipment retrieval could also possibly be handled in a manner similar to that of the long-length equipment - that is, by being disposed of within the tanks. If this scenario were adopted, it would result in significant reductions in the current estimates for LLMW. However, TWRS is not yet able to include such an assumption in the forecast, given the lack of information and experience with the process.

Average annual minimum and maximum ranges for the waste are 49% and 132% respectively, and are primarily due to the uncertainty of dealing with preliminary facility and processing concepts.

Other Forecast Data

- **Low Level Waste**
  - No LLW is expected from SST_LLE for management by the CWC.
- **Hazardous Waste**
  - No hazardous waste is expected from SST_LLE for management by the CWC.

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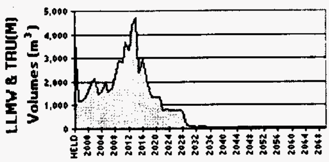
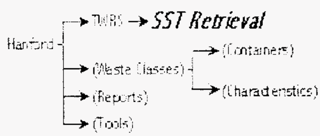


SWIFT Report: FY1997 to FY2070, rev. 1



Site Rev. date: *12/31/96*

Data version: *97.1*

Data currency: *10/25/96*

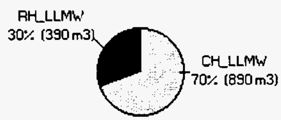
TWRS — SST Retrieval (149 tanks)

Contents

Highlights

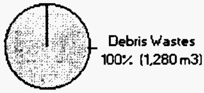
- The SST Retrieval generator contributes 1,280 m^3 (3%) of the TWRS program's solid waste forecast.
- The SST Retrieval forecast life cycle is 2004 to 2017.
- CH_LLMW is the primary waste class generated, representing 70% of the waste (890 m^3).
- All of this volume will be in 208 liter drums.
- 100% of the LLMW will have the physical form of debris.
- State regulated hazardous constituents represent 100% of the LLMW.

Waste Class Distribution



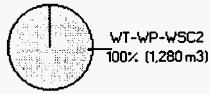
Total = 1,280 m3

Physical Waste Form Distribution



Total = 1,280 m3

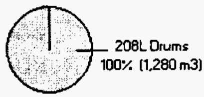
Hazardous Constituent Distribution



Total = 1,280 m3

Note: includes LLMW and TRUM only

Container Distribution

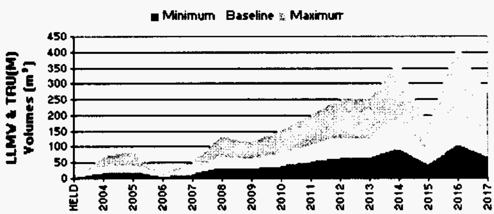


Total = 1,280 m3

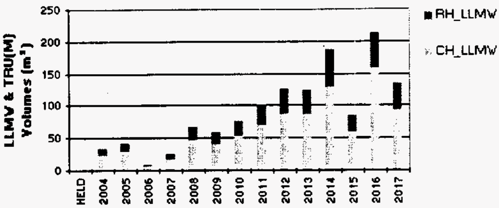
Sum of totals may not add due to rounding: numbers over 10 m³ are rounded to the nearest 10 m³, numbers less than 10 m³ are rounded to integers, non-zero numbers less than 1 are rounded to 1.

Annual Volumes

Annual Baseline Volumes



Annual Baseline by Waste Class



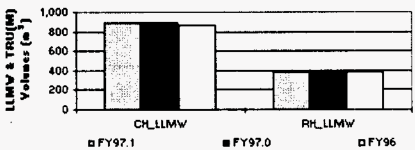
Comparison to Previous Baseline(s)

The overall FY97.1 forecast is essentially the same as the FY96 forecast of 1,250 m³.

Different from the current physical form forecast of 100% debris, the 1996 forecast expected 80 cubic meters of soil and soil/gravel.

The 1996 hazardous constituents forecast showed only organic and metals without mercury constituents, while this year only state regulated waste is forecast.

Comparison to Previous Baseline(s) by Waste Class



(in descending order by waste class)

SST Retrieval (149 tanks) Comparison: Waste Class	FY97.1 Forecast (m³)	FY97.0 Forecast (m³)	FY96 Forecast (m³)
CH_LLMW	890	890	860
RH_LLMW	390	390	390
Subtotal	***1,280***	***1,280***	***1,250***
LLW	600	600	600
Total	***1,880***	***1,880***	***1,850***

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.

Background

The single-shell tanks contain radioactive waste generated by Hanford operations starting in 1944. This generator will retrieve the waste for processing and disposal.

Forecast Assumptions and Comments

Waste is proportioned to each year based on the number of tanks being retrieved.

Minimum and maximum ranges for the waste are 50% and 200% respectively, primarily due to the uncertainty of dealing with preliminary facility and processing concepts.

Other Forecast Data

- **Low Level Waste**
  - Similar to the FY96 forecast, a total of 600 m³ of LLW is expected from SST Retrieval.
  - This waste will be shipped in 208 liter drums only.
  - 100% of the LLW will have the physical form of debris.

- **Hazardous Waste**
  - No hazardous waste is expected from SST Retrieval for management by the CWC.

GENERATORS:
Cross-Site Transfer System · DST Retrieval Systems · High Level Vitrification Project · Low Level Vitrification Project · SST Long Length Equipment · *SST Retrieval* · SST/DST Tank Farm Operations · Tank Farm Restoration · Tank Farm Ventilation Upgrade · W343 DST Retrieval

PROGRAMS:
Analytical Services · EM-40 · Facility Transitions · Landlord · Liquid Effluent · NP · Offsite · PNNL · RCRA · Solid Waste · SNF · TWRS

CHARACTERISTICS:
CH_LLMW · RH_LLMW · CH_TRU(M) · RH_TRU(M) · GTC III · LLW · HAZ

CONTAINERS:
CH_LLMW · RH_LLMW · CH_TRU(M) · RH_TRU(M) · GTC III · LLW · HAZ

WASTE CLASSES:
CH_LLMW · RH_LLMW · CH_TRU(M) · RH_TRU(M) · GTC III · LLW · HAZ

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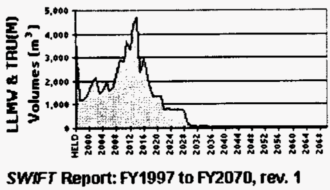


Hanford → TWRS → SST/DST Tank Farm Operations
→ (Waste Classes) → (Containers) → (Characteristics)
→ (Reports)
→ (Tools)

Site Rev. date:	*12/31/96*
Data version:	*97.1*
Data currency:	*10/25/96*

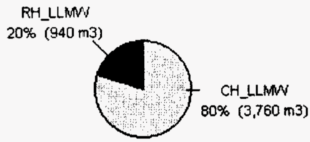
TWRS — SST/DST Tank Farm Operations

Contents

Highlights

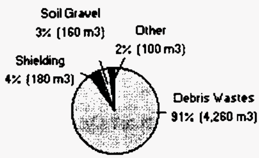
- Tank Farm Operations contributes 4,700 m³ (9%) of the TWRS program's solid waste forecast.
- The Tank Farm Operations forecast life cycle extends to 2032.
- CH_LLMW is the primary waste class generated, representing 80% of the waste (3,760 m³).
- Various boxes and drums will be used by this generator: Medium boxes account for 51% of the volume, Small boxes will hold 30%, 18% will be in 208 liter drums, and less than 1% will be in 322 liter drums.
- LLMW physical forms consist of 1% organic solids and 1% inorganic solids, 3% soil and soil/gravel, 4% shielding waste, and 91% debris.
- Except for 1% (by volume) metals without mercury, all of the LLMW hazardous constituents are organic.

Waste Class Distribution



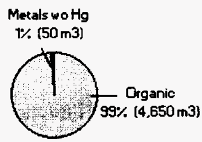
Total = 4,700 m3

Physical Waste Form Distribution



Total = 4,700 m3

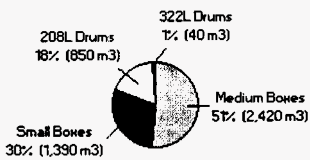
Hazardous Constituent Distribution



Total = 4,700 m3

Note: Includes LLMW and TRUM only

Container Distribution

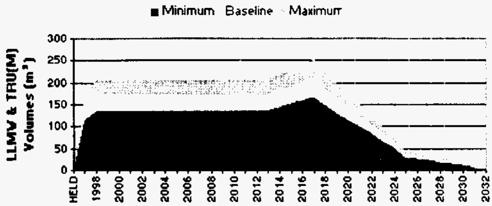


Total = 4,700 m3

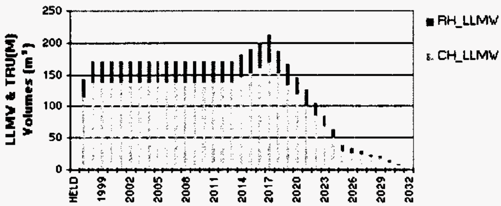
Sum of totals may not add due to rounding: numbers over 10 m³ are rounded to the nearest 10 m³, numbers less than 10 m³ are rounded to integers, non-zero numbers less than 1 are rounded to 1.

Annual Volumes

Annual Baseline Volumes



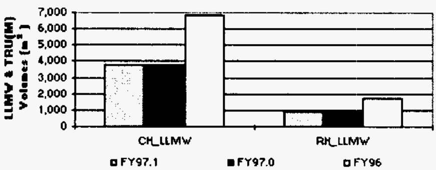
Annual Baseline by Waste Class



Comparison to Previous Baseline(s)

The overall FY97.1 forecast shows a decrease from the FY96 forecast of 8,520 m³. Estimates in all waste classes have been reduced based on this past year's actual shipped quantities.

Comparison to Previous Baseline(s) by Waste Class



SST/DST Tank Farm Operations Comparison: Waste Class	FY97.1 Forecast (m³)	FY97.0 Forecast (m³)	FY96 Forecast (m³)
CH_LLMW	3,760	3,760	6,830
RH_LLMW	940	940	1,690
Subtotal	*4,700*	*4,700*	*8,520*
LLW	7,490	7,490	9,640
HAZ	230	230	590
Total	*12,420*	*12,420*	*18,750*

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.

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 between March 1995 and May 1996 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.

Minimum and maximum ranges for the waste are 80% and 120% respectively, and are based on the work in Tank Farms increasing or decreasing unexpectedly.

Other Forecast Data

- **Low Level Waste**
  - A total of 7,490 m^3 of LLW is expected from Tank Farm Operations.
  - This forecast shows a 22% decrease from the FY96 forecast of 9,640 m^3, primarily due to a revision of forecast estimates based on FY96 actual shipping rates.
  - LLW is to be contained in various boxes and drums. MB-V boxes will contain just more than half of the volume. The second most common container category is Other drums at 18%.
  - The LLW physical forms are entirely debris. Organic and inorganic solids are expected, but they contribute less than one percent.

- **Hazardous Waste**
  - A total of 230 m^3 of hazardous waste was reported by Tank Farms Operations for management by the CWC.

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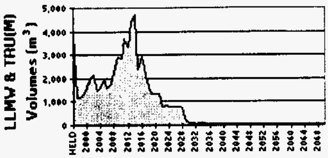


SWIFT Report: FY1997 to FY2070, rev. 1

Hanford → TWRS → Tank Farm Restoration
→ (Waste Classes) → (Containers)
→ (Characteristics)
→ (Reports)
→ (Tools)

Site Rev. date: *12/31/96*

Data version: *97.1*

Data currency: *10/25/96*

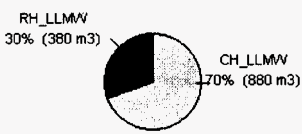
TWRS — Tank Farm Restoration (W-314)

Contents

Highlights

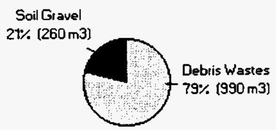
- Tank Farm Restoration (W-314) contributes 1,260 m³ (3%) of the TWRS program's solid waste forecast.
- The W-314 forecast life cycle is 1999 to 2005.
- CH_LLMW is the primary waste class generated, representing 70% of the waste (880 m³).
- 208 liter drums are the sole forecast containers for LLMW waste.
- LLMW is expected in two physical forms: debris (79% by volume) and soil and soil/gravel (21%).
- Except for 1% (by volume) metals without mercury, all of the LLMW hazardous constituents are organic.

Waste Class Distribution



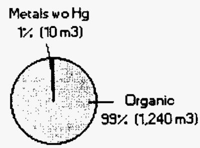
Total = 1,260 m3

Physical Waste Form Distribution



Total = 1,260 m3

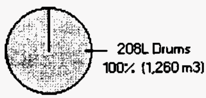
Hazardous Constituent Distribution



Total = 1,260 m3

Note; Includes LLMW and TRUM only

Container Distribution

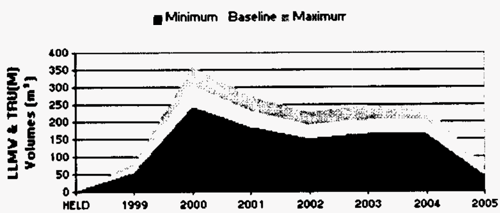


Total = 1,260 m3

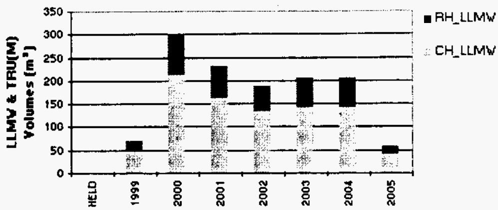
Sum of totals may not add due to rounding: numbers over 10 m³ are rounded to the nearest 10 m³, numbers less than 10 m³ are rounded to integers, non-zero numbers less than 1 are rounded to 1.

Annual Volumes

Annual Baseline Volumes



Annual Baseline by Waste Class



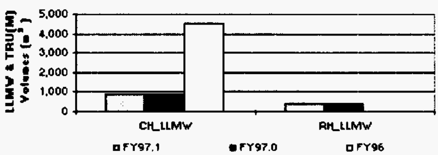
Comparison to Previous Baseline(s)

The FY97.1 forecast is significantly (71%) less than the FY96 forecast of 4,490 m³. This decrease is due to the fact that previous estimates were "best guesses" only, while the current forecast is based on a completed conceptual design for the project. This new estimate has a much higher level of confidence.

The physical LLMW forms forecast last year showed that soil/gravel was to contribute 71% of the waste; thus, the major physical form has switched for 1997 from soil/gravel to debris.

The 1996 hazardous constituents forecast reported 52% of the volume as state regulated waste, with organic and metals without mercury each at 24%. For 1997, only metals without mercury (1%) and organic constituents are expected (99%).

Comparison to Previous Baseline(s) by Waste Class



Tank Farm Restoration Comparison: Waste Class	FY97.1 Forecast (m³)	FY97.0 Forecast (m³)	FY96 Forecast (m³)
CH_LLMW	880	880	4,490
RH_LLMW	380	380	0
Subtotal	***1,260***	***1,260***	***4,490***
LLW	60	60	0
Total	***1,320***	***1,320***	***4,490***

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.

Background

Project W-314, "Tank Farm Restoration," is a planned FY96 new start major system acquisition project that will upgrade instrumentation, ventilation, waste transfer, and electrical systems associated with the existing Hanford tank farm activities. Waste generated by this project will typically be contaminated soil, debris from construction activities, and removal of outdated or unused tank farm equipment.

Forecast Assumptions and Comments

1. Waste generation volumes are based on the approved Conceptual Design Report (CDR), WHC-SD-W314-CDR-001, Rev.0. Breakdown of these waste volumes by fiscal year was approximated based on the summary level conceptual project schedule contained in the CDR.
2. Contaminated soils requiring disposal are assumed to be classified as LLMW. Assume 70% contact handled and 30% remote handled.
3. Contaminated equipment, tools, construction materials, and debris are assumed to be LLW; 100% as contact handled.
4. Tank farm equipment removed and disposed of by the project that may have come into contact with tank waste through operation (e.g., instrument trees, pipe jumpers, cover blocks, ventilation trains, etc.) are assumed to be classified as LLMW.

Minimum and maximum ranges for the waste are 80% and 120% respectively, and result from uncertainties associated with actual waste volumes produced during a given fiscal year.

Other Forecast Data

- **Low Level Waste**
    - A total of 60 m³ of LLW is expected from W-314.
    - This forecast shows an increase from the FY96 forecast of 0 m³.
    - MB-V boxes will hold 100% of this LLW.
    - 100% of the physical LLW form will be debris.

- **Hazardous Waste**
    - No hazardous waste is expected from W-314 for management by the CWC.

GENERATORS:
Cross-Site Transfer System · DST Retrieval Systems · High Level Vitrification Project · Low Level Vitrification Project · SST Long Length Equipment · SST Retrieval · SST/DST Tank Farm Operations · *Tank Farm Restoration* · Tank Farm Ventilation Upgrade · W343 DST Retrieval

PROGRAMS:
Analytical Services · EM-40 · Facility Transitions · Landlord · Liquid Effluent · NP · Offsite · PNNL · RCRA · Solid Waste · SNF · TWRS

CHARACTERISTICS:
CH_LLMW · RH_LLMW · CH_TRU(M) · RH_TRU(M) · GTC III · LLW · HAZ

CONTAINERS:
CH_LLMW · RH_LLMW · CH_TRU(M) · RH_TRU(M) · GTC III · LLW · HAZ

WASTE CLASSES:
CH_LLMW · RH_LLMW · CH_TRU(M) · RH_TRU(M) · GTC III · LLW · HAZ

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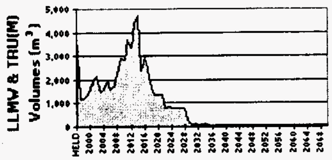


***SWIFT* Report: FY1997 to FY2070, rev. 1**

Hanford → TWRS → *Tank Farm Ventilation Upgrade*
→ (Waste Classes) → (Containers)
→ (Characteristics)
→ (Reports)
→ (Tools)

Site Rev. date: *12/31/96*

Data version: *97.1*

Data currency: *10/25/96*

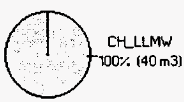
TWRS — Tank Farm Ventilation Upgrade

Contents

Highlights

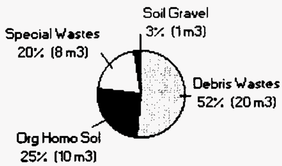
- Tank Farm Ventilation Upgrade (W-030) contributes 40 m³ (<1%) of the TWRS program's solid waste forecast.
- The W-030 forecast life cycle extends to 1997.
- CH_LLMW is the only waste class generated, representing 100% of the waste (40 m³).
- 95% of this waste will be contained in MB-V boxes, and 5% will be in 208 liter drums.
- The LLMW physical forms are varied: 3% is soil and soil/gravel, 20% is special waste, 25% is organic solids, and 52% is debris.
- LLMW hazardous constituents are to be metals without mercury (38% by volume), reactive metals (36%), and organic (26%).

Waste Class Distribution



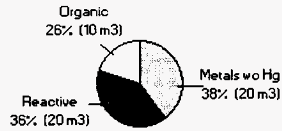
Total = 40 m3

Physical Waste Form Distribution



Total = 40 m3

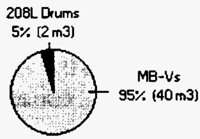
Hazardous Constituent Distribution



Total = 40 m3

Note: Includes LLMW and TRUM only

Container Distribution

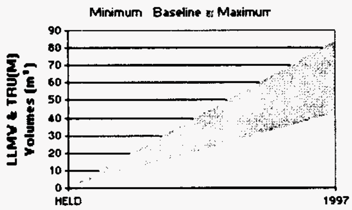


Total = 40 m3

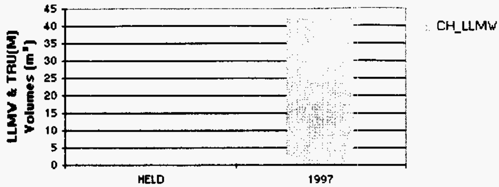
Sum of totals may not add due to rounding: numbers over 10 m³ are rounded to the nearest 10 m³, numbers less than 10 m³ are rounded to integers, non-zero numbers less than 1 are rounded to 1.

Annual Volumes

Annual Baseline Volumes



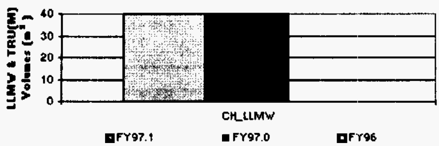
Annual Baseline by Waste Class



Comparison to Previous Baseline(s)

The FY97.1 forecast shows an increase from the FY96 forecast of 0 m³. This is due to the fact that waste that was classified as LLW last year has been reclassified as LLMW.

Comparison to Previous Baseline(s) by Waste Class



Tank Farm Ventilation Upgrade Comparison: Waste Class	FY97.1 Forecast (m³)	FY97.0 Forecast (m³)	FY96 Forecast (m³)
CH_LLMW	40	40	0
Subtotal	***40***	***40***	***0***
LLW	0	0	30
Total	***40***	***40***	***30***

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.

Background

W-030 will provide a new ventilation and cooling system to the AY/AZ Tank Farms.

Forecast Assumptions and Comments

The AY/AZ ventilation system will be replaced in FY97.

Process flow diagrams were used for waste classes and concentration, based on 1992 information from sample data and known transfers.

Minimum and maximum ranges for the waste are 100% and 200% respectively. The minimum estimate is based on the final estimate form definitive design; the maximum is based on considering unknown factors during construction (e.g., route of links).

Other Forecast Data

- **Low Level Waste**
  - No LLW is expected from W-030.
  - This forecast shows a 100% decrease from the FY96 forecast of 30 m^3, primarily due to the reclassification of previously forcasted LLW to LLMW.

- **Hazardous Waste**
  - No hazardous waste is expected from W-030 for management by the CWC.

GENERATORS: Cross-Site Transfer System · DST Retrieval Systems · High Level Vitrification Project · Low Level Vitrification Project · SST Long Length Equipment · SST Retrieval · SST/DST Tank Farm Operations · Tank Farm Restoration · *Tank Farm Ventilation Upgrade* · W343 DST Retrieval	
PROGRAMS: Analytical Services · EM-40 · Facility Transitions · Landlord · Liquid Effluent · NP · Offsite · PNNL · RCRA · Solid Waste · SNF · TWRS	
CHARACTERISTICS: CH_LLMW · RH_LLMW · CH_TRU(M) · RH_TRU(M) · GTC III · LLW · HAZ	CONTAINERS: CH_LLMW · RH_LLMW · CH_TRU(M) · RH_TRU(M) · GTC III · LLW · HAZ
WASTE CLASSES: CH_LLMW · RH_LLMW · CH_TRU(M) · RH_TRU(M) · GTC III · LLW · HAZ	
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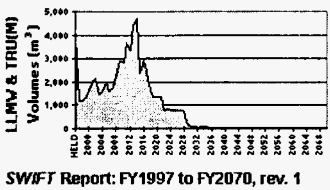


Hanford → TWRS → W343 DST Retrieval
→ (Waste Classes) → (Containers) → (Characteristics)
→ (Reports)
→ (Tools)

Site Rev. date: *12/31/96*

Data version: *97.1*

Data currency: *10/25/96*

TWRS — W-343 DST Retrieval (17 tanks)

Contents

Highlights

- W-343 DST Retrieval Systems (W-343) contributes 3,240 m³ (6%) of the TWRS program's solid waste forecast.

- The W-343 forecast life cycle is 2009 to 2021.

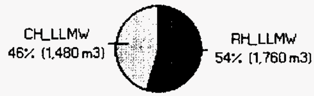
- CH_LLMW and RH_LLMW are the only waste classes generated, representing about equal portions of the waste (1,480 and 1,760 m³ respectively).

- This generator reports four different container types: MB-V boxes at 42% by volume, Medium boxes at 28%, LECs at 23%, and 208 liter drums at 7%.

- Physical LLMW forms are forecast as 84% (by volume) debris, 13% shielding, 2% soil and soil/gravel, and 1% organic solids.

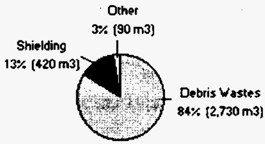
- LLMW hazardous constituents are 10% (by volume) metals without mercury and 90% organic.

Waste Class Distribution



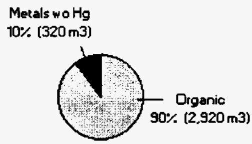
Total = 3,240 m3

Physical Waste Form Distribution



Total = 3,240 m3

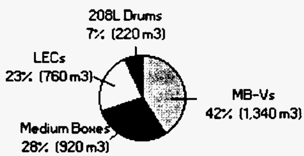
Hazardous Constituent Distribution



Total = 3,240 m3

Note: Includes LLMW and TRUM only

Container Distribution

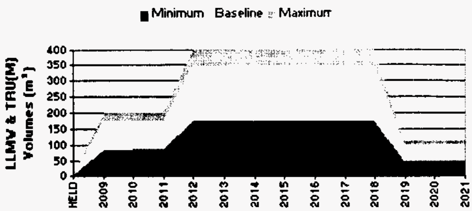


Total = 3,240 m3

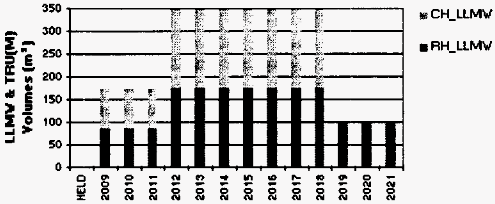
Sum of totals may not add due to rounding: numbers over 10 m³ are rounded to the nearest 10 m³, numbers less than 10 m³ are rounded to integers, non-zero numbers less than 1 are rounded to 1.

Annual Volumes

Annual Baseline Volumes



Annual Baseline by Waste Class



Comparison to Previous Baseline(s)

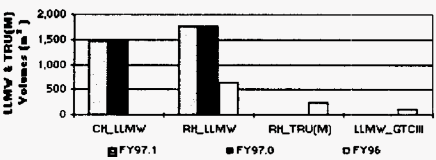
The FY97.1 forecast for W-343 is significantly (220%) greater than the FY96 forecast of 1,010 m³. Increases have occurred for both CH_LLMW and RH_LLMW and are a result of the fact that anticipated solid waste volumes generated during construction are better defined by the experience of Project W-151 for tank AZ-101. Also, solid waste generated by equipment replacements during the operating life cycle is now included.

An additional change is that the FY97.1 forecast does not include an estimate for RH_TRU waste. This is because the equipment removed from TRU tanks is now assumed to be decontaminated to non-TRU with the planning baseline of assuming a Decontamination facility available after 2003.

The FY97.1 forecast also does not include an estimate for greater-than-category III waste, again due to revised baseline estimates.

Finally, the 1996 hazardous constituents forecast showed 100% of the volume as organic constituents, while the current data includes metals without mercury as well.

Comparison to Previous Baseline(s) by Waste Class



W-343 DST Retrieval (17 Tanks) Comparison: **Waste Class**	**FY97.1 Forecast (m^3)**	**FY97.0 Forecast (m^3)**	**FY96 Forecast (m^3)**
CH_LLMW	1,480	1,480	0
RH_LLMW	1,760	1,760	640
RH_TRU(M)	0	0	250
LLMW_GTCIII	0	0	110
Subtotal	***3,240***	***3,240***	***1,010***
LLW	0	0	670
Total	***3,240***	***3,240***	***1,680***

Sum of totals may not add due to rounding: numbers over 10 m^3 are rounded to the nearest 10 m^3, numbers less than 10 m^3 are rounded to integers, non-zero numbers less than 1 are rounded to 1.

Background

The W-343 mission is to retrieve waste in 17 DSTs for processing and management of existing storage capacity. Waste classes result from construction activities involved when installing mixer pumps and transfer piping and replacing existing transfer pumps and mixer pumps during the operating life cycle.

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

Forecast Assumptions and Comments

The current baseline is assumed to be valid through 2028 in order to provide an estimate, even though Retrieval Operations is scheduled to be privatized in 2011. There is a high probability that the baseline for a number of DSTs receiving mixer pumps will decrease, but the amount of waste generated per tank is well based on the experience of project W-151 for installation of mixer pumps in AZ-101. The estimate is considered conservative since the waste forecast is for the maximum number of tanks receiving mixer pumps.

The equipment removed from TRU tanks is assumed to be decontaminated to non-TRU with the planning baseline of assuming a Decontamination facility available after 2003. It should be noted, however, that it will be challenging to reach the non-TRU status for this waste.

It is assumed that tank closure activities will start in 2022 for the first DST. Closure of the remaining tanks will commence after final retrieval and processing of the waste and be completed in 2034.

Average annual minimum and maximum ranges for the waste are 50% and 115% respectively. Minimum waste percentages are based on the uncertainty in the number of mixer pumps required and the useful life of mixer pumps and transfer pumps. The maximum waste percentages assumes all DSTs will have 2 mixer pumps and one transfer pump installed and accounts for the uncertainty in the waste generation volumes based on AZ-101 experiences. The number of mixer pumps required is considered conservative.

Other Forecast Data

- **Low Level Waste**
  - No LLW is expected from W-343 for management by the CWC.
  - This forecast shows a significant decrease from the FY96 forecast of 670 m^3, primarily due to better estimates of waste generation.

- **Hazardous Waste**
  - No hazardous waste is expected from W-343 for management by the CWC.

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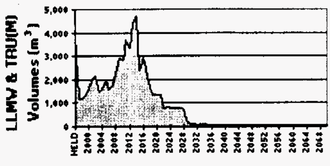


SWIFT Report: FY1997 to FY2070, rev. 1

Hanford → (Programs) → (Generators)
→ *CH_LLMW* → (Containers) / (Characteristics)
→ (Reports)
→ (Tools)

Site Rev. date: *12/31/96*

Data version: *97.1*

Data currency: *10/25/96*

FY97 Forecast of CH_LLMW

Contents

Highlights

- A total of 30,440 m³ of contact-handled LLMW is forecast for shipment to Hanford Waste Management (WM) by onsite and offsite generators.

- This forecast shows a 58% reduction from the FY96 forecast of 73,040 m³, due mainly to forecast reductions from TWRS and Facility Transitions programs. It also is a 30 m³ increase from FY97.0 primarily due to an increase by Paducah Energy Systems and slight modifications to Battelle Columbus Laboratory and 327 Building.

- TWRS program is the main source of contact-handled LLMW, accounting for 60%, or 18,260 m³ of the total waste volume.

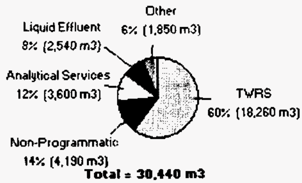
- The annual baseline, minimum, and maximum graph shows the majority of waste volume is expected from 1997 to 2029, reflecting the activities of the TWRS program.

- Of the 30,440 m³ of CH_LLMW, 69% will be shipped in 208-liter drums, 13% in Large boxes, 11% in Medium boxes, and 6% in other containers.

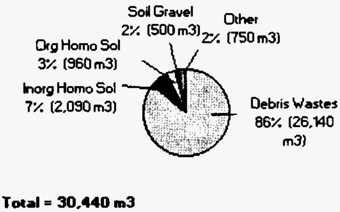
- 86% of the waste will be debris, 7% inorganic solids, 3% organic solids, and 4% other physical waste forms.

- The hazardous constituent volume of CH_LLMW will consist of state regulated waste (37%); organic (24%), metals without mercury and organic (13%); metals without mercury, organic, and state regulated (11%); and various combinations of these hazardous constituents (14%).

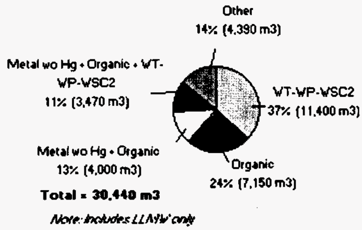
Program Distribution



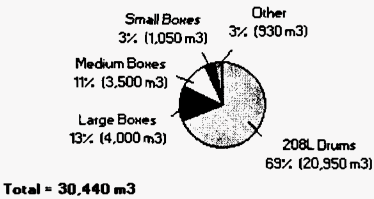
Physical Waste Form Distribution



Hazardous Constituent Distribution



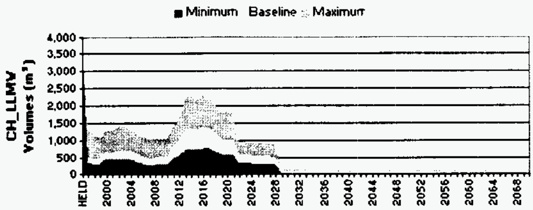
Container Distribution



Sum of totals may not add due to rounding: numbers over 10 m^3 are rounded to the nearest 10 m^3, numbers less than 10 m^3 are rounded to integers, non-zero numbers less than 1 are rounded to 1.

Annual CH_LLMW Volumes

CH_LLMW Annual Baseline Volumes



Summary Table (volumes in m³)

Forecast by Programmatic Area (in descending order by program and generator volume)

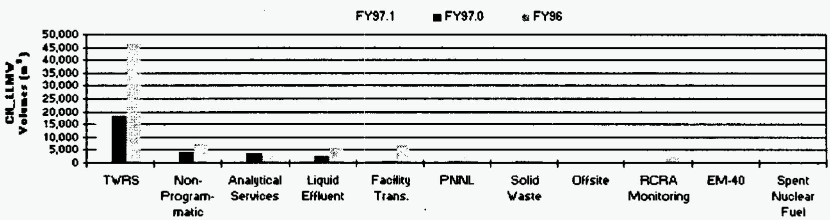
CH-LLMW Forecast: Program	FY97.1 Forecast (m³)	% of Total
TWRS	18,260	60%
Non-Programmatic	4,190	14%
Analytical Services	3,600	12%
Liquid Effluent	2,540	8%
Facility Transitions	770	3%
PNNL	490	2%
Solid Waste	310	1%
Offsite	200	1%
RCRA Monitoring	60	< 1%
EM-40	10	< 1%
Spent Nuclear Fuel	5	< 1%
Total	***30,440***	***100%***

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.

Comparison to Previous Baseline(s)

The FY97 forecast of 30,410 m³ of contact-handled LLMW shows a 58% decrease from the FY96 forecast of 73,040 m³. This decrease reflects the forecast reductions primarily from TWRS, Facility Transitions, Liquid Effluent, and RCRA programs. The FY97.1 increase is due to an increase in CH_LLMW from Paducah Energy Systems. The apparent increase in Facility Transitions volume is the reassignment of 324 and 327 Buildings from PNNL to Facility Transitions.

Comparison to Previous Baseline(s) by Program Area



CH-LLMV Comparison: Program	FY97.1 Forecast (m^3)	FY97.0 Forecast (m^3)	FY96 Forecast (m^3)
TVRS	**18,260**	**18,260**	**46,310**
High Level Vitrification Project	5,220	5,220	800
Low Level Vitrification Project	5,120	5,120	60
SST/DST Tank Farm Operations	3,760	3,760	6,830
W343 DST Retrieval (17 Tanks)	1,480	1,480	0
SST Retrieval (149 tanks)	890	890	860
Tank Farm Restoration	880	880	4,490
DST Retrieval Systems (10 tanks)	870	870	0
Tank Farm Ventilation Upgrade	40	40	0
Cross-Site Transfer System	5	5	0
SST Long Length Equipment	0	0	32,980
SST Tank 106-C Sluicing	0	0	270
Tank Waste Pretreatment	0	0	30
Non-Programmatic	**4,190**	**4,190**	**7,270**
Stored Equipment	4,000	4,000	7,080
PFP Non-Transition	80	80	80
300 Area Facilities Non-Transition	60	60	60
PUREX Non-Transition	40	40	40
REDOX Non-Transition	2	2	2
U Plant Non-Transition	3	3	3
Analytical Services	**3,600**	**3,600**	**2,370**
222S Analytical Laboratory	3,570	3,570	2,290
6266 Waste Sampling & Characterization Facility	30	30	80
Liquid Effluent	**2,540**	**2,540**	**5,620**
C018H-200 Area Effluent Treatment Facility	2,540	2,540	5,620
Facility Transitions	**770**	**770**	**6,710**
2345Z Plutonium Finishing Plant	710	710	3,280
Waste Encapsulation/Storage Facility	30	30	0
324 Building	20	20	0
202A Purex Operations	10	10	20
327 Building	4	1	0
225B B Plant	2	2	3,360
309 PRTR Vault Waste (Ion Exchange Mod)	1	1	0
335 Sodium Test Facility	1	1	0
FFTF Transition Project	1	1	20
303K Fuels Fabrication	0	0	20
PNNL	**490**	**490**	**2,250**
Pacific Northwest National Laboratories	490	490	2,250
Solid Waste	**310**	**310**	**320**
221T/2706T T Plant Operations	220	220	210
W026-Waste Receiving and Processing (WRAP1)	80	80	0
Central Waste Complex	20	20	0
224T TRU Storage & Assay Facility	2	2	30
218E/W Low Level Burial Ground	0	0	80
Offsite	**200**	**170**	**60**
Princeton Plasma Physics Lab	60	60	0
Rockwell-Canoga Park	50	50	0
Puget Sound Naval Shipyards	30	30	0
Paducah Energy Systems	20	0	0
Knolls Atomic Power-Laboratory	10	10	10
Battelle Columbus Laboratories	8	6	10
General Atomics	7	7	3
University of Utah	7	7	0
Pearl Harbor Naval Shipyards	5	5	5
Portsmouth Naval Shipyards	1	1	1
Puget Sound Naval Shipyards	0	0	30
RCRA Monitoring	**60**	**60**	**2,030**
Well Drilling	60	60	2,030
EM-40	**10**	**10**	**100**
Surplus Facilities	10	10	100
Spent Nuclear Fuel	**5**	**5**	**7**
100K K-Basin Operations	5	5	7
Total	***30,440***	***30,410***	***73,040***

Sum of totals may not add due to rounding: numbers over 10 m^3 are rounded to the nearest 10 m^3, numbers less than 10 m^3 are rounded to integers, non-zero numbers less than 1 are rounded to 1.

The reasons for the volume changes are explained in each of the program and waste generator pages.

Definitions

Contact-handled LLMW 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.

WASTE CLASSES:
CH_LLMW · RH_LLMW · CH_TRU(M) · RH_TRU(M) · GTC III · LLW · HAZ

CHARACTERISTICS:
CH_LLMW · RH_LLMW · CH_TRU(M) · RH_TRU(M) · GTC III · LLW · HAZ

CONTAINERS:
CH_LLMW · RH_LLMW · CH_TRU(M) · RH_TRU(M) · GTC III · LLW · HAZ

PROGRAMS:
Analytical Services · EM-40 · Facility Transitions · Landlord · Liquid Effluent · NP · Offsite · PNNL · RCRA · Solid Waste · SNF · TWRS

Home · Contents · Web Site Map · Glossary · Help · Reports · Data Requests · Feedback Form

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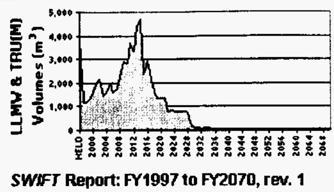
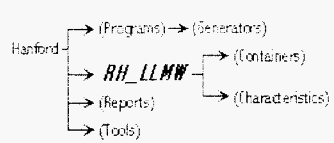




Site Rev. date: *12/31/96*

Data version: *97.1*

Data currency: *10/25/96*

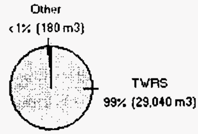
FY97 Forecast of RH_LLMW

Contents

Highlights

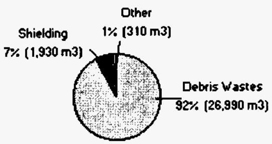
- A total of 29,220 m^3 of remote-handled LLMW is forecast for shipment to Hanford Waste Management (WM) by onsite and offsite generators.
- This forecast shows a 623% increase from the FY96 forecast of 4,040 m^3, due entirely to forecast increase from TWRS.
- TWRS program is the main source of remote-handled LLMW, accounting for 99%, or 29,040 m^3 of the total waste volume.
- The annual baseline, minimum, and maximum graph shows the majority of waste volume is expected from 1997 to 2018, reflecting the activities of the TWRS program.
- Of the 29,220 m^3 of remote-handled LLMW forecast, 88% will be shipped in LECs from the TWRS program.
- Of this waste, 92% will be debris, 7% will be shielding, and 1% will be other physical waste forms.
- The RH_LLMW hazardous constituent volume will consist of 78% state regulated waste, 19% toxic organics, and 2% other categories.

Program Distribution



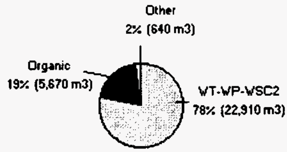
Total = 29,220 m3

Physical Waste Form Distribution



Total = 29,220 m3

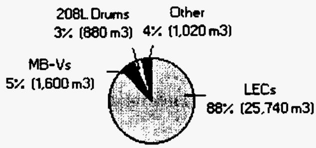
Hazardous Constituent Distribution



Total = 29,220 m3

Note: Includes LLMW only

Container Distribution

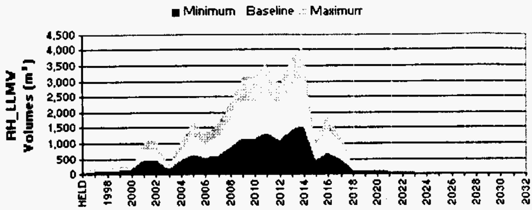


Total = 29,220 m3

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.

Annual RH_LLMW Volumes

RH_LLMW Annual Baseline Volumes



Summary Table (Volumes in m³)

Forecast by Programmatic Area (in descending order by program and generator volume)

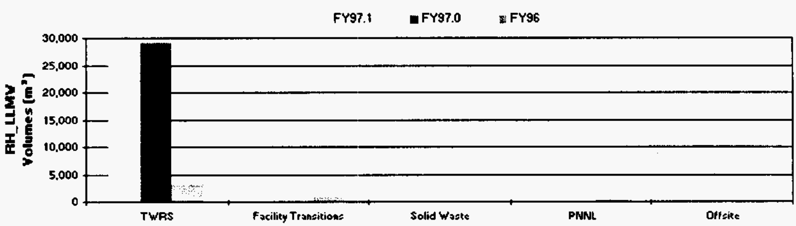
RH-LLMW Forecast: Program	FY97.1 Forecast (m³)	% of Total
TWRS	29,040	99%
Facility Transitions	70	< 1%
Solid Waste	60	< 1%
PNNL	50	< 1%
Offsite	5	< 1%
Total	*29,220*	*100%*

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.

Comparison to Previous Baseline(s)

The FY97 forecast of 29,220 m³ of remote-handled LLMW shows a 7-fold increase from the FY96 forecast of 4,040 m³. This increase is due almost entirely from the SST Long Length Equipment generator within the TWRS program; based on new programmatic definitions, SST Long Length Equipment expects more RH_LLMW and less CH_LLMW than in the FY96 forecast.

Comparison to Previous Baseline(s) by Program Area

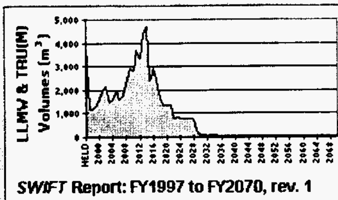


RH-LLMW Comparison: Program	FY97.1 Forecast (m³)	FY97.0 Forecast (m³)	FY96 Forecast (m³)
TWRS	**29,040**	**29,040**	**3,080**
SST Long Length Equipment	22,520	22,520	0
DST Retrieval Systems (10 tanks)	3,050	3,050	260
W343 DST Retrieval (17 Tanks)	1,760	1,760	640
SST/DST Tank Farm Operations	940	940	1,690
SST Retrieval (149 tanks)	390	390	390
Tank Farm Restoration	380	380	0
DST 101-AZ Retrieval (1 tank)	0	0	110
Facility Transitions	**70**	**70**	**660**
303K Fuels Fabrication Transition	70	70	660
B Plant	0	0	660
PNNL	**50**	**50**	**220**
Pacific Northwest National Laboratories	50	50	220
Solid Waste	**60**	**60**	**70**
221T/2706T T Plant Operations	60	60	70
Offsite	**5**	**5**	**0**
Knolls Atomic Power-Laboratory	5	5	0
Total	***29,220***	***29,220***	***4,040***

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.

Definitions

Remote-handled LLMW has a dose rate greater 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.



Hanford → (Programs) → (Generators)
→ CH_TRU(M) → (Containers) / (Characteristics)
→ (Reports)
→ (Tools)

Site Rev. date: *12/31/96*

Data version: *97.1*

Data currency: *10/25/96*

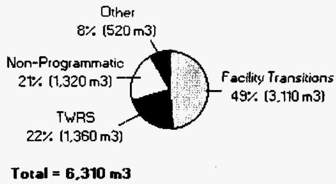
FY97 Forecast of CH_TRU(M) Waste

Contents

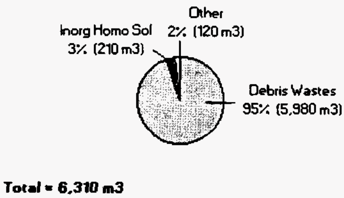
Highlights

- A total of 6,310 m³ of contact-handled TRU(M) waste is forecast for shipment to Hanford Waste Management (WM) by onsite and offsite generators.
- This forecast shows a 36% decrease from the FY96 forecast of 9,830 m³, due entirely to forecast reductions from Facility Transitions, Surplus Facilities, and TWRS. It is also a 50 m³ increase from the FY97.0 data due to 327 Building revisions.
- Facility Transitions program generates the most contact-handled TRU(M) waste, accounting for 49%, or 3,110 m³, of the total waste volume.
- The annual baseline, minimum, and maximum graph shows the majority of waste volume is expected from 1997 to 2004, reflecting the activities of the Facility Transitions and TWRS programs.
- Of the 6,310 m³ of contact-handled TRU(M) waste forecast, 81% will be shipped in 208-liter drums, 11% in SWBs, and 8% in LECs.
- Of this waste, 95% will be debris, 3% will be inorganic homogeneous solids, and 2% will be other physical waste forms.
- The CH_TRU(M) hazardous constituent volume (2,080 m³) will consist of state regulated waste (65%), metals without mercury (31%), and other hazardous constituents (4%).

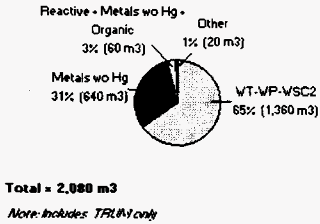
Program Distribution



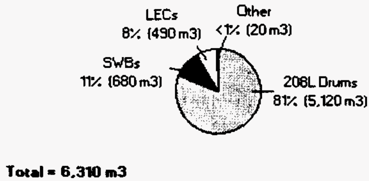
Physical Waste Form Distribution



Hazardous Constituent Distribution



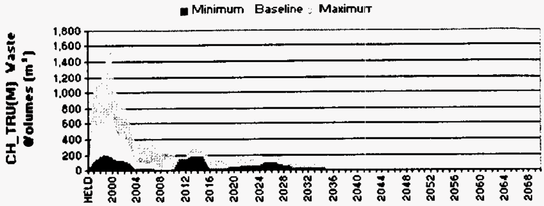
Container Distribution



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.

Annual Volumes

CH_TRU(M) Waste Annual Baseline Volumes



Summary Table (Volumes in m³)

Forecast by Programmatic Area (in descending order by program and generator volume)

CH-TRU(M) Waste Forecast: Program	FY97.1 Forecast (m^3)	% of Total
Facility Transitions	3,110	49%
TWRS	1,360	22%
Non-Programmatic	1,320	21%
PNNL	240	4%
EM-40	230	4%
Analytical Services	20	< 1%
Spent Nuclear Fuel	20	< 1%
Offsite	2	< 1%
Total	***6,310***	***100%***

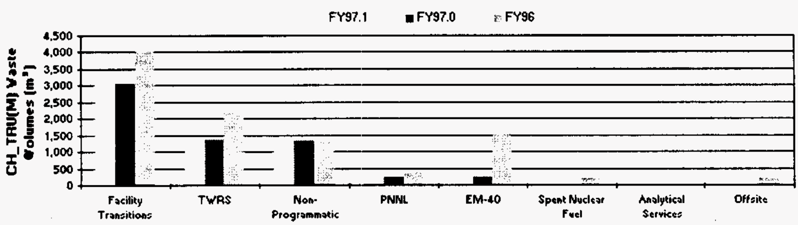
Sum of totals may not add due to rounding: numbers over 10 m³ are rounded to the nearest 10 m³, numbers less than 10 m³ are rounded to integers, non-zero numbers less than 1 are rounded to 1.

Comparison to Previous Baseline(s)

The FY97.1 forecast of 6,310 m³ of contact-handled TRU(M) waste shows a 36% decrease from the FY96 forecast of 9,830 m³. This decrease is due to decreases from the Plutonium Finishing Plant (Facility Transitions), Surplus Facilities (Environmental Restoration), and High Level Vitrification Project (TWRS).

The FY97.1 data also shows a 50 m³ increase from 97.0 due to 327 Building revisions.

Comparison to Previous Baseline(s) by Program



CH-TRU(M) Waste Comparison: Program	FY97.1 Forecast (m^3)	FY97.0 Forecast (m^3)	FY96 Forecast (m^3)
Facility Transitions	**3,110**	**3,060**	**4,000**
2345Z Plutonium Finishing Plant	3,050	3,050	3,990
327 Building	60	2	0
324 Building	4	4	0
309 PRTR Vault Waste (Ion Exchange Mod)	1	1	0
Purex (202A) Operations	0	0	10
FFTF	0	0	4
TWRS	**1,360**	**1,360**	**2,180**
High Level Vitrification Project	870	870	2,170
SST Long Length Equipment	490	490	0
Aging Waste Transfer Lines	0	0	7
Non-Programmatic	**1,320**	**1,320**	**1,320**
300 Area Facilities Non-Transition	730	730	730
REDOX Non-Transition	210	210	210
PUREX Non-Transition	110	110	110
400 Area Facilities Non-Transition	70	70	70
B Plant Non-Transition	60	60	60
PFP Non-Transition	60	60	60
T Plant Non-Transition	40	40	40
Site Support Non-Transition	30	30	30
U Plant Non-Transition	10	10	10
PNNL	**240**	**240**	**390**
Pacific Northwest National Laboratories	240	240	390
EM-40	**230**	**230**	**1,520**
Surplus Facilities	230	230	1,520
Analytical Services	**20**	**20**	**20**
222S Analytical Laboratory	20	20	20
Spent Nuclear Fuel	**20**	**20**	**210**
K-Basin Fuel Sampling Project	20	20	1
K-Basin Operations	0	0	210
Offsite	**2**	**2**	**200**
Ames Laboratory-Ames, Iowa	< 1	< 1	< 1
Lawrence Berkeley Laboratory	< 1	< 1	0
Argonne National Laboratory-East	0	0	200
Total	***6,310***	***6,260***	***9,830***

Sum of totals may not add due to rounding: numbers over 10 m^3 are rounded to the nearest 10 m^3, numbers less than 10 m^3 are rounded to integers, non-zero numbers less than 1 are rounded to 1.

Definitions

Contact-handled 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.

WASTE CLASSES:
CH_LLMW · RH_LLMW · *CH_TRU(M)* · RH_TRU(M) · GTC III · LLW · HAZ

CHARACTERISTICS:
CH_LLMW · RH_LLMW · CH_TRU(M) · RH_TRU(M) · GTC III · LLW · HAZ

CONTAINERS:
CH_LLMW · RH_LLMW · CH_TRU(M) · RH_TRU(M) · GTC III · LLW · HAZ

PROGRAMS:
Analytical Services · EM-40 · Facility Transitions · Landlord · Liquid Effluent · NP · Offsite · PNNL · RCRA · Solid Waste · SNF · TWRS

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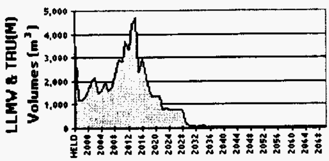


SWIFT Report: FY1997 to FY2070, rev. 1

Hanford → (Programs) → (Generators)
→ *RH_TRU(M)* → (Containers)
→ (Characteristics)
→ (Reports)
→ (Tools)

Site Rev. date:
12/31/96

Data version:
97.1

Data currency:
10/25/96

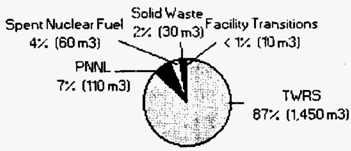
FY97 Forecast of RH_TRU(M) Waste

Contents

Highlights

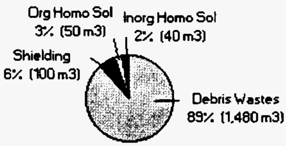
- A total of 1,670 m³ of remote-handled TRU(M) waste is forecast for shipment to Hanford Waste Management (WM) by onsite and offsite generators.
- This forecast shows a 87% decrease from the FY96 forecast of 13,350 m³, due almost entirely to forecast reductions from TWRS and a 30 m³ decrease from the FY97.0 forecast of 1,700 due to 327 Building revisions.
- TWRS program generates the most remote-handled TRU(M) waste, accounting for 87%, or 1,450 m³ of the total waste volume.
- The annual baseline, minimum, and maximum graph shows that waste generation is fragmented through the years, with the peaks corresponding to increases in volumes from TWRS.
- Of the 1,670 m³ of remote-handled TRU(M) waste forecast, 56% will be shipped in SWBs, 35% in LECs, 5% in 208-liter drums, and 4% in extra large boxes.
- Of this waste, 89% will be debris, 6% will be shielding, and 5% will be other physical waste forms.
- The RH_TRU(M) hazardous constituent waste volume (1,550 m³) will consist of Washington State regulated waste (88%), toxic organics (7%), and other hazardous constituents (5%).

Program Distribution



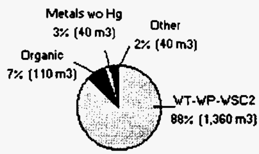
Total = 1,670 m3

Physical Waste Form Distribution



Total = 1,670 m3

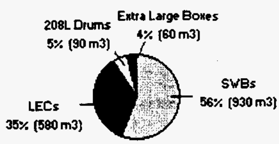
Hazardous Constituent Distribution



Total = 1,550 m3

Note: Includes TRUM only

Container Distribution

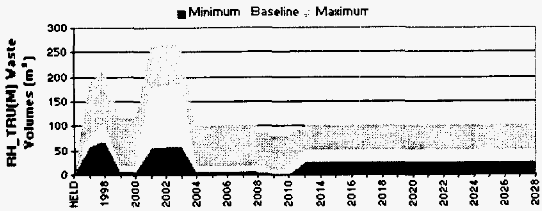


Total = 1,670 m3

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.

Annual Volumes

RH_TRU(M) Waste Annual Baseline Volumes



Summary Table (Volumes in m³)

Forecast by Programmatic Area (in descending order by program and generator volume)

RH-TRU(M) Waste Forecast: Program	FY97.1 Forecast (m^3)	% of Total
TWRS	1,450	87%
PNNL	110	7%
Spent Nuclear Fuel	60	4%
Solid Waste	30	2%
Facility Transitions	10	1%
Total	*1,670*	*100%*

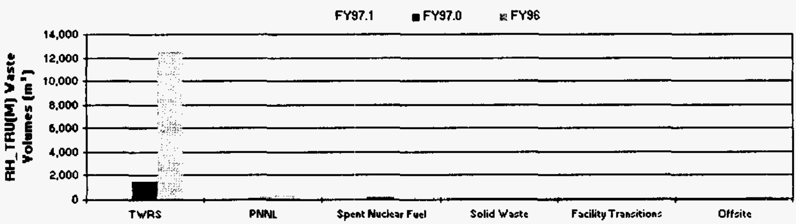
Sum of totals may not add due to rounding: numbers over 10 m³ are rounded to the nearest 10 m³, numbers less than 10 m³ are rounded to integers, non-zero numbers less than 1 are rounded to 1.

Comparison to Previous Baseline(s)

The FY97.1 forecast of 1,670 m³ of remote-handled TRU(M) waste shows a 87% decrease from the FY96 forecast of 13,350 m³. This decrease is due almost entirely to decreases in the TWRS program - the SST Long Length Equipment generator alone decreased the forecast from 10,280 m³ in FY96 to 490 m³ in FY97, while the High Level Vitrification Project dropped from 1,960 m³ to 870 m³.

The FY97.1 forecast is also 30 m³ less than 97.0 due to revisions in the 327 Building.

Comparison to Previous Baseline(s) by Program



RH-TRU(M) Waste Comparison: Program	FY97.1 Forecast (m³)	FY97.0 Forecast (m³)	FY96 Forecast (m³)
TWRS	**1,450**	**1,450**	**12,490**
High Level Vitrification Project	870	870	1,960
SST Long Length Equipment	490	490	10,280
DST Retrieval Systems (10 tanks)	90	90	0
W343 DST Retrieval (17 tanks)	0	0	250
PNNL	**110**	**150**	**350**
Pacific Northwest National Laboratories	110	110	350
327 Building	0	30	0
324 Building	0	10	0
Spent Nuclear Fuel	**60**	**60**	**40**
100K K-Basin Operations	60	60	40
Solid Waste	**30**	**30**	**30**
221T/2706T T Plant Operations	30	30	30
Facility Transitions	**10**	**0**	**0**
324 Building	10	0	0
EM-40	**0**	**0**	**360**
Surplus Facilities	0	0	360
Offsite	**0**	**0**	**80**
Battelle Columbus Laboratories	0	0	80
Total	***1,670***	***1,700***	***13,350***

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.

In addition, the FY97.1 volume is 30 m³ due to 327 Building revisions.

Definitions

Remote-handled 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.

WASTE CLASSES:
CH_LLMW · RH_LLMW · CH_TRU(M) · *RH_TRU(M)* · GTC III · LLW · HAZ

CHARACTERISTICS:
CH_LLMW · RH_LLMW · CH_TRU(M) · RH_TRU(M) · GTC III · LLW · HAZ

CONTAINERS:
CH_LLMW · RH_LLMW · CH_TRU(M) · RH_TRU(M) · GTC III · LLW · HAZ

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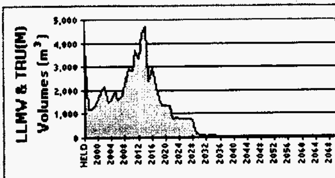
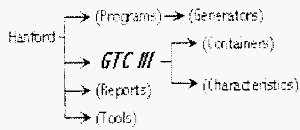


SWIFT Report: FY1997 to FY2070, rev. 1



Site Rev. date: *12/31/96*

Data version: *97.1*

Data currency: *10/25/96*

FY97 Forecast of GTC III

Contents

Highlights

- No LLW or LLMW greater-than-class III (GTCIII) is forecast for shipment to the Hanford SW Project by onsite and offsite generators.
- This forecast shows a significant reduction from the FY96 forecast of 990 m³ (640 m³ of LLMW_GTCIII and 350 m³ of LLW_GTCIII).

Summary Table (Volumes in m³)

[Not applicable]

Comparison to Previous Baseline(s)

The FY97 forecast of no GTCIII waste shows a significant reduction from the FY96 forecast of 990 m³. This reduction arises because the 2 generators that reported GTCIII waste last year – DST Retrieval and PNNL – have both changed their planning assumptions for the current year's forecast. DST Retrieval is using a new baseline for waste forecasts based on the experience of Project W-151. PNNL has determined that they would include in their forecast only waste for which a disposal pathway exists. As a result, no GTCIII waste has been forecast for that program. No GTC III was reported for FY97.1.

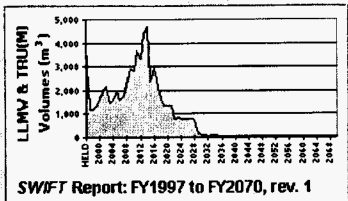
GTCIII Waste Comparison: Program	FY97.1 Forecast (m³)	FY97.0 Forecast (m³)	FY96 Forecast (m³)
PNNL	**0**	**0**	**880**
Pacific Northwest National Laboratories	0	0	880
TWRS	**0**	**0**	**110**
W-343 DST Retrieval (17 tanks)	0	0	110
Total	*0*	*0*	*990*

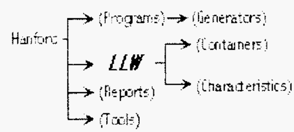
Sum of totals may not add due to rounding: numbers over 10 m³ are rounded to the nearest 10 m³, numbers less than 10 m³ are rounded to integers, non-zero numbers less than 1 are rounded to 1.

Definitions

LLW greater-than-class III 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. 4, November 1993.

LLMW greater-than-class III has radiation levels as defined for LLW greater-than-class-III, and is also defined as dangerous (hazardous) waste in WAC 173-303.





Site Rev. date: *12/31/96*

Data version: *97.1*

Data currency: *10/25/96*

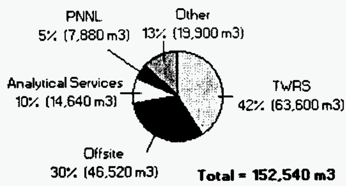
FY97 Forecast of LLW

Contents

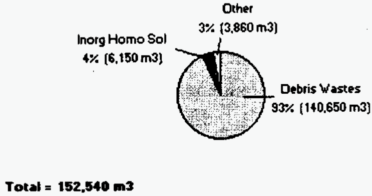
Highlights

- A total of 152,540 m³ of LLW is forecast for shipment to Hanford Waste Management (WM) by onsite and offsite generators.
- This forecast shows a 57% reduction from the FY96 forecast of 353,160 m³, reflecting large waste volume reductions from Offsite, PNNL, and RCRA programs.
- CH_LLW is the main waste class, representing 94%, or 144,010 m³ of the total LLW volume.
- TWRS program is the main source of LLW, accounting for 42%, or 63,600 m³ of the total waste volume.
- The annual baseline, minimum, and maximum graph shows that most of the LLW volume is expected to be generated between 1997 and 2029, reflecting the scheduled activities of TWRS and Analytical Services program.
- Of the 152,540 m³ LLW forecast, 52% will be shipped in MB-Vs, 12% in small boxes, 12% in 208-liter drums, 8% in MB-IVs, and 16% in other containers.
- Of this waste, 92% will be debris, 4% will be inorganic homogenous solids, 3% will be soil and gravel, and 1% will be other physical waste forms.

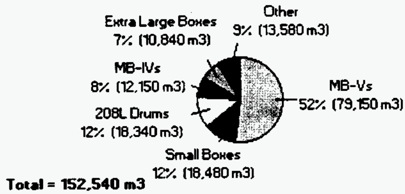
Program Distribution



Physical Waste Form Distribution



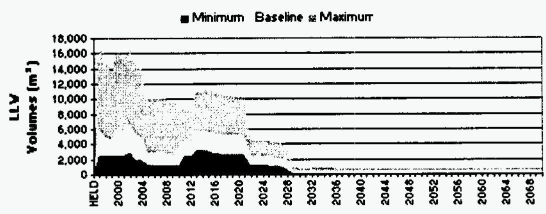
Container Distribution



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.

Annual LLW Volumes

LLW Annual Baseline Volumes



Summary Table (Volumes in m³)

Forecast by Programmatic Area (in descending order by program and generator volume)

LLW Forecast: Program	FY97.1 Forecast (m^3)	% of Total
TWRS	63,600	42%
Offsite	46,520	30%
Analytical Services	14,640	10%
PNNL	7,880	5%
Facility Transitions	6,470	4%
Liquid Effluent	5,490	4%
Solid Waste	3,500	2%
Non-Programmatic	2,330	2%
Spent Nuclear Fuel	1,990	1%
RCRA Monitoring	130	< 1%
Total	*152,540*	*100%*

Sum of totals may not add due to rounding: numbers over 10 m^3 are rounded to the nearest 10 m^3, numbers less than 10 m^3 are rounded to integers, non-zero numbers less than 1 are rounded to 1.

Comparison to Previous Baseline(s)

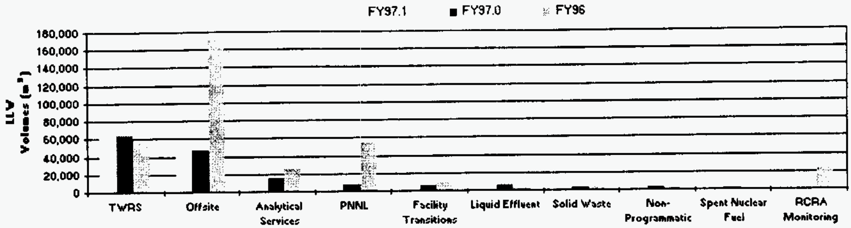
As in previous forecasts, all of the major program areas are expected to generate LLW. Although the volumes of LLW are considerably greater than the LLMW and TRU(M) waste volumes, they do not represent as great a concern because the vast majority of this waste can be sent directly to disposal. Therefore, it is unlikely that the LLW volumes presented will have a significant impact on the solid waste system.

The FY97.1 forecast of 152,540 m^3 of LLW waste shows a 57% decrease from the FY96 forecast of 353,510 m^3. This decrease reflects the significant waste volume reductions from Offsite, PNNL, and RCRA programs. The LLW volume reductions from these 3 programs account for almost the entire reduction of LLW volume for Hanford.

In the case of Offsite program, the LLW reductions are due to the fact that a number of sites no longer intend to send waste to the CWC for storage and disposal. For PNNL and RCRA generators, the waste volume reductions are due to reduced life cycles and changes in planning assumptions.

The FY97.1 Volume changes result from minor offsite and Facility Transitions changes. PNNL's reduced volumes are due to the transfer of 324 and 327 Buildings to the Facility Transitions Program. The amount of waste volume reduction and reasons for the decrease are further explained in each of the program and waste generator pages.

Comparison to Previous Baseline(s) by Program



LLW Comparison: Program	FY97.1 Forecast (m³)	FY97.0 Forecast (m³)	FY96 Forecast (m³)
TWRS	**63,600**	**63,600**	**59,110**
Low Level Vitrification Project	34,560	34,560	13,250
High Level Vitrification Project	20,880	20,880	25,650
SST/DST Tank Farm Operations	7,490	7,490	9,640
SST Retrieval (149 tanks)	600	600	600
Tank Farm Restoration	60	60	0
DST Retrieval Systems (10 tanks)	0	0	1,980
W343 DST Retrieval (17 Tanks)	0	0	670
Cross-Site Transfer System	0	0	120
Tank Farm Ventilation Upgrade	0	0	30
Tank Waste Pretreatment Facility	0	0	7,000
SST Tank 106-C Sluicing	0	0	170
DST 101-AZ Retrieval	0	0	4
Offsite	**46,520**	**46,500**	**170,830**
Argonne National Laboratory-East	20,040	20,040	20,420
Lawrence Berkeley Laboratory	11,520	11,520	10,870
Princeton Plasma Physics Lab	4,030	4,040	18,000
Brookhaven National Laboratory	3,090	3,090	74,890
Fermi National Accelerator Laboratory	1,520	1,520	3,350
Stanford Linear Accelerator Center	1,170	1,170	1,750
Rockwell-Canoga Park	1,150	1,150	930
Battelle Columbus Laboratories	1,030	1,030	1,270
University of California-Davis	980	980	1,870
General Atomics	660	660	850
Knolls Atomic Power-Shipyards	320	320	240
Portsmouth Energy Systems	310	310	34,810
Bettis Atomic Power-Laboratory	210	210	1
Rocky Flats	180	180	220
Ames Laboratory-Ames, Iowa	130	120	110
Paducah Energy Systems	70	70	710

Bettis Atomic Power-Shipyards	50	50	40
Bates Accelerator-Massachusetts	40	40	480
University of Utah	7	7	20
Analytical Services	**14,640**	**14,640**	**25,710**
222S Analytical Laboratory	14,590	14,590	25,560
6266 Waste Sampling & Characterization Facility	60	60	150
PNNL	**7,880**	**7,880**	**53,280**
Pacific Northwest National Laboratories	7,880	7,880	53,280
Facility Transitions	**6,470**	**6,320**	**9,600**
2345Z Plutonium Finishing Plant	3,880	3,880	8,370
324 Building	690	690	0
Waste Encapsulation/Storage Facility	460	460	0
303K Fuels Fabrication Transition	400	260	250
202A Purex Operations	390	390	590
225B B Plant	270	270	0
327 Building	220	210	0
FFTF Transition Project	80	80	390
309 PRTR Vault Waste (Ion Exchange Mod)	70	70	0
335 Sodium Test Facility	1	1	0
Liquid Effluent	**5,490**	**5,490**	**4,480**
300 Area/Treated Effluent Disposal Facilities	5,410	5,410	4,360
C018H-200 Area Effluent Treatment Facility	80	80	0
Waste Neutralization Facility	0	0	120
Solid Waste	**3,500**	**3,500**	**3,090**
221T/2706T T Plant Operations	3,070	3,070	2,620
W026-Waste Receiving and Processing (WRAP1)	390	390	0
218E/W Low Level Burial Grounds	40	40	460
224T TRU Storage & Assay Facility	2	2	10
Non-Programmatic	**2,330**	**2,330**	**2,330**
300 Area Facilities Non-Transition	1,420	1,420	1,420
REDOX Non-Transition	300	300	300
PUREX Non-Transition	170	170	170
400 Area Facilities Non-Transition	100	100	100
B Plant Non-Transition	90	90	90
T Plant Non-Transition	80	80	80
PFP Non-Transition	70	70	70
Site Support Non-Transition	50	50	50
U Plant Non-Transition	30	30	30
Spent Nuclear Fuel	**1,990**	**1,990**	**1,520**
K-Basin Fuel Sampling Project	1,030	1,030	310
100K K-Basin Operations	960	960	1,210
RCRA Monitoring	**130**	**130**	**22,500**
Well Drilling	130	130	22,500
EM-40	**0**	**0**	**710**
Surplus Facilities	0	0	710
Total	***152,540***	***152,380***	***353,160***

Sum of totals may not add due to rounding: numbers over 10 m^3 are rounded to the nearest 10 m^3, numbers less than 10 m^3 are rounded to integers, non-zero numbers less than 1 are rounded to 1.

Definitions

Contact-handled low-level waste (CH_LLW)

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).

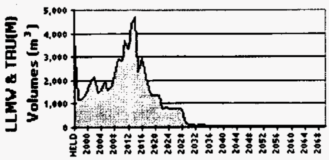
Remote-handled low-level waste (RH_LLW)

This waste has a dose rate greater than 200 mrem/h and meets the definition for LLW.

WASTE CLASSES: CH_LLMW · RH_LLMW · CH_TRU(M) · RH_TRU(M) · GTC III · *LLW* · HAZ

CHARACTERISTICS: CH_LLMW · RH_LLMW · CH_TRU(M) · RH_TRU(M) · GTC III · LLW · HAZ	CONTAINERS: CH_LLMW · RH_LLMW · CH_TRU(M) · RH_TRU(M) · GTC III · LLW · HAZ

PROGRAMS: Analytical Services · EM-40 · Facility Transitions · Landlord · Liquid Effluent · NP · Offsite · PNNL · RCRA · Solid Waste · SNF · TWRS



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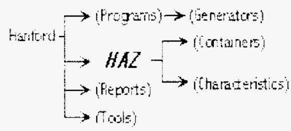

Site Rev. date: *12/31/96*

Data version: *97.1*

Data currency: *10/25/96*

Hazardous Waste (HAZ)

Contents

» Highlights » Summary Table

Highlights

- A total of 2,770 m³ of hazardous waste has been forecast for management by CWC; other Hanford-generated hazardous waste will be shipped offsite for disposition.
- Hazardous waste is waste defined under the Washington Administrative Code 173-303.
- Of the 2,770 m³ of hazardous waste that has been forecast for management by CWC, 96% (2660 m³) will be shipped in 208-liter drums. The remaining 4% will be shipped in 114-liter drums, 322-liter drums, other drums, medium boxes, and small boxes.

Summary Table (Volumes in m³)

Forecast by Programmatic Area (in descending order by program and generator volume)

Hazardous Waste Forecast: Program	FY97.1 Forecast (m³)	% of Total
TWRS	2,380	86%
RCRA Monitoring	150	5%
Analytical Services	120	4%
Liquid Effluent	80	3%
Solid Waste	30	1%
Facility Transitions	10	< 1%
Total	*2,770*	*100%*

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.

WASTE CLASSES:
CH_LLMW · RH_LLMW · CH_TRU(M) · RH_TRU(M) · GTC III · LLW · *HAZ*

CHARACTERISTICS:
CH_LLMW · RH_LLMW · CH_TRU(M) · RH_TRU(M) · GTC III · LLW · HAZ

CONTAINERS:
CH_LLMW · RH_LLMW · CH_TRU(M) · RH_TRU(M) · GTC III · LLW · HAZ

PROGRAMS:
Analytical Services · EM-40 · Facility Transitions · Landlord · Liquid Effluent · NP · Offsite · PNNL · RCRA · Solid Waste · SNF · TWRS

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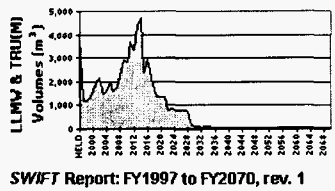
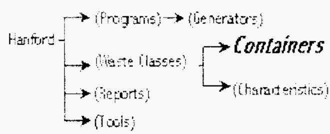




Site Rev. date: *12/31/96*

Data version: *97.1*

Data currency: *10/25/96*

Container Summary

Contents

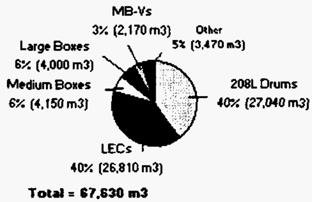
Links to Specific Waste Class Container Data

CH_LLMW Containers	CH_TRU(M) Waste Containers	LLW Containers
RH_LLMW Containers	RH_TRU(M) Waste Containers	HAZ Waste Containers

Highlights

- A total of 67,630 m³ of LLMW and TRU(M) waste is forecast for shipment to the Hanford Waste Management Project by onsite and offsite generators. Of this waste, most will be shipped in 208-liter boxes (40%) and LECs (40%).

Container Distribution

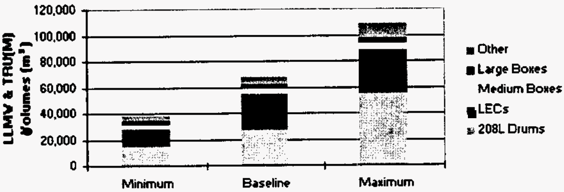


Sum of totals may not add due to rounding: numbers over 10 m³ are rounded to the nearest 10 m³, numbers less than 10 m³ are rounded to integers, non-zero numbers less than 1 are rounded to 1.

Annual Container Volumes

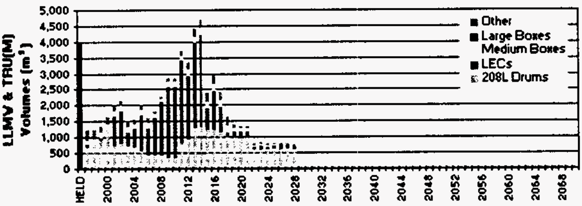
Life Cycle Volumes by Container

The total baseline volume of waste is approximately 67,630 m³. The minimum expected volume is approximately 37,680 m³, and the maximum expected volume is 108,280 m³. The minimum, baseline, and maximum waste forecast volumes are distributed as follows:



Annual Baseline Volumes by Container

The graph shows the LLMW and TRU(M) waste volume for 1997 through 2070. Waste generation will peak in 2013-2014, due primarily to retrieval of the long-length contaminated equipment (from the TWRS program), which will be shipped in LECs. Waste volume from 2038 through 2070 is virtually constant at about 50 m³. The only facility operating during this period will be the 222S Analytical Laboratory which will be shipping its waste in 208-liter (> 99%) and other drums.



Summary Tables (Volumes in m³)

Forecast by Container Type

(in descending order by container volume)

Container	97.1 Forecast (m³)	% of Total
208L Drums	27,040	40%
LECs	26,810	40%
Medium Boxes	4,150	6%
Large Boxes	4,000	6%
MB-Vs	2,170	3%
SWBs	1,610	2%
Small Boxes	1,440	2%
MB-IVs	210	0%
322L Drums	130	0%
Extra Large Boxes	60	0%
Other Drums	20	0%
114L Drums	1	0%
Total	**67,630**	**100%**

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.

Life Cycle Baseline Volumes

(in descending order by Program and Generator volume)

LLMW & TRU(M) Waste Containers: Program	208L Drum	LEC	Medium Box	Large Box	MB-V	Other	Total
TWRS	14,950	26,810	3,880	0	2,170	2,300	50,120
Non-Programmatic	1,350	0	0	4,000	0	160	5,510
Facility Transitions	3,480	0	50	0	0	436	3,970
Analytical Services	3,560	0	0	0	0	60	3,610
Liquid Effluent	2,540	0	0	0	0	0	2,540
PNNL	600	0	0	0	0	300	900
Solid Waste	190	0	210	0	0	0	400
EM-40	240	0	0	0	0	0	240
Offsite	70	0	0	0	0	130	210
Spent Nuclear Fuel	5	0	0	0	0	80	80
RCRA Monitoring	50	0	0	0	0	10	60
Total	*27,040*	*26,810*	*4,150*	*4,000*	*2,170*	*3,471*	*67,630*

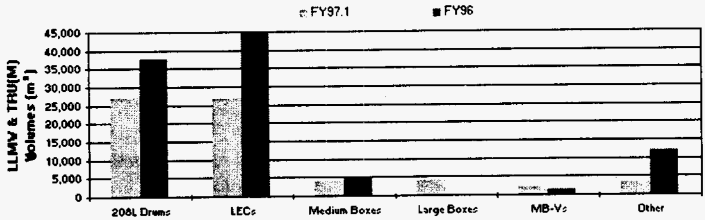
Sum of totals may not add due to rounding: numbers over 10 m³ are rounded to the nearest 10 m³, numbers less than 10 m³ are rounded to integers, non-zero numbers less than 1 are rounded to 1.

Comparison to Previous Baseline(s)

This year both 208 liter drums and LECs are the most used containers. Last year, 208 liter drums were second to the LECs. The change was caused by significant reductions in RH_TRU(M) and CH_LLMW wastes in LECs from the Single Shell Tank Long Length Equipment retrievals among the TWRS program. Also, Unknown boxes are not reported in this year's forecast. The two generators, Non-Programmatic Stored Equipment and PNNL, have redesignated their containers as Large and Small boxes, respectively. Lastly, SWBs are relatively less of the whole due mostly to TWRS HLVP reductions.

Of the total waste volume, these container types are not interspersed within each waste category; rather, a single waste category often represents the major use of a single container. For example, 69% of CH_LLMW is forecast to be shipped in 208 liter drums. This amount also represents 78% of the total Hanford-wide use of 208 liter drums. LEC containers are 88% of the containers used for RH_LLMW and 96% of all the LECs coming to Hanford. The other striking example is that the volume in Large boxes is nearly all (99%) CH_LLMW.

The 1996 forecast showed the same occurrence but with different waste classes and containers. All of the Unknown boxes were CH_LLMW. All of the Small boxes were RH_LLMW. All of the Extra-Large boxes were RH_TRU(M), and all of the MB-V boxes were CH_TRU(M). Nevertheless, LECs and 208 liter drums held a large majority of CH_LLMW, similar to this year's forecast.



(in descending order by container volume)

LLMW & TRU(M) Waste Comparison: Containers	FY 97.1 Forecast (m³)	FY96 Forecast (m³)
208L Drums	27,040	37,680
LECs	26,810	44,630
Medium Boxes	4,150	5,010
Large Boxes	4,000	0
MB-Vs	2,170	1,610
SWBs	1,610	2,530
Small Boxes	1,440	1,710
MB-IVs	210	50
322L Drums	130	400
Extra Large Boxes	60	40
Other Drums	20	10
114L Drums	1	0
Unknown Box	0	7,230
Total	***67,630***	***100,900***

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.

Definitions

For the 1997 forecast, 12 different container types have been reported for solid waste shipment to Waste Management during its life cycle. The following is a brief description of these containers:

114-liter drum: This is a small standard drum equivalent to 30 U.S. gallons.

208-liter drum: This is a standard-size drum equal to 55 U.S. gallons.

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.

Extra-large box: This shipping container is defined by an external volume greater than 28.3 m³ (1,000 ft³). Boxes of this size are too big to be accepted at the STP treatment facility.

Large box: The size of this container is defined as greater than 16.3 m³ and less than 28.3 m³ in external volume (576-1,000 ft³). This size is too large to be accepted at the STP facility.

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_LLMW.

MB-IV: This metal box measures 1.95 m long by 1.32 m wide by 1.11 m high.

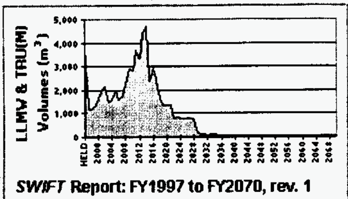
MB-V: Made of either metal or plywood, this box measures 2.43 m long by 1.22 m wide by 1.33 m high.

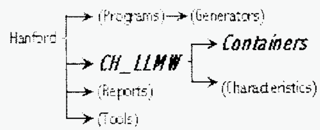
Medium box: Any size in between an external volume of 3.6 and 16.3 m^3 (128-576 ft^3) classifies as a medium box. All Medium boxes can be handled by STP treatment facility.

Other drums: This category represents various container sizes used less often than the standard drums, such as 57-liter drums, 76-liter drums, or 416-liter drums.

Small box: A small box has an external volume less than 3.6 m^3 (128 ft^3).

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).





Site Rev. date: *12/31/96*

Data version: *97.1*

Data currency: *10/25/96*

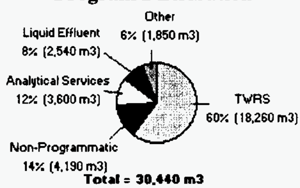
CH_LLMW Containers

Contents

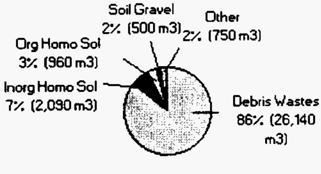
Highlights

- Of the 30,440 m³ of contact-handled LLMW forecast, 69% will be shipped in 208-liter drums, 13% in large boxes, 11% in medium boxes, and 6% in other containers.
- The 1996 forecast had 32,980 m³ of CH_LLMW stored in LECs from the TWRS program. This waste has been reclassified as RH_LLMW.
- Almost every CH_LLMW generator will be using 208 liter drums.
- All of the Large boxes will be coming from the Non-Programmatic Stored Equipment generator.

Program Distribution

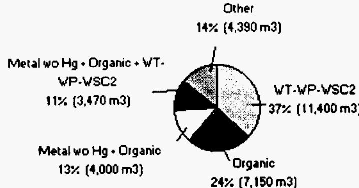


Physical Waste Form Distribution



Total = 30,440 m3

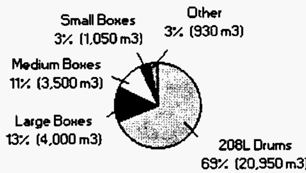
Hazardous Constituent Distribution



Total = 30,440 m3

Note: Includes LLMW only

Container Distribution



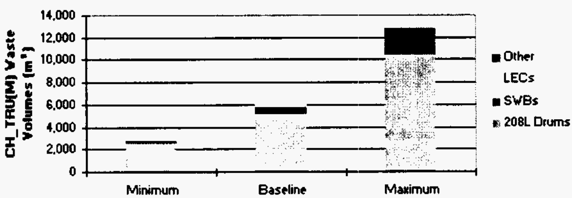
Total = 30,440 m3

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.

Annual CH_LLMW Volumes

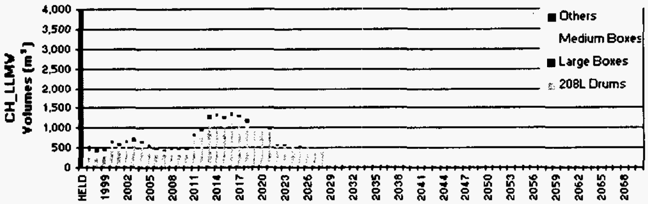
CH_LLMW Life Cycle Volumes by Container

The total baseline volume of waste is approximately 30,440 m³. The minimum expected volume is approximately 19,180 m³, and the maximum expected volume is 53,080 m³. The minimum, baseline, and maximum waste forecast volumes are distributed as follows:



CH_LLMW Annual Baseline Volumes by Container

The graph shows the CH_LLMW volume for 1997 through 2070. The 4,000 m³ of Held waste in large boxes is from the Stored Equipment waste generator. This waste currently exists but does not have a shipping schedule; thus, it is reported as Held waste. The remaining waste will be sent primarily in 208-liter drums and medium boxes. Waste generation will peak in 2014-2016, due primarily to waste associated with the retrieval of the long-length contaminated equipment. Waste volume from 2038 through 2070 is virtually constant at about 50 m³. The only facility operating during this period will be the 222S Analytical Laboratory which will be shipping its waste in 208-liter (> 99%) and other drums.



Summary Tables (Volumes in m³)

Forecast by Container Type

(in descending order by container volumes)

CH_LLMW Forecast: Containers	97.1 Forecast (m³)	% of Total
208L Drums	20,950	69%
Large Boxes	4,000	13%
Medium Boxes	3,500	11%
Small Boxes	1,050	3%
MB-Vs	570	2%
MB-IVs	210	1%
322L Drums	130	< 1%
Other Drums	20	< 1%
114L Drums	1	< 1%
Total	*30,440*	*100%*

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.

Life Cycle Baseline Volumes

(in descending order by Program and Generator Volumes)

CH_LLMV Containers: Program	208L Drum	Large Box	Medium Box	Small Box	MB-V	Other	Total
TVRS	**13,320**	**0**	**3,290**	**1,040**	**570**	**40**	**18,260**
High Level Vitrification Project	5,220	0	0	0	0	0	5,220
Low Level Vitrification Project	5,120	0	0	0	0	0	5,120
SST/DST Tank Farm Operations	850	0	1,830	1,040	0	40	3,760
W343 DST Retrieval (17 Tanks)	220	0	920	0	340	0	1,480
SST Retrieval (149 tanks)	890	0	0	0	0	0	890
Tank Farm Restoration	880	0	0	0	0	0	880
DST Retrieval Systems (10 tanks)	130	0	540	0	200	0	870
Tank Farm Ventilation Upgrade	2	0	0	0	40	0	40
Cross-Site Transfer System	5	0	0	0	0	0	5
Non-Programmatic	**180**	**4,000**	**0**	**0**	**0**	**10**	**4,190**
Stored Equipment	0	4,000	0	0	0	0	4,000
PFP Non-Transition	80	0	0	0	0	0	80
300 Area Facilities Non-Transition	60	0	0	0	0	1	60
PUREX Non-Transition	30	0	0	0	0	10	50
U Plant Non-Transition	2	0	0	0	0	1	3
REDOX Non-Transition	1	0	0	0	0	1	2
Analytical Services	**3,540**	**0**	**0**	**0**	**0**	**60**	**3,600**
222S Analytical Laboratory	3,510	0	0	0	0	60	3,570
6266 Waste Sampling & Characterization Facility	30	0	0	0	0	0	30
Liquid Effluent	**2,540**	**0**	**0**	**0**	**0**	**0**	**2,540**
C018H-200 Area Effluent Treatment Facility	2,540	0	0	0	0	0	2,540
Facility Transitions	**770**	**0**	**0**	**0**	**0**	**6**	**770**
2345Z Plutonium Finishing Plant	710	0	0	0	0	0	710
Waste Encapsulation/Storage Facility	30	0	0	0	0	0	30
324 Building	20	0	0	0	0	0	20
202A Purex Operations	7	0	0	0	0	5	10
327 Building	4	0	0	0	0	0	4
225B B Plant	2	0	0	0	0	0	2
FFTF Transition Project	1	0	0	0	0	0	1
309 PRTR Vault Waste (Ion Exchange Mod)	1	0	0	0	0	0	1
335 Sodium Test Facility	0	0	0	0	0	1	1
PNNL	**370**	**0**	**0**	**0**	**0**	**120**	**490**
Pacific Northwest National Laboratories	370	0	0	0	0	120	490
Solid Waste	**110**	**0**	**210**	**0**	**0**	**0**	**310**
221T/2706T T Plant Operations	10	0	210	0	0	0	220
W026-Waste Receiving and Processing (WRAP1)	80	0	0	0	0	0	80
Central Waste Complex	20	0	0	0	0	0	20
224T TRU Storage & Assay Facility	2	0	0	0	0	0	2
Offsite	**70**	**0**	**0**	**10**	**0**	**110**	**200**
Princeton Plasma Physics Lab	0	0	0	0	0	60	60
Rockwell-Canoga Park	4	0	0	10	0	30	50
Puget Sound Naval Shipyards	30	0	0	0	0	0	30
Paducah Energy Systems	0	0	0	0	0	20	20
Knolls Atomic Power Laboratory	10	0	0	0	0	1	10
Battelle Columbus Laboratories	8	0	0	0	0	0	8
General Atomics	7	0	0	0	0	0	7
University of Utah	7	0	0	0	0	0	7
Pearl Harbor Naval Shipyards	5	0	0	0	0	0	5
Portsmouth Naval Shipyards	1	0	0	0	0	0	1
RCRA Monitoring	**50**	**0**	**0**	**0**	**0**	**10**	**60**
Well Drilling	50	0	0	0	0	10	60
EM-40	**10**	**0**	**0**	**0**	**0**	**0**	**10**
Surplus Facilities	10	0	0	0	0	0	10
Spent Nuclear Fuel	**5**	**0**	**0**	**0**	**0**	**0**	**5**
100K K-Basin Operations	5	0	0	0	0	0	5
Total	**20,950**	**4,000**	**3,500**	**1,050**	**570**	**361**	**30,440**

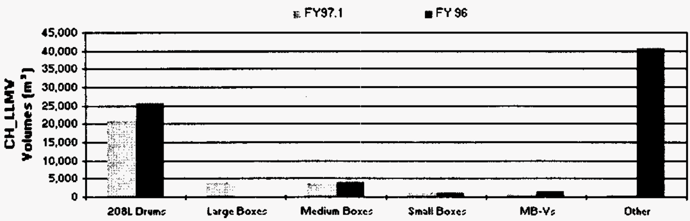
Sum of totals may not add due to rounding: numbers over 10 m³ are rounded to the nearest 10 m³, numbers less than 10 m³ are rounded to integers, non-zero numbers less than 1 are rounded to 1.

Comparison to Previous Baseline(s)

The FY 97.1 forecast of 30,440 m³ of CH_LLMW shows a 58% decrease from the FY96 forecast of 73,040 m³. The reduction is due to the elimination of 32,980 m³ of CH_LLMW in

LECs from the 1996 data. No CH_LLMW will be shipped in LECs since this waste has been reclassified as RH_LLMW. Other container categories have changed as well. First, the Unknown boxes from PNNL are reported to be Small boxes this year. Large boxes are a new CH_LLMW container, coming only from Non-Programmatic Stored Equipment. Also, the group entitled Other containers is reduced in volume due to the TWRS program. Both forecasts report similar volumes for 208 liter drums and Medium boxes.

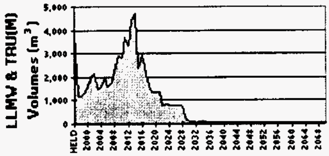
Comparison to Previous Baseline(s) by Container



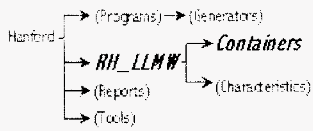
(in descending order by container volumes)

CH-LLMV Comparison: Containers	FY 97.1 Forecast (m³)	FY96 Forecast (m³)
208L Drums	20,950	25,780
Large Boxes	4,000	0
Medium Boxes	3,500	3,880
Small Boxes	1,050	1,120
MB-Vs	570	1,610
MB-IVs	210	50
322L Drums	130	400
Other Drums	20	10
114L Drums	1	0
LECs	0	32,980
Unknown Box	0	7,230
Total	*30,440*	*73,040*

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.



SWIFT Report: FY1997 to FY2070, rev. 1



Site Rev. date: *12/31/96*

Data version: *97.1*

Data currency: *10/25/96*

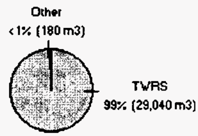
RH_LLMW Containers

Contents

Highlights

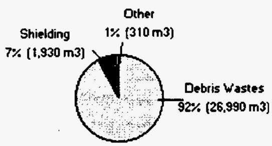
- Of the 29,220 m³ of remote-handled LLMW forecast, 88% will be in the form of LECs from the TWRS program, 5% of the waste will be stored in MB-Vs, and the remaining 7% will be shipped in other containers.

Program Distribution



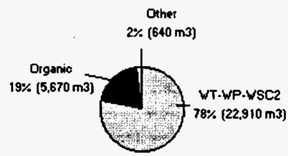
Total = 29,220 m3

Physical Waste Form Distribution



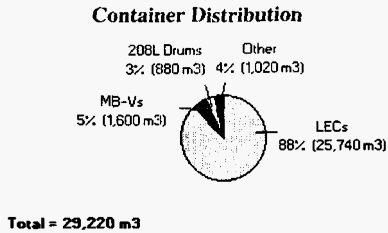
Total = 29,220 m3

Hazardous Constituent Distribution



Total = 29,220 m3

Note: Includes LLMW only

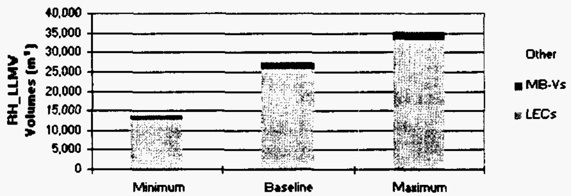


Sum of totals may not add due to rounding: numbers over 10 m³ are rounded to the nearest 10 m³, numbers less than 10 m³ are rounded to integers, non-zero numbers less than 1 are rounded to 1.

Annual RH_LLMW Volumes

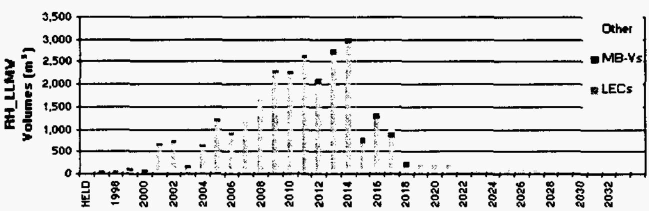
RH_LLMW Life Cycle Volumes by Container

The total baseline volume of waste is approximately 29,220 m³. The minimum expected volume is approximately 14,870 m³, and the maximum expected volume is 38,190 m³. The minimum, baseline, and maximum waste forecast volumes are distributed as follows:



RH_LLMW Annual Baseline Volumes by Container

The graph shows the RH_LLMW volume for 1997 through 2032. The TWRS program accounts for more than 99% of the RH_LLMW. Waste generation will peak in 2013-2014, due primarily to retrieval of the long-length contaminated equipment (from the TWRS program), which will be shipped in LECs.



Summary Tables (Volumes in m³)

Forecast by Container Type

(in descending order by container volumes)

RH_LLMW Forecast: Containers	97.1 Forecast (m³)	% of Total
LECs	25,740	88%
MB-Vs	1,600	5%
208L Drums	880	3%
Medium Boxes	650	2%
Small Boxes	370	1%
Total	*29,220*	*100%*

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.

Life Cycle Baseline Volumes

(in descending order by Program and Generator Volumes)

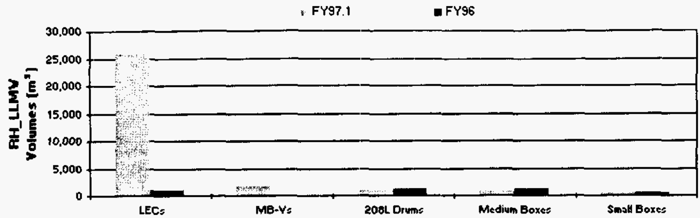
RH_LLMW Containers: Program	LEC	MB-V	208L Drum	Medium Box	Small Box	Total
TWRS	**25,740**	**1,600**	**770**	**590**	**350**	**29,040**
SST Long Length Equipment	22,520	0	0	0	0	22,520
DST Retrieval Systems (10 tanks)	2,460	590	0	0	0	3,050
W343 DST Retrieval (17 Tanks)	760	1,010	0	0	0	1,760
SST/DST Tank Farm Operations	0	0	0	590	350	940
SST Retrieval (149 tanks)	0	0	390	0	0	390
Tank Farm Restoration	0	0	380	0	0	380
Facility Transitions	**0**	**0**	**7**	**50**	**10**	**70**
303K Fuels Fabrication Transition	0	0	7	50	10	70
Solid Waste	**0**	**0**	**50**	**6**	**0**	**60**
221T/2706T T Plant Operations	0	0	50	6	0	60
PNNL	**0**	**0**	**50**	**0**	**0**	**50**
Pacific Northwest National Laboratories	0	0	50	0	0	50
Offsite	**0**	**0**	**0**	**0**	**5**	**5**
Knolls Atomic Power-Laboratory	0	0	0	0	5	5
Total	*25,740*	*1,600*	*880*	*650*	*370*	*29,220*

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.

Comparison to Previous Baseline(s)

The usage of LECs has increased dramatically for RH_LLMW. Much of the CH_LLMW from the Single Shell Tank Long Length Equipment generator in the TWRS program has been redesignated as remote-handled this year. This item is the cause of the 623% increase in RH_LLMW volume over the 1996 level. The TWRS DST Retrieval and Retrieval System volume has increased, reporting MB-V boxes for 1997. Besides these, the containers used are the same but the volumes are generally smaller.

Comparison to Previous Baseline(s) by Container



(in descending order by container volumes)

RH-LLMW Comparison: Containers	FY 97.1 Forecast (m³)	FY96 Forecast (m³)
LECs	25,740	1,010
MB-Vs	1,600	0
208L Drums	880	1,330
Medium Boxes	650	1,110
Small Boxes	370	590
Total	***29,220***	***4,040***

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.

CHARACTERISTICS: CH_LLMW · RH_LLMW · CH_TRU(M) · RH_TRU(M) · GTC III · LLW · HAZ	CONTAINERS: CH_LLMW · *RH_LLMW* · CH_TRU(M) · RH_TRU(M) · GTC III · LLW · HAZ

WASTE CLASSES:
CH_LLMW · RH_LLMW · CH_TRU(M) · RH_TRU(M) · GTC III · LLW · HAZ

PROGRAMS:
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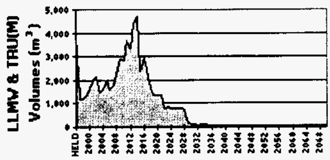
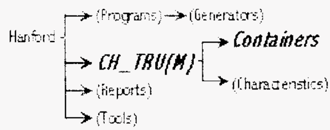


SWIFT Report: FY1997 to FY2070, rev. 1



Site Rev. date: *12/31/96*

Data version: *97.1*

Data currency: *10/25/96*

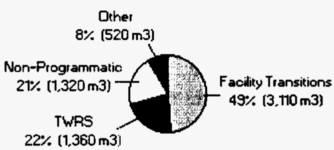
CH_TRU(M) Waste Containers

Contents

Highlights

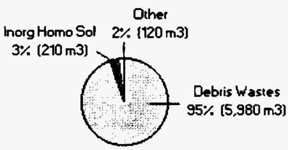
- Of the 6,310 m³ of contact-handled TRU(M) forecast, 81% will be shipped in 208-liter drums, 11% in SWBs, and 8% in LECs.
- Every waste generator except Spent Nuclear Fuel will use 208-liter drums for this waste category.

Program Distribution



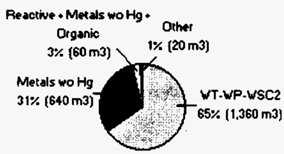
Total = 6,310 m3

Physical Waste Form Distribution



Total = 6,310 m3

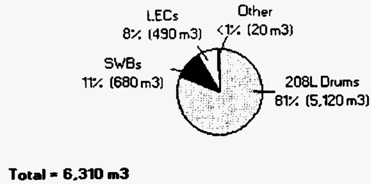
Hazardous Constituent Distribution



Total = 2,080 m3

Note: Includes TRUM only

Container Distribution

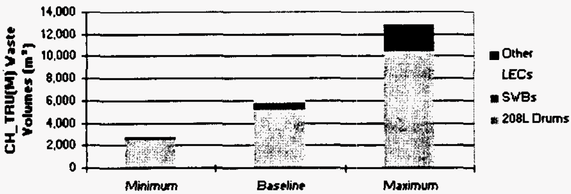


Sum of totals may not add due to rounding: numbers over 10 m³ are rounded to the nearest 10 m³, numbers less than 10 m³ are rounded to integers, non-zero numbers less than 1 are rounded to 1.

Annual CH_TRU(M) Waste Containers

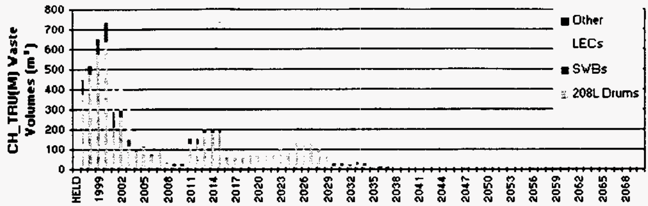
CH_TRU(M) Waste Life Cycle Volumes by Containers

The total baseline volume of waste is approximately 6,310 m³. The minimum expected volume is approximately 2,900 m³, and the maximum expected volume is 13,290 m³. The minimum, baseline, and maximum waste forecast volumes are distributed as follows:



CH_TRU(M) Waste Annual Baseline Volumes by Containers

The graph shows the CH_TRU(M) waste volume for 1997 through 2070. Facility Transitions will ship waste in 208-liter drums and SWBs from 1997 through 2034. This accounts for 49% of the CH_TRU(M) waste. TWRS will ship waste in 208-liter boxes (2002 through 2028) and LECs (2001 through 2003). Waste from TWRS accounts for about 22% of the CH_TRU(M) waste. The Non-Programmatic (NP) program accounts for about 21% of the CH_TRU(M) waste. Waste from NP, in the form of 208-liter drums and SWBs, will be shipped from 2011 through 2035. The remaining waste, about 8%, mostly in 208-liter drums, will be shipped from Analytical Laboratories, EM-40, Offsite, Pacific Northwest National Laboratory, and the Spent Nuclear Fuel program.



Summary Tables (Volumes in m³)

Forecast by Container Type

(in descending order by container volumes)

CH_TRU(M) Waste Forecast: Containers	97.1 Forecast (m³)	% of Total
208L Drums	5,120	81%
SWBs	680	11%
LECs	490	8%
Small Boxes	20	< 1%
Other Drums	1	< 1%
Total	6,310	100%

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.

Life Cycle Baseline Volumes

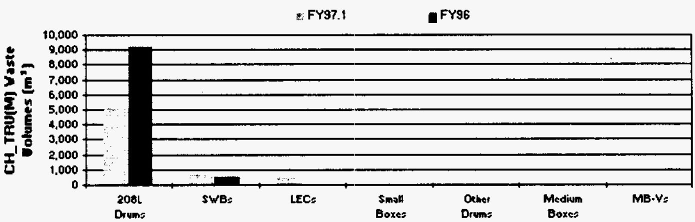
(in descending order by Program and Generator Volumes)

CH_TRU(M) Containers: Program	208L Drum	SWB	LEC	Small Box	Other Drum	Total
Facility Transitions	**2,700**	**420**	**0**	**0**	**0**	**3,110**
2345Z Plutonium Finishing Plant	2,640	420	0	0	0	3,050
327 Building	60	0	0	0	0	60
324 Building	4	0	0	0	0	4
309 PRTR Vault Waste (Ion Exchange Mod)	1	0	0	0	0	1
TWRS	**870**	**0**	**490**	**0**	**0**	**1,360**
High Level Vitrification Project	870	0	0	0	0	870
SST Long Length Equipment	0	0	490	0	0	490
Non-Programmatic	**1,170**	**150**	**0**	**0**	**0**	**1,320**
300 Area Facilities Non-Transition	610	120	0	0	0	730
REDOX Non-Transition	210	0	0	0	0	210
PUREX Non-Transition	110	0	0	0	0	110
400 Area Facilities Non-Transition	70	8	0	0	0	70
B Plant Non-Transition	50	7	0	0	0	60
PFP Non-Transition	50	9	0	0	0	50
T Plant Non-Transition	40	0	0	0	0	40
Site Support Non-Transition	30	6	0	0	0	30
U Plant Non-Transition	9	2	0	0	0	10
PNNL	**130**	**120**	**0**	**0**	**0**	**240**
Pacific Northwest National Laboratories	130	120	0	0	0	240
EM-40	**230**	**0**	**0**	**0**	**0**	**230**
Surplus Facilities	230	0	0	0	0	230
Analytical Services	**20**	**0**	**0**	**0**	**0**	**20**
222S Analytical Laboratory	20	0	0	0	0	20
Spent Nuclear Fuel	**0**	**0**	**0**	**20**	**0**	**20**
K-Basin Fuel Sampling Project	0	0	0	20	0	20
Offsite	**1**	**0**	**0**	**0**	**1**	**2**
Ames Laboratory-Ames, Iowa	0	0	0	0	1	1
Lawrence Berkeley Laboratory	1	0	0	0	0	1
Total	*5,120*	*680*	*490*	*20*	*1*	*6,310*

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.

Comparison to Previous Baseline(s)

The FY97.1 forecast of 6,310 m³ of CH_TRU(M) waste shows a 36% decrease from the FY96 forecast of 9,830 m³. For 1997, the kinds of containers are different from the 1996 forecast data. Medium and MB-V boxes are no longer reported since their generators are not sending CH_TRU(M) waste this year, and as a new source in 1997, the TWRS SST LLE will send waste in LECs. Also, the Spent Nuclear Fuel K-Basin Sampling Project reported waste in 208 liter drums in 1996 but has currently changed to Small boxes. Lastly, this year's forecast includes SWBs from PNNL and an Other drum category from Ames Laboratory.



(in descending order by container volumes)

CH-TRU(M) Waste Comparison: Containers	**FY 97.1 Forecast (m^3)**	**FY96 Forecast (m^3)**
208L Drums	5,120	9,220
SWBs	680	570
LECs	490	0
Small Boxes	20	0
Other Drums	1	0
Medium Boxes	0	30
MB-Vs	0	7
Total	***6,310***	***9,830***

Sum of totals may not add due to rounding: numbers over 10 m^3 are rounded to the nearest 10 m^3, numbers less than 10 m^3 are rounded to integers, non-zero numbers less than 1 are rounded to 1.

CHARACTERISTICS:
CH_LLMW · RH_LLMW · CH_TRU(M) · RH_TRU(M) · GTC III · LLW · HAZ

CONTAINERS:
CH_LLMW · RH_LLMW · *CH_TRU(M)* · RH_TRU(M) · GTC III · LLW · HAZ

WASTE CLASSES:
CH_LLMW · RH_LLMW · CH_TRU(M) · RH_TRU(M) · GTC III · LLW · HAZ

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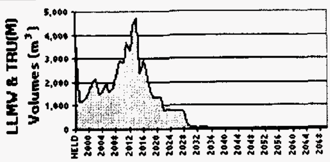

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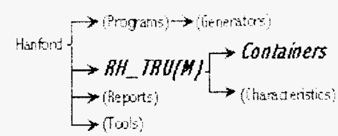


Site Rev. date: *12/31/96*

Data version: *97.1*

Data currency: *10/25/96*

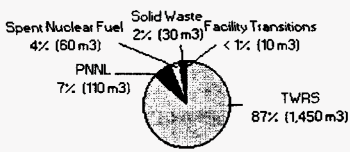
RH_TRU(M) Waste Containers

Contents

Highlights

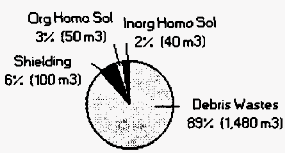
- Of the 1,670 m³ of remote-handled TRU(M) waste forecast, 56% will be shipped in SWBs, 35% in LECs, 5% in 208-liter drums, and 4% in extra large boxes.

Program Distribution



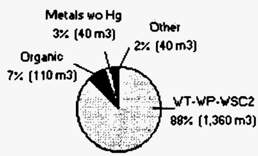
Total = 1,670 m3

Physical Waste Form Distribution



Total = 1,670 m3

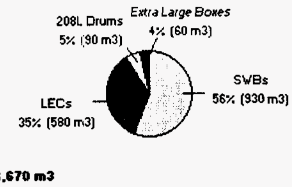
Hazardous Constituent Distribution



Total = 1,550 m3

Note: Includes TRUM only

Container Distribution

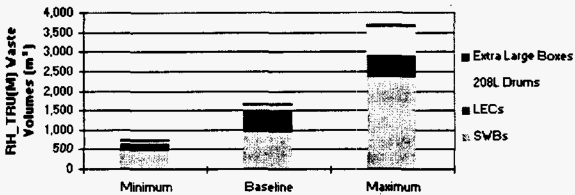


Sum of totals may not add due to rounding: numbers over 10 m^3 are rounded to the nearest 10 m^3, numbers less than 10 m^3 are rounded to integers, non-zero numbers less than 1 are rounded to 1.

Annual RH_TRU(M) Waste Containers

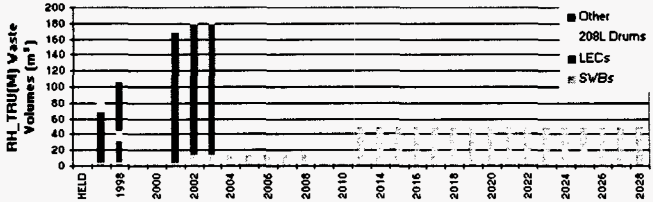
RH_TRU(M) Waste Life Cycle Volumes by Container

The total baseline volume of RH_TRU(M) waste is approximately 1,670 m^3. The minimum expected volume is approximately 740 m^3, and the maximum expected volume is 3,710 m^3. The minimum, baseline, and maximum waste forecast volumes are distributed as follows:



RH_TRU(M) Waste Annual Baseline Volumes by Container

The graph shows the RH_TRU(M) waste volume from 1997 through 2028. LECs (580 m^3) will be shipped from TWRS in the years 1997, 1998, and 2001 through 2003. SWBs (60 m^3) will be shipped by PNNL from 1997 through 2010 and by TWRS (870 m^3) from 2002 through 2028. The remaining waste will be shipped in 208-liter drums from Pacific Northwest National Laboratory, Solid Waste, Facility Transitions, and TWRS, and in Extra Large boxes (in 1998) from the Spent Nuclear Fuel program.



Summary Tables (Volumes in m³)

Forecast by Container Type (in descending order by container volumes)

CH_TRU(M) Waste Forecast: Containers	97.1 Forecast (m³)	% of Total
SWBs	930	56%
LECs	580	35%
208L Drums	90	5%
Extra Large Boxes	60	4%
Total	1,670	*100%*

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.

Life Cycle Baseline Volumes (in descending order by container volumes)

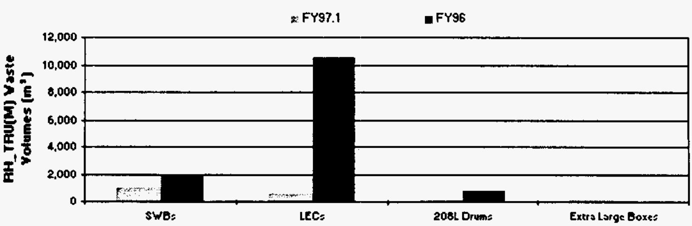
RH_TRU(M) Containers: Program	SWB	LEC	208L Drum	Extra Large Box	Total
TWRS	**870**	**580**	**0**	**0**	**1,450**
High Level Vitrification Project	870	0	0	0	870
SST Long Length Equipment	0	490	0	0	490
DST Retrieval Systems (10 tanks)	0	90	0	0	90
PNNL	**60**	**0**	**50**	**0**	**110**
Pacific Northwest National Laboratories	60	0	50	0	110
Spent Nuclear Fuel	**0**	**0**	**0**	**60**	**60**
100K K-Basin Operations	0	0	0	60	60
Solid Waste	**0**	**0**	**30**	**0**	**30**
221T/2706T T Plant Operations	0	0	30	0	30
Facility Transitions	**0**	**0**	**10**	**0**	**10**
324 Building	0	0	10	0	10
Total	*930*	*580*	*90*	*60*	*1,670*

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.

Comparison to Previous Baseline(s)

A large volume decrease has occurred because no LECs were forecast from TWRS Single Shell Tank Long Length Equipment containing RH_TRU(M) waste. Some container categories have changed. PNNL is using both SWBs and 208-liter drums. Also, the ER and Offsite generators are not projecting RH_TRU(M) wastes in 1997, which contributes to the general reduction in SWBs and 208 liter drums for this waste class.

Comparison to Previous Baseline(s) by Container (in descending order by container volumes)



RH-TRU(M) Waste Comparison: Containers	FY 97.1 Forecast (m³)	FY96 Forecast (m³)
SWBs	930	1,960
LECs	580	10,530
208L Drums	90	820
Extra Large Boxes	60	40
Total	***1,670***	***13,350***

Sum of totals may not add due to rounding: numbers over 10 m^3 are rounded to the nearest 10 m^3, numbers less than 10 m^3 are rounded to integers, non-zero numbers less than 1 are rounded to 1.

CHARACTERISTICS:
CH_LLMW · RH_LLMW · CH_TRU(M) · RH_TRU(M) · GTC III · LLW · HAZ

CONTAINERS:
CH_LLMW · RH_LLMW · CH_TRU(M) · *RH_TRU(M)* · GTC III · LLW · HAZ

WASTE CLASSES:
CH_LLMW · RH_LLMW · CH_TRU(M) · RH_TRU(M) · GTC III · LLW · HAZ

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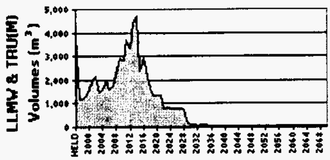

SWIFT Report: FY1997 to FY2070, rev. 1

Hanford → (Programs) → (Generators)
→ GTC III → Containers
→ (Characteristics)
→ (Reports)
→ (Tools)

Site Rev. date: *12/31/96*

Data version: *97.1*

Data currency: *10/25/96*

GTC III Waste Containers

Contents

Highlights

- No LLW or LLMW greater-than-class III (GTCIII) is forecast for shipment to the Hanford SW Project by onsite and offsite generators.

- This forecast shows a significant reduction from the FY96 forecast of 990 m³ (640 m³ of LLMW_GTCIII and 350 m³ of LLW_GTCIII).

Summary Table (Volumes in m³)

[Not applicable]

Comparison to Previous Baseline(s)

The FY97 forecast of no GTCIII waste shows a significant reduction from the FY96 forecast of 990 m³. This reduction arises because the 2 generators that reported GTCIII waste last year – DST Retrieval and PNNL – have both changed their planning assumptions for the current year's forecast. DST Retrieval is using a new baseline for waste forecasts based on the experience of Project W-151. PNNL has determined that they would include in their forecast only waste for which a disposal pathway exists. As a result, no GTCIII waste has been forecast for that program. No GTC III was reported for FY97.1.

GTCIII Comparison: Containers	FY 97.1 Forecast (m³)	FY96 Forecast (m³)
208L Drums	0	880
LECs	0	110
Total	***0***	***990***

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.

CHARACTERISTICS: CH_LLMW · RH_LLMW · CH_TRU(M) · RH_TRU(M) · GTC III · LLW · HAZ	CONTAINERS: CH_LLMW · RH_LLMW · CH_TRU(M) · RH_TRU(M) · *GTC III* · LLW · HAZ
WASTE CLASSES: CH_LLMW · RH_LLMW · CH_TRU(M) · RH_TRU(M) · GTC III · LLW · HAZ	
PROGRAMS: Analytical Services · EM-40 · Facility Transitions · Landlord · Liquid Effluent · NP · *Offsite* · PNNL · RCRA · Solid Waste · SNF · TWRS	
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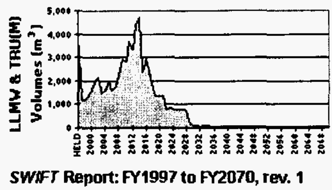

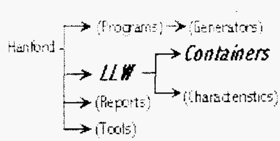

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Data currency: *10/25/96*

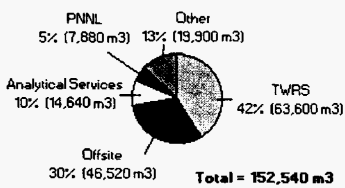
LLW Containers

Contents

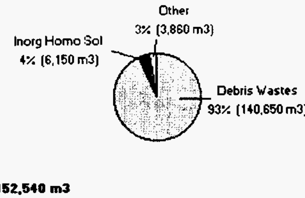
Highlights

- Of the 152,540 m³ LLW forecast, 52% will be shipped in MB-Vs, 12% in small boxes, 12% in 208-liter drums, 8% in MB-IVs, and 16% in other containers.
- The container distribution for the FY97.1 forecast is similar to the FY96 forecast.
- MB-V boxes will be sent from every program except Liquid Effluents.
- The Low Level Vitrification Project (LLVP) contributes 44% of the MB-V boxes forecast.

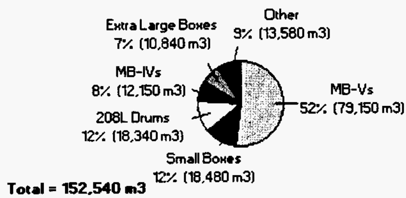
Program Distribution



Physical Waste Form Distribution



Container Distribution

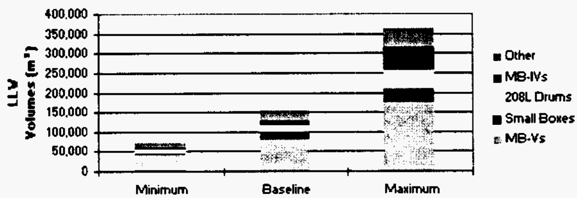


Sum of totals may not add due to rounding: numbers over 10 m³ are rounded to the nearest 10 m³, numbers less than 10 m³ are rounded to integers, non-zero numbers less than 1 are rounded to 1.

Annual LLW Container Volumes

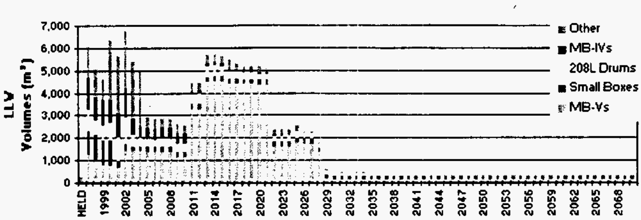
LLW Life Cycle Volumes by Container

The total baseline volume of waste is approximately 152,540 m³. The minimum expected volume is approximately 71,220 m³, and the maximum expected volume is 361,960 m³. The minimum, baseline, and maximum waste forecast volumes are distributed as follows:



LLW Annual Baseline Volumes by Container

The graph shows the LLW volume for 1997 to 2070. TWRS is the main source of LLW, accounting for about 42%, or 63,600 m³, of the total LLW volume.



Summary Tables (Volumes in m³)

Forecast by Container Type

(in descending order by container volumes)

LLW Forecast: Containers	97.1 Forecast (m³)	% of Total
MB-Vs	79,150	52%
Small Boxes	18,480	12%
208L Drums	18,340	12%
MB-IVs	12,150	8%
Extra Large Boxes	10,840	7%
Medium Boxes	9,180	6%
Other Drums	2,110	1%
322L Drums	2,040	1%
Large Boxes	250	0%
Total	*152,540*	*100%*

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.

Life Cycle Baseline Volumes

(in descending order by Program and Generator Volumes)

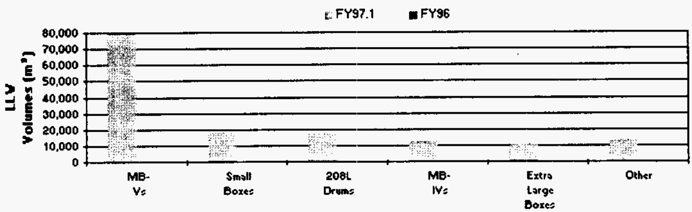
LLW Containers: Program	MB-V	Small Box	208L Drum	MB-IV	Extra Large Box	Other	*Total*
TWRS	**59,400**	**0**	**1,500**	**0**	**0**	**2,690**	***63,600***
Low Level Vitrification Project	34,560	0	0	0	0	0	*34,560*
High Level Vitrification Project	20,880	0	0	0	0	0	*20,880*
SST/DST Tank Farm Operations	3,900	0	900	0	0	2,690	*7,490*
SST Retrieval (149 tanks)	0	0	600	0	0	0	*600*
Tank Farm Restoration	60	0	0	0	0	0	*60*
Offsite	**1,320**	**18,480**	**7,940**	**5,730**	**10,820**	**2,230**	***46,520***
Argonne National Laboratory-East	0	15,770	4,270	0	0	0	*20,040*
Lawrence Berkeley Laboratory	150	0	710	0	10,670	0	*11,520*
Princeton Plasma Physics Lab	0	0	2,230	1,620	0	180	*4,040*
Brookhaven National Laboratory	0	130	0	1,550	0	1,410	*3,090*
Fermi National Accelerator Laboratory	0	1,160	360	0	0	0	*1,520*
Stanford Linear Accelerator Center	1,170	0	0	0	0	0	*1,170*
Rockwell-Canoga Park	0	770	0	240	0	140	*1,150*
Battelle Columbus Laboratories	0	0	0	1,030	0	0	*1,030*
University of California-Davis	0	0	10	970	0	0	*980*
General Atomics	0	620	0	40	0	1	*660*
Knolls Atomic Power-Shipyards	0	0	0	0	150	170	*320*
Portsmouth Energy Systems	0	0	0	60	0	250	*310*
Bettis Atomic Power-Laboratory	0	0	3	200	0	0	*210*
Rocky Flats	0	0	180	0	0	0	*180*
Ames Laboratory-Ames, Iowa	0	20	80	0	0	20	*120*
Paducah Energy Systems	0	0	50	20	0	0	*70*
Bettis Atomic Power-Shipyards	0	1	0	0	0	40	*50*
Bates Accelerator-Massachusetts	0	0	40	0	0	0	*40*
University of Utah	0	0	7	0	0	0	*7*
Analytical Services	**11,060**	**0**	**3,500**	**0**	**0**	**80**	***14,640***
222S Analytical Laboratory	11,060	0	3,440	0	0	80	*14,590*
6266 Waste Sampling & Characterization Facility	0	0	60	0	0	0	*60*
PNNL	**1,590**	**0**	**1,240**	**4,650**	**0**	**400**	***7,880***
Pacific Northwest National Laboratories	1,590	0	1,240	4,650	0	400	*7,880*
Facility Transitions	**1,260**	**0**	**2,850**	**1,520**	**0**	**840**	***6,470***
324 Building	400	0	130	0	0	160	*690*
327 Building	130	0	90	0	0	0	*220*
225B B Plant	170	0	20	0	0	80	*270*
FFTF Transition Project	20	0	30	0	0	30	*80*
303K Fuels Fabrication Transition	0	0	30	0	0	370	*400*
2345Z Plutonium Finishing Plant	40	0	2,320	1,520	0	0	*3,880*
309 PRTR Vault Waste (Ion Exchange Mod)"	0	0	50	0	0	11	*70*
202A Purex Operations	210	0	90	0	0	90	*390*
335 Sodium Test Facility	0	0	0	0	0	1	*1*
Waste Encapsulation/Storage Facility"	280	0	80	0	0	100	*460*
Liquid Effluent	**0**	**0**	**140**	**0**	**0**	**5,360**	***5,490***
300 Area/Treated Effluen Disposal Facilities	0	0	50	0	0	5,360	*5,410*
C018H-200 Area Effluent Treatment Facility	0	0	80	0	0	0	*80*
Solid Waste	**2,920**	**0**	**190**	**0**	**0**	**390**	***3,500***
221T/2706T T Plant Operations	2,920	0	150	0	0	0	*3,070*
W026-Waste Receiving and Processing (WRAP 1)	0	0	0	0	0	390	*390*
218E/W Low Level Burial Grounds	0	0	40	0	0	0	*40*
224T TRU Storage & Assay Facility	0	0	2	0	0	0	*2*
Non-Programmatic	**1,050**	**0**	**880**	**6**	**20**	**370**	***2,330***
300 Area Facilities Non-Transition	640	0	620	6	8	156	*1,420*
REDOX Non-Transition	160	0	70	0	0	70	*300*
PUREX Non-Transition	90	0	40	0	0	40	*170*
400 Area Facilities Non-Transition	20	0	40	0	0	40	*100*
B Plant Non-Transition	20	0	10	0	9	50	*90*
T Plant Non-Transition	40	0	20	0	0	20	*80*
PFP Non-Transition	30	0	40	1	0	0	*70*
Site Support Non-Transition	20	0	20	1	1	7	*50*
U Plant Non-Transition	10	0	10	1	1	5	*30*
Spent Nuclear Fuel	**550**	**0**	**0**	**250**	**0**	**1,190**	***1,990***
K-Basin Fuel Sampling Project	60	0	0	250	0	720	*1,030*
100K K-Basin Operations	490	0	0	0	0	470	*960*
RCRA Monitoring	**20**	**0**	**100**	**0**	**0**	**10**	***130***
Well Drilling	20	0	100	0	0	10	*130*
Total	***79,150***	***18,480***	***18,340***	***12,150***	***10,840***	***13,580***	***152,540***

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.

Comparison to Previous Baseline(s)

The FY97.1 forecast of 152,540 m³ of LLW shows a 57% decrease from the FY96 forecast of 353,160 m³. This decrease reflects the significant waste volume reductions from Offsite, Pacific Northwest National Laboratory, and RCRA programs.

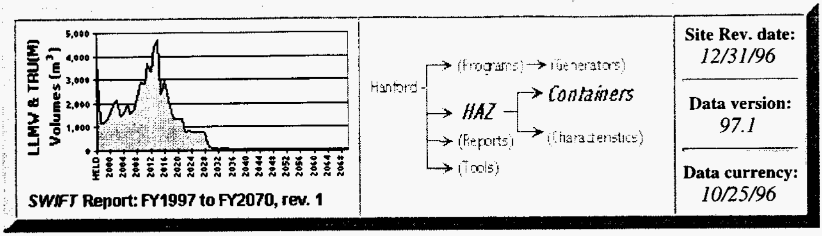
Comparison to Previous Baseline(s) by Container



(in descending order by container volumes)

LLW Comparison: Containers	FY 97.1 Forecast (m³)	FY96 Forecast (m³)
MB-Vs	79,150	123,160
Small Boxes	18,480	23,700
208L Drums	18,340	63,160
MB-IVs	12,150	55,460
Extra Large Boxes	10,840	20
Medium Boxes	9,180	41,770
Other Drums	2,110	5,870
322L Drums	2,040	4,240
Large Boxes	250	22,570
Unknown Box	0	13,170
LECs	0	110
SWBs	0	40
114L Drums	0	20
Total	***152,540***	***353,160***

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.



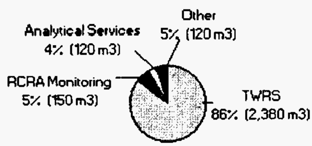
Hazardous Waste (HAZ) Containers

Contents

Highlights

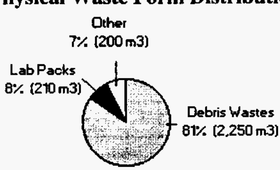
- Of the 2,770 m³ of hazardous waste that has been forecast for management by CWC, 96% (2,660 m3) will be shipped in 208-liter drums. The remaining 4% will be shipped in 114-liter drums, 322-liter drums, other drums, medium boxes, and small boxes.

Program Distribution



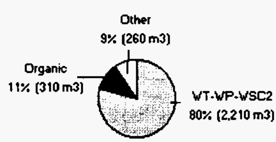
Total = 2,770 m3

Physical Waste Form Distribution



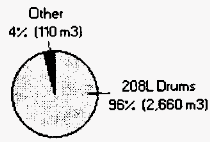
Total = 2,770 m3

Hazardous Constituent Distribution



Total = 2,770 m3

Container Distribution



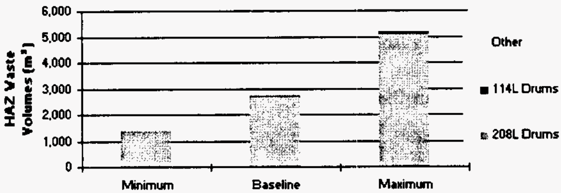
Total = 2,770 m3

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.

Annual HAZ Waste Volumes

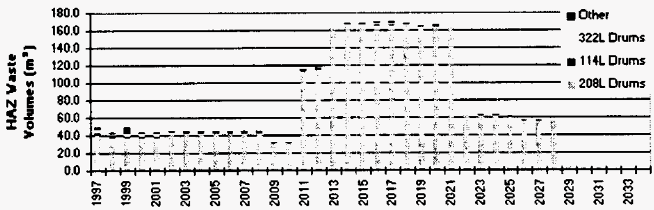
HAZ Waste Life Cycle Volumes by Container

The total baseline volume of waste is approximately 2,770 m³. The minimum expected volume is approximately 1,430 m³, and the maximum expected volume is 5,300 m³. The minimum, baseline, and maximum waste forecast volumes are distributed as follows:



HAZ Waste Annual Baseline Volumes by Container

The graph shows the HAZ waste volume for 1997 through 2034. About 86% of the waste is generated by TWRS, 5% by RCRA and 4% by Analytical Laboratories.



Summary Tables (Volumes in m³)

Forecast by Container Type

(in descending order by container volumes)

HAZ Waste Forecast: Containers	FY97.1 Forecast (m^3)	Percent
208L Drums	2,660	96%
114L Drums	40	1%
322L Drums	40	1%
Other Drums	30	1%
Medium Boxes	7	< 1%
Small Boxes	2	< 1%
Total	*2,770*	*100%*

Sum of totals may not add due to rounding: numbers over 10 m^3 are rounded to the nearest 10 m^3, numbers less than 10 m^3 are rounded to integers, non-zero numbers less than 1 are rounded to 1.

Life Cycle Baseline Volumes

(in descending order by Program and Generator Volumes)

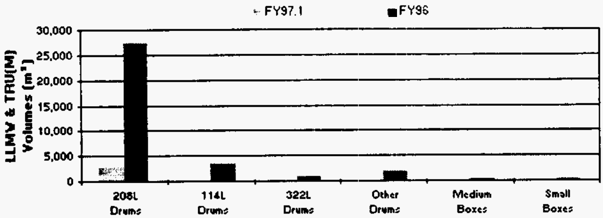
HAZ Containers: Program	208L Drums	114L Drums	322L Drums	Other Drums	Medium Boxes	Small Boxes	*Total*
TVRS	**20**	**20**	**30**	**20**	**<1**	**<1**	***2,380***
High Level Vitrification Project	870	0	0	0	0	0	*870*
Low Level Vitrification Project	1,280	0	0	0	0	0	*1,280*
SST/DST Tank Farm Operations	160	20	30	20	0	0	*230*
RCRA Monitoring	**130**	**8**	**10**	**<1**	**<1**	**<1**	***150***
Well Drilling	130	8	10	0	0	0	*150*
Analytical Services	**110**	**<1**	**<1**	**6**	**<1**	**<1**	***120***
6266 Waste Sampling & Characterization Facility	110	0	0	6	0	0	*120*
Liquid Effluent	**80**	**<1**	**<1**	**<1**	**<1**	**<1**	***80***
C018H-200 Area Effluent Treatment Facility	80	0	0	0	0	0	*80*
Solid Waste	**20**	**8**	**<1**	**<1**	**<1**	**<1**	***30***
221T/2706T T Plant Operations	20	8	0	0	0	0	*30*
Facility Transitions	**4**	**<1**	**<1**	**<1**	**7**	**2**	***10***
202A Purex Operations	3	<1	0	<1	0	<1	*4*
309 PRTR Vault Waste (Ion Exchange Mod)	<1	0	0	0	0	0	*<1*
335 Sodium Test Facility	<1	0	0	0	7	2	*9*
Total	***2,660***	***40***	***40***	***30***	***7***	***2***	***2,770***

Sum of totals may not add due to rounding: numbers over 10 m^3 are rounded to the nearest 10 m^3, numbers less than 10 m^3 are rounded to integers, non-zero numbers less than 1 are rounded to 1.

Comparison to Previous Baseline(s)

The FY97.1 forecast of 2,770 m3 of hazardous waste shows a 99.4% decrease from the FY96 forecast of 488,450 m^3. The reason for the enormous change between the two forecasts is that the WM program is no longer the central collection point for hazardous waste generated on the Hanford Site. Many generators have elected to send their hazardous waste directly to other vendors for waste management. Only those generators who plan to have the WM program manage their waste are included in the FY 97 forecast.

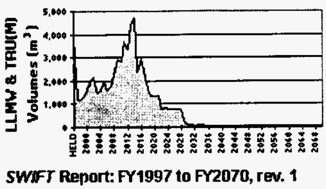
Comparison to Previous Baseline(s) by Container



(in descending order by container volumes)

HAZ Waste Comparison: Container	FY97.1 Forecast (m^3)	FY96 Forecast (m^3)
208L Drums	2,660	27,320
114L Drums	40	3,450
322L Drums	40	710
Other Drums	30	1,876
Medium Boxes	7	150
Small Boxes	2	330
Total	**2,770**	**33,830**

Sum of totals may not add due to rounding: numbers over 10 m^3 are rounded to the nearest 10 m^3, numbers less than 10 m^3 are rounded to integers, non-zero numbers less than 1 are rounded to 1.



Hanford → (Programs) → (Generators)
→ (Waste Classes) → (Containers)
→ *Characteristics*
→ (Reports)
→ (Tools)

Site Rev. date:
12/31/96
Data version:
97.1
Data currency:
10/25/96

Characteristics Summary

Contents

Links to Specific Waste Class Characteristics Data

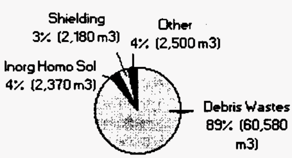
CH_LLMW Characteristics	CH_TRU(M) Waste Characteristics	LLW Characteristics
RH_LLMW Characteristics	RH_TRU(M) Waste Characteristics	HAZ Waste Characteristics

Highlights

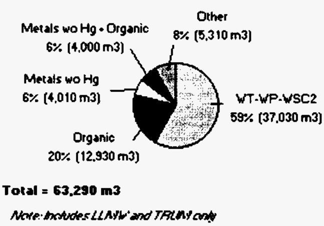
- A total of 67,630 m³ of LLMW and TRU(M) waste is forecast for shipment to the Hanford Waste Management Program by onsite and offsite generators. Of this waste, 89% will be debris, 4% will be inorganic homogenous solids, 3% will be shielding, and 4% will be other physical waste forms.

- 63,290 m³ (94%) of the LLMW and TRU(M) waste is forecast to contain hazardous constituents. More than 90% of this waste falls into four categories: state regulated ("WT-WP-WSC2") (59%); organic compounds (20%); metals without mercury (6%); and a combination of materials from the previous two categories (6%).

Physical Waste Form Distribution



Hazardous Constituent Distribution



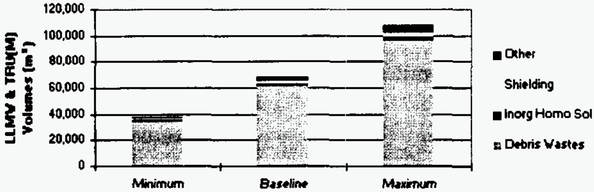
Sum of totals may not add due to rounding: numbers over 10 m³ are rounded to the nearest 10 m³, numbers less than 10 m³ are rounded to integers, non-zero numbers less than 1 are rounded to 1.

Annual Waste Characteristics Volumes

Physical Waste Forms (PWFs)

LLMW & TRU(M) Waste Life Cycle Volumes by Physical Waste Form

The total baseline volume of waste is approximately 67,630 m³. The minimum expected volume is approximately 37,680 m³, and the maximum expected volume is 108,280 m³. The minimum, baseline, and maximum waste forecast volumes are distributed as follows:



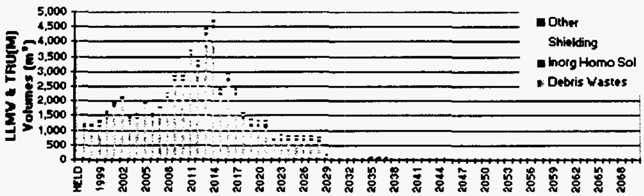
(In descending order, by Physical Waste Form)

LLMW & TRU(M) Waste Life Cycle: Physical Waste Form	Minimum	Baseline	Maximum
Debris Wastes	33,680	60,580	95,220
Inorg Homo Sol	1,730	2,370	3,430
Shielding	930	2,180	3,390
Other	1,340	2,500	6,240
Total	*37,680*	*67,630*	*108,280*

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.

LLMW & TRU(M) Waste Annual Baseline Volumes by Physical Waste Form

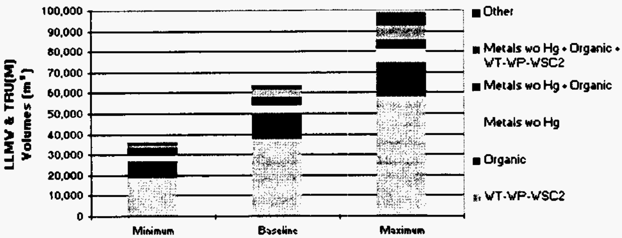
The graph shows the LLMW and TRU(M) waste volume for 1997 through 2070. Waste generation will peak in 2013-2014, due primarily to debris waste from retrieval of the long-length contaminated equipment (from the TWRS program). Waste volume from 2038 through 2070 is virtually constant at about 50 m³. The only facility operating during this period will be the 222S Analytical Laboratory which will be shipping mostly debris waste (79%).



Hazardous Constituents (HCs)

LLMW & TRU(M) Waste Life-Cycle Volumes by Hazardous Constituent

The total baseline volume of waste is approximately 63,290 m³. The minimum expected volume is approximately 35,740 m³, and the maximum expected volume is 98,680 m³. The minimum, baseline, and maximum waste forecast volumes are distributed as follows:



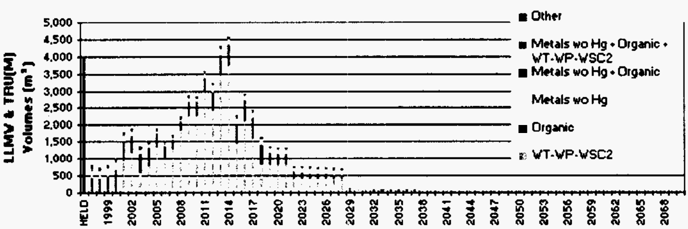
(In descending order, by Hazardous Constituent volume)

LLMW & TRU(M) Waste Life Cycle: Hazardous Constituents	Minimum	Baseline	Maximum
WT-WP-WSC2	18,380	37,030	57,940
Organic	8,400	12,930	16,270
Metals wo Hg	2,660	4,010	6,800
Metals wo Hg + Organic	4,000	4,000	4,000
Metals wo Hg + Organic + WT-WP-WSC2	1,350	3,490	7,140
Other	950	1,830	6,520
Total	*35,740*	*63,290*	*98,680*

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.

LLMW & TRU(M) Waste Annual Baseline Volumes by Hazardous Constituent

The graph shows the LLMW and TRU(M) hazardous constituent waste volume for 1997 through 2070. Waste generation will peak in 2013-2014, due primarily to Washington State regulated waste from retrieval of the long-length contaminated equipment (from the TWRS program). The waste volume from 2038 through 2070 is constant at about 45 m³. The only facility operating during this period will be the 222S Analytical Laboratory which will be shipping mostly metals without mercury, toxic organic, state regulated waste (93%).



Summary Tables (LLMW and TRU(M) waste volumes in m³)

Physical Waste Forms (PWFs)

LLMW & TRU(M) Waste Baseline Forecast by Physical Waste Form

(In descending order, by Physical Waste Form volume)

LLMW & TRU(M) Forecast: Phsical Waste Form	FY97.1 Forecast (m³)	% of Total
Debris Wastes	60,580	90%
Inorg Homo Sol	2,370	4%
Shielding	2,180	3%
Org Homo Sol	1,210	2%
Soil Gravel	580	1%
Other	710	1%
Total	***67,630***	***100%***

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.

LLMW & TRU(M) Waste Life Cycle Baseline Volumes by Physical Waste Form

(In descending order, by Physical Waste Form volume)

LLMW & TRU(M) Physical Waste Forms: Program	Debris Wastes	Inorg Homo Sol	Shielding	Org Homo Sol	Soil Gravel	Other	*Total*
TWRS	47,320	50	2,000	220	520	8	***50,120***
Non-Programmatic	5,390	1	0	2	1	120	***5,510***
Facility Transitions	3,470	230	30	5	1	230	***3,970***
Analytical Services	2,870	0	0	710	0	30	***3,610***
Liquid Effluent	330	2,000	0	130	0	80	***2,540***
PNNL	500	30	120	30	0	220	***900***
Solid Waste	340	30	20	1	3	5	***400***
EM-40	220	1	0	10	3	0	***240***
Offsite	100	30	0	60	1	10	***210***
Spent Nuclear Fuel	20	3	20	40	0	1	***80***
RCRA Monitoring	6	0	3	0	50	0	***60***
Total	***60,580***	***2,370***	***2,180***	***1,210***	***580***	***710***	***67,630***

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.

Hazardous Constituents (HCs)

LLMW & TRU(M) Waste Baseline Forecast by Hazardous Constituent

(In descending order, by Hazardous Constituent volume)

LLMW & TRU(M) Waste: Hazardous Constituent	FY97.1 Forecast (m³)	Percent
WT-WP-WSC2	37,030	59%
Organic	12,930	20%
Metals wo Hg	4,010	6%
Metal wo HG + Organic	4,000	6%
Metal wo HG + Organic +G	3,490	6%
Other	1,830	< 1%
Total	***63,290***	***100%***

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.

LLMW & TRU(M) Waste Life Cycle Baseline Volumes by Hazardous Constituent

(In descending order, by Hazardous Constituent volume)

LLMW & TRU(M) Waste Hazardous Constituents: Program	VT-VP-VSC2	Organic	Metals wo Hg	Metals wo Hg + Organic	Metals wo Hg + Organic + VT-VP-VSC2	Other	*Total*
TWRS	36,860	12,430	800	0	0	0	*50,120*
Non-Programmatic	6	1	200	4,000	60	100	*4,370*
Analytical Services	0	0	0	0	3,350	270	*3,610*
Liquid Effluent	0	0	1,900	0	0	660	*2,540*
Facility Transitions	40	80	730	0	5	280	*1,130*
PNNL	3	120	110	0	70	250	*720*
Solid Waste	50	200	40	0	0	260	*400*
Offsite	60	50	70	0	0	30	*200*
EM-40	0	1	140	0	0	7	*140*
RCRA Monitoring	9	50	3	0	0	0	*60*
Spent Nuclear Fuel	3	0	1	0	0	3	*5*
Total	*37,030*	*12,930*	*4,010*	*4,000*	*3,490*	*1,830*	*63,290*

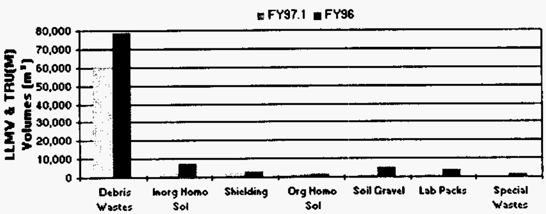
Sum of totals may not add due to rounding: numbers over 10 m³ are rounded to the nearest 10 m³, numbers less than 10 m³ are rounded to integers, non-zero numbers less than 1 are rounded to 1.

Comparison to Previous Baseline(s)

This forecast of 67,630 m³ shows a 33% decrease from the FY96 forecast of 100,900 m³. The largest source of reduction arises from the TWRS program estimate, although almost all programs reported estimate reductions. The FY97.1 forecast (67,630 m³) is 0.13% higher than the FY97.0 forecast of 67,540 m³.

LLMW & TRU(M) Waste Comparison to Previous Baseline(s) by Physical Waste Form

For the FY 97.1 forecast the volume percent of the three most significant physical waste forms are: debris waste (89%), inorganic homogeneous solids (4%) and shielding (3%). For the FY96 forecast the percentages are: debris waste (79%), inorganic homogeneous solids (7%), and labpacks (4%).



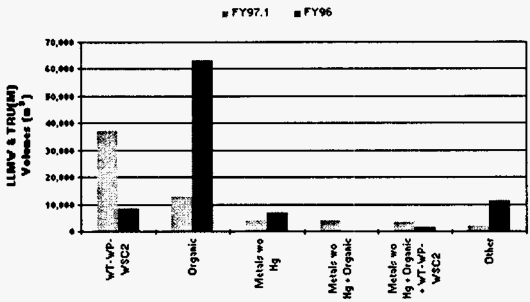
(in descending order by Physical Waste Form volume)

LLMW & TRU(M) Waste Comparison: Physical Waste Form	FY97.1 Forecast (m^3)	FY96 Forecast (m^3)
Debris Wastes	60,580	78,750
Inorg Homo Sol	2,370	7,440
Shielding	2,180	2,790
Org Homo Sol	1,210	1,740
Soil Gravel	580	5,330
Lab Packs	420	3,760
Special Wastes	290	1,090
Total	*67,630*	*100,900*

Sum of totals may not add due to rounding: numbers over 10 m^3 are rounded to the nearest 10 m^3, numbers less than 10 m^3 are rounded to integers, non-zero numbers less than 1 are rounded to 1.

LLMW & TRU(M) Waste Comparison to Previous Baseline(s) by Hazardous Constituent

For the FY 97.1 forecast the volume percent of the three most significant hazardous waste constituents are: Washington State regulated (59%); toxic organics (20%); and metals without mercury (6%). For the FY96 forecast the percentages are: toxic organics (69%); state regulated (9%); corrosives (9%); and metals without mercury (8%).



(in descending order by Hazardous Constituent volume)

LLMW & TRU(M) Waste Comparison Hazardous Constituent	FY97.1 Forecast (m^3)	FY96 Forecast (m^3)
WT-WP-WSC2	37,030	8,210
Organic	12,930	63,020
Metals wo Hg	4,010	7,090
Metals wo Hg + Organic	4,000	0
Metals wo Hg + Organic + WT-WP-WSC2	3,490	1,540
Other	1,824	11,460
Total	**63,280**	**93,320**

Sum of totals may not add due to rounding: numbers over 10 m^3 are rounded to the nearest 10 m^3, numbers less than 10 m^3 are rounded to integers, non-zero numbers less than 1 are rounded to 1.

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 Homogeneous Solids: Material that has an inorganic matrix or content, and does not meet the criteria for debris.

Organic Homogeneous 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.

Labpacks: Various quantities of compatible waste within the same Department of Transportation hazard class, packaged in vessels such as cans or bottles.

Soils/Gravel: Soil or gravel contaminated with hazardous and/or radioactive materials.

Shielding: Three types of shielding include steel, lead, and concrete. It is assumed that, if shielding is required, then 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.

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.

Hazardous Constituents (HCs)

Hazardous constituents as defined by the Resource Conservation and Recovery Act (RCRA) are an important characteristic of the waste that will be generated. These hazardous constituents can be grouped into eight main categories that may be individual or mixed. Several hazardous constituents might be present in a particular waste form and require definition by waste volume percentages as mixed hazardous constituents (e.g., if a 208-liter drum contains both ignitables and corrosives, then the package is 100% ignitables and corrosives). The relevant hazardous constituent 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 Metals (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.

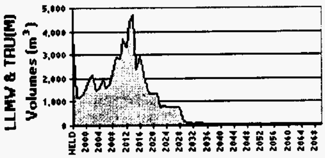
Metals Without Mercury (RCRA codes: D004-D011): Toxic metals that are not contaminated with mercury.

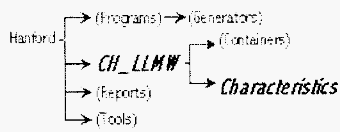
Metals With Mercury (RCRA codes: D009, P065, P092, and U151): Toxic metals that are specifically contaminated with mercury.

Toxic Organics (RCRA codes: D018-D043): Toxic organic compounds.

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.





Site Rev. date: *12/31/96*

Data version: *97.1*

Data currency: *10/25/96*

CH_LLMW Characteristics

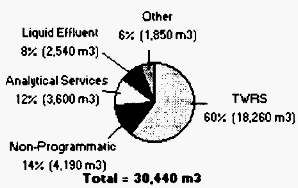
Contents

Highlights

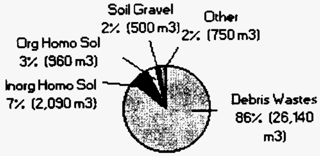
- A total of 30,440 m³ of CH_LLMW is forecast for shipment to the Hanford Waste Management Project by onsite and offsite generators. Of this waste, 86% will be debris, 7% will be inorganic homogenous solids, 3% will be organic homogeneous solids, and 4% will be other physical waste forms.

- The hazardous constituent volume of the CH_LLMW will consist of containers holding state regulated material (WT-WP-WSC2) (37%); organic compounds (24%); metals without mercury and organic (13%); metals without mercury, organic, and state regulated (11%); and various combinations of these hazardous constituents (14%).

Program Distribution

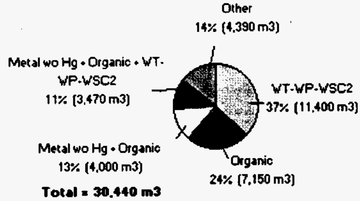


Physical Waste Form Distribution



Total = 30,440 m3

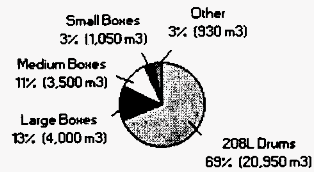
Hazardous Constituent Distribution



Total = 30,440 m3

Note: Includes LLMW only

Container Distribution



Total = 30,440 m3

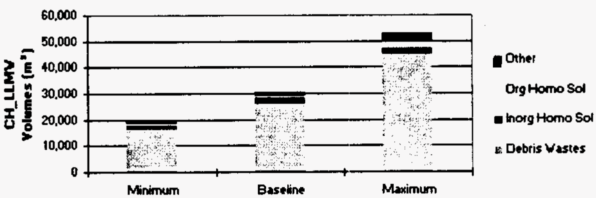
Sum of totals may not add due to rounding: numbers over 10 m³ are rounded to the nearest 10 m³, numbers less than 10 m³ are rounded to integers, non-zero numbers less than 1 are rounded to 1.

Annual Characteristics Volumes

Physical Waste Forms (PWFs)

CH_LLMW Life Cycle Volumes by Physical Waste Form

The total baseline volume of waste is approximately 30,440 m³. The minimum expected volume is approximately 19,180 m³, and the maximum expected volume is 53,080 m³. The minimum, baseline, and maximum waste forecast volumes are distributed as follows:



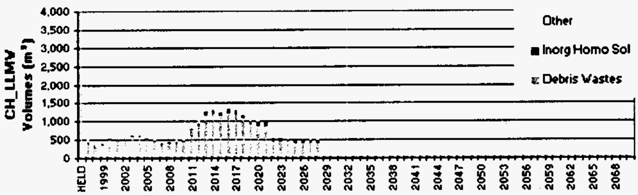
(In descending order, by Physical Waste Form volume)

CH_LLMW Life Cycle: Physical Waste Form	Minimum	Baseline	Maximum
Debris Wastes	16,350	26,140	44,970
Inorg Homo Sol	1,650	2,090	2,470
Org Homo Sol	460	960	1,650
Other	720	1,240	3,990
Total	***19,180***	***30,440***	***53,080***

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.

CH_LLMW Annual Baseline Volumes by Physical Waste Form

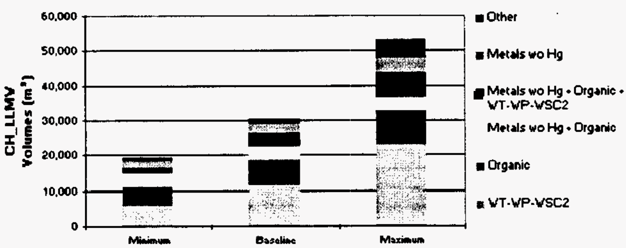
The graph shows the CH_LLMW volume for 1997 through 2070. The 4,000 m³ (100% debris waste) of Held waste is from the Stored Equipment Waste Generator. This waste currently exists but does not have a shipping schedule; thus, it is reported as Held waste. Waste generation will peak in 2014-2016, due primarily to waste associated with the retrieval of the long-length contaminated equipment . Waste volume from 2038 through 2070 is virtually constant at about 50 m³. The only facility operating during this period will be the 222S Analytical Laboratory, which will be shipping mostly debris waste.



Hazardous Constituents (HCs)

CH_LLMW Life-Cycle Volumes by Hazardous Constituent

The total baseline volume of waste is approximately 30,440 m³. The minimum expected volume is approximately 19,180 m³, and the maximum expected volume is 53,080 m³. The minimum, baseline, and maximum waste forecast volumes are distributed as follows:



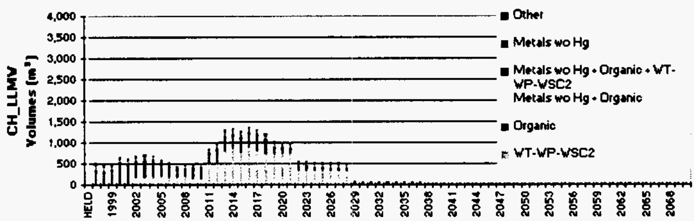
(In descending order, by Hazardous Constituent volume)

CH-LLMW Life Cycle: **Hazardous Constituents**	**Minimum**	**Baseline**	**Maximum**
WT-WP-WSC2	5,730	11,400	22,750
Organic	5,190	7,150	9,750
Metals wo Hg + Organic	4,000	4,000	4,000
Metals wo Hg + Organic + WT-WP-WSC2	1,330	3,470	7,100
Metals wo Hg	1,990	2,730	4,280
Other	940	1,690	5,200
Total	***19,180***	***30,440***	***53,080***

Sum of totals may not add due to rounding: numbers over 10 m^3 are rounded to the nearest 10 m^3, numbers less than 10 m^3 are rounded to integers, non-zero numbers less than 1 are rounded to 1.

CH_LLMW Annual Baseline Volumes by Hazardous Constituent

The graph shows the CH_LLMW hazardous constituent volume for 1997 through 2070. The 4,000 m^3 (100% metals without mercury, organic) of Held waste is from the Stored Equipment Waste Generator. Waste generation will peak in 2013-2014, due primarily to Washington State regulated waste and toxic organic waste from retrieval of the long-length contaminated equipment (from the TWRS program). Waste volume from 2038 through 2070 is constant at about 45 m^3. The only facility operating during this period will be the 222S Analytical Laboratory.



Summary Tables (Volumes in m^3)

Physical Waste Forms (PWFs)

CH_LLMW Forecast by Physical Waste Form

(In descending order, by Physical Waste Form volume)

CH_LLMW Forecast: **Physical Waste Form**	**FY97.1 Forecast (m^3)**	**% of Total**
Debris Wastes	26,140	86%
Inorg Homo Sol	2,090	7%
Org Homo Sol	960	3%
Soil Gravel	500	2%
Lab Packs	420	1%
Special Wastes	280	1%
Shielding	50	< 1%
Total	***30,440***	***100%***

Sum of totals may not add due to rounding: numbers over 10 m^3 are rounded to the nearest 10 m^3, numbers less than 10 m^3 are rounded to integers, non-zero numbers less than 1 are rounded to 1.

CH_LLMW Life-Cycle Baseline Volumes by Physical Waste Form (m^3)

(In descending order, by Physical Waste Form volume)

CH_LLMW Physical Waste Forms: Program	Debris Wastes	Inorg Homo Sol	Org Homo Sol	Soil Gravel	Lab Packs	Other	*Total*
TWRS	17,690	40	50	440	0	50	***18,260***
Non-Programmatic	4,070	1	2	1	90	30	***4,190***
Analytical Services	2,850	0	710	0	30	0	***3,600***
Liquid Effluent	330	2,000	130	0	30	50	***2,540***
Facility Transitions	510	20	5	1	80	150	***770***
PNNL	270	0	0	0	180	40	***490***
Solid Waste	300	1	1	1	1	10	***310***
Offsite	100	30	60	1	3	6	***200***
RCRA Monitoring	6	0	0	50	0	3	***60***
EM-40	6	1	1	3	0	0	***10***
Spent Nuclear Fuel	2	3	1	0	0	1	***5***
Total	***26,140***	***2,090***	***960***	***500***	***420***	***330***	***30,440***

Sum of totals may not add due to rounding: numbers over 10 m^3 are rounded to the nearest 10 m^3, numbers less than 10 m^3 are rounded to integers, non-zero numbers less than 1 are rounded to 1.

Hazardous Constituents (HCs)

CH_LLMW Forecast by Hazardous Constituent Volumes (m^3)

(In descending order, by Hazardous Constituent volume)

CH_LLMW Forecast: Hazardous constituent	FY97.1 Forecast (m^3)	Percent
WT-WP-WSC2	11,400	37%
Organic	7,150	24%
Metal wo Hg + Organic	4,000	13%
Metal wo Hg + Organic + WT-WP-WSC2	3,470	11%
Metals wo Hg	2,730	9%
Other	1,690	6%
Total	***30,440***	***100%***

Sum of totals may not add due to rounding: numbers over 10 m^3 are rounded to the nearest 10 m^3, numbers less than 10 m^3 are rounded to integers, non-zero numbers less than 1 are rounded to 1.

CH_LLMW Life-Cycle Baseline Volumes by Hazardous Constituent Volumes (m^3)

(In descending order, by Hazardous Constituent volume)

CH_LLMW Hazardous Constituents: Program	WT-WP-WSC2	Organic	Metal wo Hg + Organic	Metal wo Hg + Organic + WT-WP-WSC2	Metals wo Hg	Other	*Total*
TWRS	11,230	6,710	0	0	300	30	***18,260***
Non-Programmatic	6	1	4,000	60	30	100	***4,190***
Analytical Services	0	0	0	3,330	0	270	***3,600***
Liquid Effluent	0	0	0	0	1,900	630	***2,540***
Facility Transitions	40	80	0	5	360	290	***770***
PNNL	0	110	0	70	40	260	***490***
Solid Waste	50	150	0	0	20	90	***310***
Offsite	60	50	0	0	70	30	***200***
RCRA Monitoring	9	50	0	0	3	0	***60***
EM-40	0	1	0	0	9	1	***10***
Spent Nuclear Fuel	3	0	0	0	1	3	***5***
Total	***11,400***	***7,150***	***4,000***	***3,470***	***2,730***	***1,690***	***30,440***

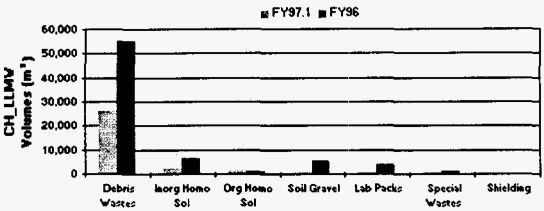
Sum of totals may not add due to rounding: numbers over 10 m^3 are rounded to the nearest 10 m^3, numbers less than 10 m^3 are rounded to integers, non-zero numbers less than 1 are rounded to 1.

Comparison to Previous Baseline(s)

This forecast of 30,440 m³ shows a 58% decrease from the FY96 forecast of 73,040 m³. The largest source of reduction arises from the elimination of 32,980 m³ of CH_LLMW in LECs from the 1996 data. No CH_LLMW will be shipped in LECs since this waste has been reclassified as RH_LLMW. The FY97.1 forecast (30,440 m³) is 0.13% higher than the FY97.0 forecast of 30,400 m³.

CH_LLMW Comparison to Previous Baseline(s) by Physical Waste Form

For the FY 97.1 forecast the volume percent of the three most significant physical waste forms are: debris waste (86%), inorganic homogeneous solids (7%) and organic homogeneous solids (3%). For the FY96 forecast the percentages are: debris waste (75%), inorganic homogeneous solids (9%), and labpacks (5%).



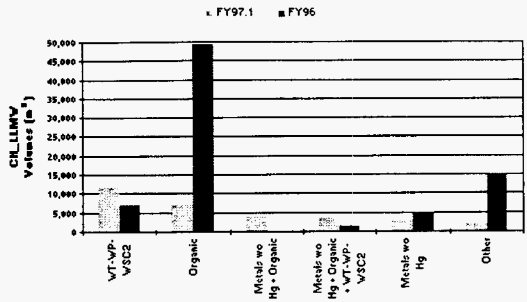
(In descending order, by Physical Waste Form volume)

CH_LLMW Comparison: Physical Waste Form	FY97.1 Forecast (m³)	FY96 Forecast (m³)
Debris Wastes	26,140	54,860
Inorg Homo Sol	2,090	6,670
Org Homo Sol	960	1,350
Soil Gravel	500	5,290
Lab Packs	420	3,600
Special Wastes	280	1,050
Shielding	50	230
Total	*30,440*	*73,040*

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.

CH_LLMW Comparison to Previous Baseline(s) by Hazardous Constituent

For the FY 97.1 forecast the volume percent of the three most significant hazardous waste constituents are: Washington State regulated (37%), toxic organics (24%), and metals without mercury, toxic organics (13%). For the FY96 forecast the percentages are: toxic organics (68%), Washington State regulated waste (10%), and metals without mercury (7%).



(In descending order, by Hazardous Constituent volume)

CH_LLMW Comparison Hazardous Constituent	FY97.1 Forecast (m^3)	FY96 Forecast (m^3)
WT-WP-WSC2	11,400	7,160
Organic	7,150	49,400
Metals wo Hg + Organic	4,000	(na)
Metals wo Hg + Organic + WT-WP-WSC2	3,470	1,540
Metals wo Hg	2,730	4,900
Other	1,664	14,930
Total	***30,440***	***73,040***

Sum of totals may not add due to rounding: numbers over 10 m^3 are rounded to the nearest 10 m^3, numbers less than 10 m^3 are rounded to integers, non-zero numbers less than 1 are rounded to 1.

CHARACTERISTICS:
CH_LLMW · RH_LLMW · CH_TRU(M) · RH_TRU(M) · GTC III · LLW · HAZ

CONTAINERS:
CH_LLMW · RH_LLMW · CH_TRU(M) · RH_TRU(M) · GTC III · LLW · HAZ

WASTE CLASSES:
CH_LLMW · RH_LLMW · CH_TRU(M) · RH_TRU(M) · GTC III · LLW · HAZ

PROGRAMS:
Analytical Services · EM-40 · Facility Transitions · Landlord · Liquid Effluent · NP · Offsite · PNNL · RCRA · Solid Waste · SNF · TWRS

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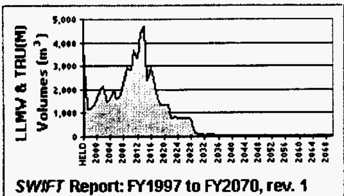
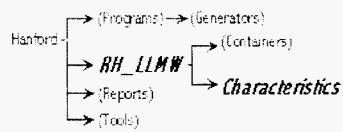




Site Rev. date: *12/31/96*

Data version: *97.1*

Data currency: *10/25/96*

RH_LLMW Characteristics

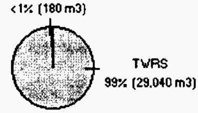
Contents

Highlights

- A total of 29,220 m³ of RH_LLMW is forecast for shipment to the Hanford Waste Management Project by onsite and offsite generators. Of this waste, 92% will be debris, 7% will be shielding, and 1% will be other physical waste forms.

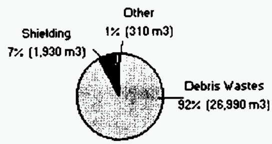
- The RH_LLMW hazardous constituent volume will consist of 78% Washington State regulated waste (WT-WP-WSC2), 19% toxic organics, and 2% other categories.

Program Distribution



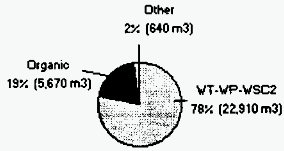
Total = 29,220 m3

Physical Waste Form Distribution



Total = 29,220 m3

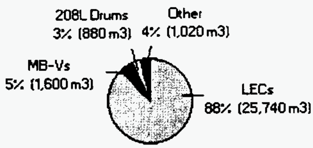
Hazardous Constituent Distribution



Total = 29,220 m3

Note: Includes LLMW only

Container Distribution



Total = 29,220 m3

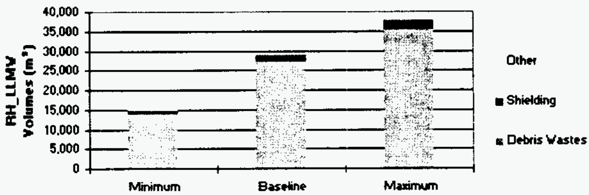
Sum of totals may not add due to rounding: numbers over 10 m³ are rounded to the nearest 10 m³, numbers less than 10 m³ are rounded to integers, non-zero numbers less than 1 are rounded to 1.

Annual RH_LLMW Characteristics

Physical Waste Forms (PWFs)

RH_LLMW Life Cycle Volumes by Physical Waste Form

The total baseline volume of waste is approximately 29,220 m³. The minimum expected volume is approximately 14,870 m³, and the maximum expected volume is 38,190 m³. The minimum, baseline, and maximum waste forecast volumes are distributed as follows:



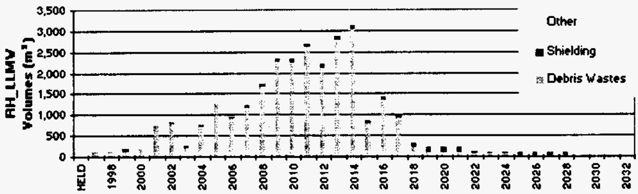
(in descending order by Physical Waste Form volumes)

RH_LLMW Waste Life Cycle: Physical Waste Form	Minimum	Baseline	Maximum
Debris Wastes	13,890	26,990	35,320
Shielding	820	1,930	2,240
Other	150	310	620
Total	***14,870***	***29,220***	***38,190***

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.

RH_LLMW Annual Baseline Volumes by Physical Waste Form

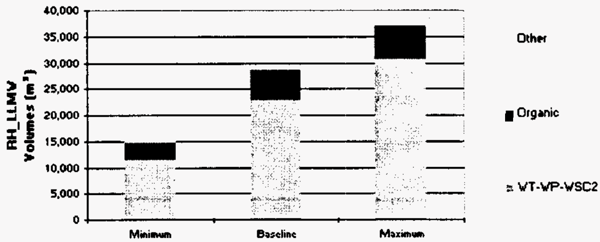
The graph shows the RH_LLMW volume for 1997 through 2032. The TWRS program accounts for more than 99% of the RH_LLMW. Waste generation will peak in 2013-2014, due primarily to retrieval of the long-length contaminated equipment, from the TWRS program.



Hazardous Constituents (HCs)

RH_LLMW Life-Cycle Volumes by Hazardous Constituent

The total baseline volume of waste is approximately 29,220 m³. The minimum expected volume is approximately 14,870 m³, and the maximum expected volume is 38,190 m³. The minimum, baseline, and maximum waste forecast volumes are distributed as follows:



(in descending order by Hazardous Constituent volumes)

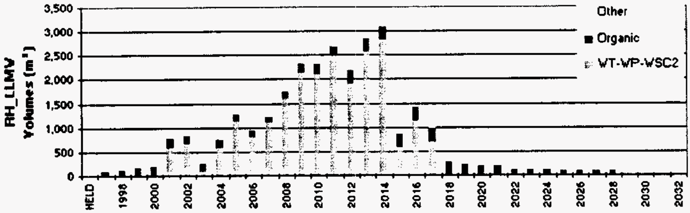
RH-LLMW Life Cycle: Hazardous Constituents	Minimum	Baseline	Maximum
WT-WP-WSC2	11,460	22,910	30,730
Organic	3,140	5,670	6,290
Other	270	640	1,170
Total	***14,870***	***29,220***	***38,200***

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.

RH_LLMW Annual Baseline Volumes by Hazardous Constituent

The graph shows the RH_LLMW volume for 1997 through 2032. The TWRS program accounts for more than 99% of the RH_LLMW. Waste generation will peak in 2013-2014, due primarily to retrieval of the long-length contaminated equipment from the TWRS program.



Summary Tables (Volumes in m³)

Physical Waste Forms (PWFs)

RH_LLMW Forecast by Physical Waste Form

(in descending order by Physical Waste Form volumes)

RH_LLMW Forecast: Physical Waste Form	FY97.1 Forecast (m³)	% of Total
Debris Wastes	26,990	92%
Shielding	1,930	7%
Org Homo Sol	190	1%
Soil Gravel	80	< 1%
Inorg Homo Sol	30	< 1%
Special Wastes	6	< 1%
Lab Packs	3	< 1%
Total	***29,220***	***100%***

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.

RH_LLMW Life-Cycle Baseline Volumes by Physical Waste Form (m³)

(in descending order by Physical Waste Form volumes)

RH_LLMW Physical Waste Forms: Program	Debris Wastes	Shielding	Org Homo Sol	Soil Gravel	Inorg Homo Sol	Other	*Total*
TWRS	26,870	1,910	170	80	9	0	**29,040**
Facility Transitions	70	0	0	0	0	0	**70**
Solid Waste	40	3	1	3	2	5	**60**
PNNL	0	20	20	0	20	0	**50**
Offsite	1	0	0	0	0	4	**5**
Total	**26,990**	**1,930**	**190**	**80**	**30**	**9**	**29,220**

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.

Hazardous Constituents (HCs)

RH_LLMW Forecast by Hazardous Constituent Volumes (m³)

(in descending order by Hazardous Constituent volumes)

RH_LLMW Forecast: Hazardous Constituent	FY97.1 Forecast (m³)	% of Total
WT-WP-WSC2	22,910	78%
Organic	5,670	19%
Metals wo Hg	600	2%
Other	40	< 1%
Total	***29,220***	***100%***

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.

RH_LLMW Life-Cycle Baseline Volumes by Hazardous Constituent Volumes (m³)

(in descending order by Hazardous Constituent volumes)

RH_LLMW Hazardous Constituents: Program	WT-WP-WSC2	Organic	Metals wo Hg	Corrosive + Metal wo Hg + Organic + WT-WP-WSC2	Corrosive	Other	*Total*
TWRS	22,910	5,640	490	0	0	0	***29,040***
Facility Transitions	0	0	70	0	0	0	***70***
Solid Waste	4	40	10	0	3	5	***60***
PNNL	0	0	20	30	0	0	***50***
Offsite	0	0	4	0	0	1	***5***
Total	***22,910***	***5,670***	***600***	***30***	***3***	***6***	***29,220***

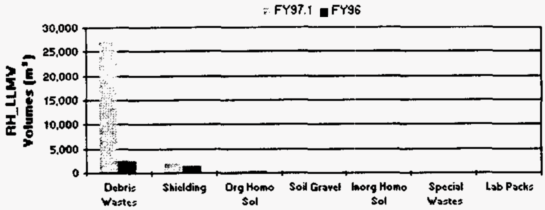
Sum of totals may not add due to rounding: numbers over 10 m³ are rounded to the nearest 10 m³, numbers less than 10 m³ are rounded to integers, non-zero numbers less than 1 are rounded to 1.

Comparison to Previous Baseline(s)

The FY97.1 forecast of 29,200 m³ shows a 623% increase from the FY96 forecast of 4,040 m³. This increase was due to the redesignation of the CH_LLMW from the Single Shell Tank Long Length Equipment generator in the TWRS program to RH_LLMW. The FY97.1 forecast is virtually identical (within 10 m³) to the FY97.0 forecast.

RH_LLMW Comparison to Previous Baseline(s) by Physical Waste Form

For the FY 97.1 forecast the volume percent of the three most significant physical waste forms are: debris waste (92%), shielding (7%) and organic homogeneous solids (1%). For the FY96 forecast the percentages were: debris waste (61%), shielding (32%), and organic homogeneous solids (4%).



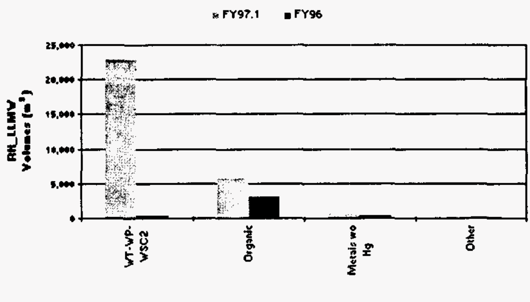
(in descending order by Physical Waste Form volumes)

RH_LLMV Comparison: Physical Waste Form	FY 97.1 Forecast (m^3)	FY96 Forecast (m^3)
Debris Wastes	26,990	2,480
Shielding	1,930	1,290
Org Homo Sol	190	140
Soil Gravel	80	30
Inorg Homo Sol	30	90
Special Wastes	6	2
Lab Packs	3	3
Total	*29,220*	*4,040*

Sum of totals may not add due to rounding: numbers over 10 m^3 are rounded to the nearest 10 m^3, numbers less than 10 m^3 are rounded to integers, non-zero numbers less than 1 are rounded to 1.

RH_LLMW Comparison to Previous Baseline(s) by Hazardous Constituent

For the FY 97.1 forecast the volume percent of the three most significant hazardous waste constituents are: Washington State regulated waste (78%), toxic organics (19%), and metals without mercury (2%). For the FY96 forecast the percentages were: toxic organics (74%), Washington State regulated waste (12%), and metals without mercury (10%).



(in descending order by Hazardous Constituent volumes)

RH_LLMV Comparison Hazardous Constituent	FY97.1 Forecast (m^3)	FY96 Forecast (m^3)
WT-WP-WSC2	22,910	470
Organic	5,670	2,990
Metals wo Hg	600	410
Other	40	170
Total	*29,220*	*4,040*

Sum of totals may not add due to rounding: numbers over 10 m^3 are rounded to the nearest 10 m^3, numbers less than 10 m^3 are rounded to integers, non-zero numbers less than 1 are rounded to 1.

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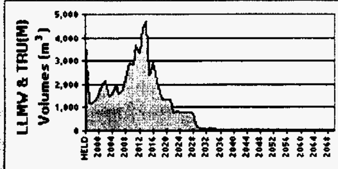


SWIFT Report: FY1997 to FY2070, rev. 1

Hanford → (Programs) → (Generators)
→ *CH_TRU(M)* → (Containers)
→ *Characteristics*
→ (Reports)
→ (Tools)

Site Rev. date: *12/31/96*

Data version: *97.1*

Data currency: *10/25/96*

CH_TRU(M) Waste Characteristics

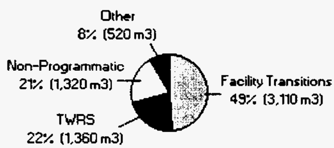
Contents

Highlights

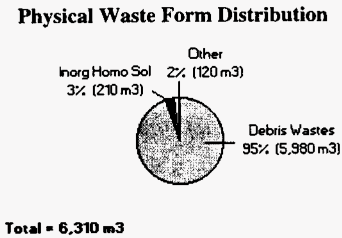
- A total of 6,310 m³ of CH_TRU(M) waste is forecast for shipment to the Hanford Waste Management Project by onsite and offsite generators. Of this waste, 95% will be debris, 3% will be inorganic homogeneous solids, and 2% will be other physical waste forms.

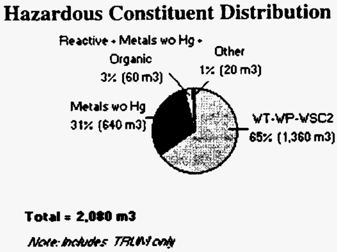
- The CH_TRU(M) waste hazardous constituent volume (2,080 m³) will consist of Washington State regulated waste (WT-WP-WSC2) (65%), metals without mercury (31%), and other hazardous constituents (4%).

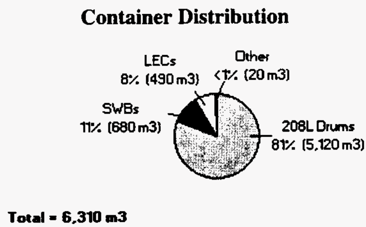
Program Distribution



Total = 6,310 m3







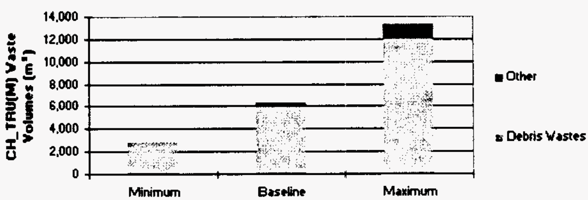
Sum of totals may not add due to rounding: numbers over 10 m³ are rounded to the nearest 10 m³, numbers less than 10 m³ are rounded to integers, non-zero numbers less than 1 are rounded to 1.

Annual CH_TRU(M) Waste Characteristics Volumes

Physical Waste Forms (PWFs)

CH_TRU(M) Waste Life Cycle Volumes by Physical Waste Form

The total baseline volume of waste is approximately 6,310 m³. The minimum expected volume is approximately 2,900 m³, and the maximum expected volume is 13,290 m³. The minimum, baseline, and maximum waste forecast volumes are distributed as follows:



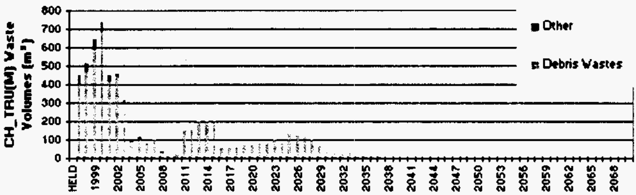
(In descending order, by Physical Waste Form volume)

CH_TRU(M) Waste Life Cycle: Physical Waste Form	Minimum	Baseline	Maximum
Debris Wastes	2,800	5,980	11,980
Other	90	320	1,310
Total	*2,900*	*6,310*	*13,290*

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.

CH_TRU(M) Waste Annual Baseline Volumes by Physical Waste Form

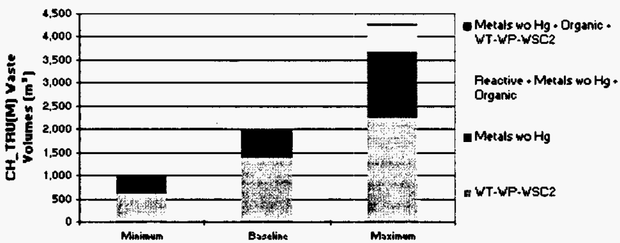
The graph shows the CH_TRU(M) waste volume for 1997 through 2070. Facility Transitions will ship debris waste and inorganic homogenous solids, primarily, from 1997 through 2034. This accounts for 49% of the CH_TRU(M) waste. TWRS will ship debris waste from 2001 through 2028, accounting for about 22% of the CH_TRU(M) waste. The Non-Programmatic (NP) program will ship debris waste from 2011 through 2037, accounting for about 21% of the CH_TRU(M) waste. The remaining waste, about 8%, will be shipped from Analytical Laboratories, EM-40, Offsite, Pacific Northwest National Laboratory, and the Spent Nuclear Fuel program.



Hazardous Constituents (HCs)

CH_TRU(M) Waste Life-Cycle Volumes by Hazardous Constituent

The total baseline volume of waste is approximately 2,080 m³. The minimum expected volume is approximately 1,000 m³, and the maximum expected volume is 4,270 m³. The minimum, baseline, and maximum waste forecast volumes are distributed as follows:



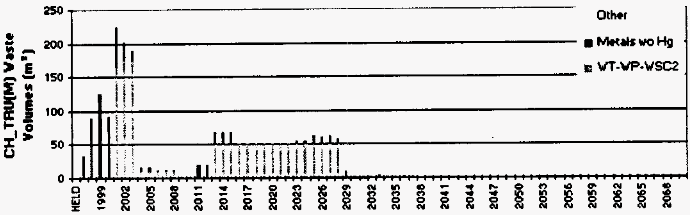
(In descending order, by Hazardous Constituent volume)

CH-TRU(M) Waste Life Cycle: Hazardous Constituents	Minimum	Baseline	Maximum
WT-WP-WSC2	600	1,360	2,230
Metals wo Hg	380	640	1,440
Reactive + Metals wo Hg + Organic	1	60	560
Metals wo Hg + Organic + WT-WP-WSC2	20	20	40
Total	*1,000*	*2,080*	*4,270*

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.

CH_TRU(M) Waste Annual Baseline Volumes by Hazardous Constituent

The graph shows the CH_TRUM waste hazardous constituent volume for 1997 through 2070. TWRS, shipping 100% debris waste from 2001 to 2028, accounts for 66% of this volume. Transition projects, shipping metals without mercury (>99%) from 1997 to 2005, accounts for 15%. EM-40, Non-programmatic, and Offsite, all shipping 100% metals without mercury, contribute 15%. The remaining 4% is contributed by Pacific Northwest National Laboratory and Analytical laboratories.



Summary Tables (Volumes in m³)

Physical Waste Forms (PWFs)

CH_TRU(M) Waste Forecast by Physical Waste Form

(in descending order by Physical Waste Form volumes)

CH_TRU(M) Waste Forecast: Physical Waste Form	FY97.1 Forecast (m³)	Percent
Debris Wastes	5,980	95%
Inorg Homo Sol	210	3%
Shielding	90	1%
Org Homo Sol	20	< 1%
Special Wastes	5	< 1%
Lab Packs	<1	< 1%
Total	*6,310*	*100%*

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.

CH_TRU(M) Waste Life-Cycle Baseline Volumes by Physical Waste Form (m³)

(in descending order by Physical Waste Form volumes)

CH_TRU(M) Waste Physical Waste Forms: Program	Debris Wastes	Inorg Homo Sol	Shielding	Org Homo Sol	Special Wastes	Lab Packs	*Total*
Facility Transitions	2,870	210	30	0	0	0	***3,110***
TWRS	1,360	0	0	0	0	0	***1,360***
Non-Programmatic	1,320	0	0	0	0	0	***1,320***
PNNL	180	0	60	0	5	0	***240***
EM-40	220	0	0	10	0	0	***230***
Analytical Services	20	0	0	0	0	0	***20***
Spent Nuclear Fuel	10	0	0	6	0	0	***20***
Offsite	1	0	0	1	0	< 1	***2***
Total	***5,980***	***210***	***90***	***20***	***5***	***< 1***	***6,310***

Sum of totals may not add due to rounding: numbers over 10 m^3 are rounded to the nearest 10 m^3, numbers less than 10 m^3 are rounded to integers, non-zero numbers less than 1 are rounded to 1.

Hazardous Constituents (HCs)

CH_TRU(M) Waste Forecast by Hazardous Constituent Volumes (m^3)

(in descending order by Hazardous Constituent volumes)

CH_TRU(M) Waste Forecast: Hazardous Constituent	FY97.1 Forecast (m^3)	Percent
VT-VP-VSC2	1,360	66%
Metals wo Hg	640	31%
Reactive • Metals wo Hg • Organic	60	3%
Metal wo HG • Organic • VT-VP-VSC2	20	1%
Corrosive	4	< 1%
Total	***2,080***	***100%***

Sum of totals may not add due to rounding: numbers over 10 m^3 are rounded to the nearest 10 m^3, numbers less than 10 m^3 are rounded to integers, non-zero numbers less than 1 are rounded to 1.

CH_TRU(M) Waste Life-Cycle Baseline Volumes by Hazardous Constituent Volumes (m^3)

(in descending order by Hazardous Constituent volumes)

CH_TRU(M) Hazardous Constituents: Program	VT-VP-VSC2	Metals wo Hg	Reactive • Metal wo Hg • Organic	Metal wo Hg • Organic • VT-VP-VSC2	Corrosive	*Total*
TWRS	1,360	0	0	0	0	***1,360***
Facility Transitions	0	310	0	0	0	***310***
Non-Programmatic	0	170	0	0	0	***170***
EM-40	0	130	0	0	0	***130***
PNNL	0	20	60	0	4	***80***
Analytical Services	0	0	0	20	0	***20***
Offsite	0	1	0	0	0	***1***
Total	***1,360***	***640***	***60***	***20***	***4***	***2,080***

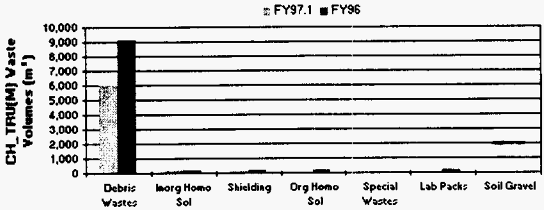
Sum of totals may not add due to rounding: numbers over 10 m^3 are rounded to the nearest 10 m^3, numbers less than 10 m^3 are rounded to integers, non-zero numbers less than 1 are rounded to 1.

Comparison to Previous Baseline(s)

The FY97.1 forecast of 6,310 m^3 of CH_TRU(M) waste shows a 36% decrease from the FY96 forecast of 9,830 m^3 due entirely to forecast reductions from Facility Transitions, Surplus Facilities, and TWRS. The FY97.1 forecast shows a 1% increase over the FY97.0 forecast of 6,250 m^3.

CH_TRU(M) Waste Comparison to Previous Baseline(s) by Physical Waste Form

The FY97.1 forecast shows 95% debris waste and 3% inorganic homogeneous solids as contrasted with the FY96 forecast of 92% debris waste and 2% inorganic homogeneous solids.



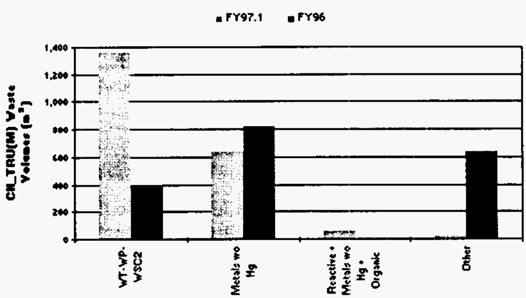
(in descending order by Physical Waste Form volumes)

CH_TRU(M) Waste Comparison: Physical Waste Form	FY 97.1 Forecast (m^3)	FY96 Forecast (m^3)
Debris Wastes	5,980	9,070
Inorg Homo Sol	210	200
Shielding	90	200
Org Homo Sol	20	160
Special Wastes	5	40
Lab Packs	1	160
Soil Gravel	0	7
Total	6,310	9,830

Sum of totals may not add due to rounding: numbers over 10 m^3 are rounded to the nearest 10 m^3, numbers less than 10 m^3 are rounded to integers, non-zero numbers less than 1 are rounded to 1.

CH_TRU(M) Waste Comparison to Previous Baseline(s) by Hazardous Constituent

The FY97.1 forecast of 2,080 m^3 of CH_TRUM waste shows a 13% increase from the FY96 forecast of 1,840 m^3. This change is due to increases in forecast volumes from EM-40, PNNL, and TWRS. These increases more than offset the decrease in volume forecast by Facility Transitions. The FY97.1 forecast of hazardous constituents shows 66% Washington State regulated waste, 31% metals without mercury, and 4% other hazardous constituents. The FY96 forecast is significantly different: 44% metals without mercury, 22% Washington State regulated waste, 13% ignitables, 6% corrosives and 15% other hazardous constituents.



(in descending order by Hazardous Constituent volumes)

CH_TRU(M) Waste Comparison Hazardous Constituent	FY97.1 Forecast (m³)	FY96 Forecast (m³)
WT-WP-WSC2	1,360	400
Metals wo Hg	640	820
Reactive + Metals wo Hg + Organic	60	0
Other	20	640
Total	*2,080*	*1,840*

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.

CHARACTERISTICS:
CH_LLMW · RH_LLMW · *CH_TRU(M)* · RH_TRU(M) · GTC III · LLW · HAZ

CONTAINERS:
CH_LLMW · RH_LLMW · CH_TRU(M) · RH_TRU(M) · GTC III · LLW · HAZ

WASTE CLASSES:
CH_LLMW · RH_LLMW · CH_TRU(M) · RH_TRU(M) · GTC III · LLW · HAZ

PROGRAMS:
Analytical Services · EM-40 · Facility Transitions · Landlord · Liquid Effluent · NP · Offsite · PNNL · RCRA · Solid Waste · SNF · TWRS

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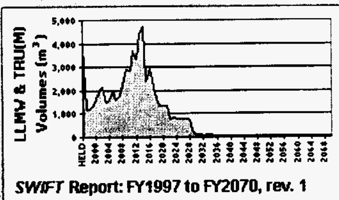
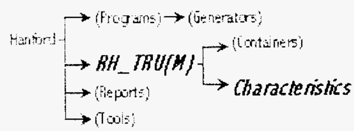




Site Rev. date:	*12/31/96*
Data version:	*97.1*
Data currency:	*10/25/96*

RH_TRU(M) Waste Characteristics

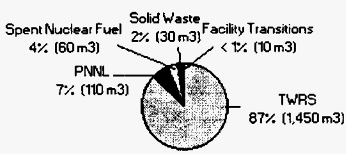
Contents

Highlights

- A total of 1,670 m³ of RH_TRU(M) is forecast for shipment to the Hanford Waste Management Project by onsite and offsite generators. Of this waste, 89% will be debris, 6% will be shielding, and 5% will be other physical waste forms.

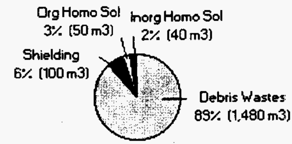
- The RH_TRU(M) hazardous constituent waste volume (1,550 m³) will consist of Washington State regulated waste (WP-WP-WSC2) (88%), toxic organics (7%), and other hazardous constituents (5%).

Program Distribution



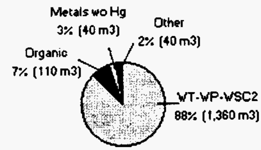
Total = 1,670 m3

Physical Waste Form Distribution



Total = 1,670 m3

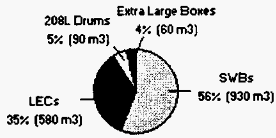
Hazardous Constituent Distribution



Total = 1,550 m3

Note: Includes TRUM only

Container Distribution



Total = 1,670 m3

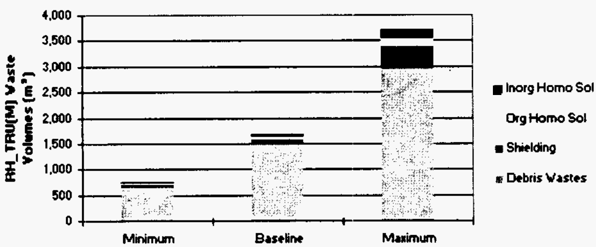
Sum of totals may not add due to rounding: numbers over 10 m³ are rounded to the nearest 10 m³, numbers less than 10 m³ are rounded to integers, non-zero numbers less than 1 are rounded to 1.

Annual RH_TRU(M) Waste Characteristics

Physical Waste Forms (PWFs)

RH_TRU(M) Waste Life Cycle Volumes by Physical Waste Form

The total baseline volume of waste is approximately 1,670 m³. The minimum expected volume is approximately 740 m³, and the maximum expected volume is 3,710 m³. The minimum, baseline, and maximum waste forecast volumes are distributed as follows:



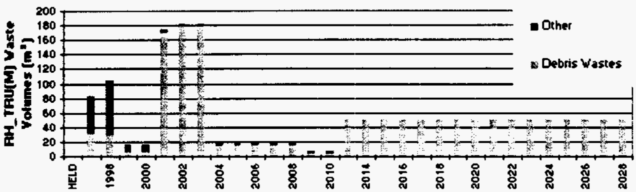
(In descending order, by Physical Waste Form volume)

RH_TRU(M) Waste Life Cycle: Physical Waste Form	Minimum	Baseline	Maximum
Debris Wastes	630	1,480	2,950
Shielding	50	100	430
Org Homo Sol	30	50	150
Inorg Homo Sol	30	40	180
Total	***740***	***1,670***	***3,710***

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.

RH_TRU(M) Waste Annual Baseline Volumes by Hazardous Constituent

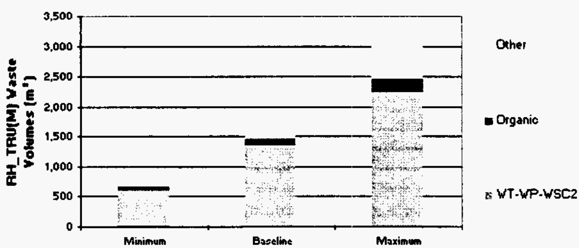
The graph shows the RH_TRU(M) volume from 1997 through 2028. TWRS accounts for 87% of this waste, and 96% of the TWRS waste is debris waste. The second largest contributor (from 1997 through 2010) is Pacific Northwest National Laboratory, which accounts for 7% of the waste, mostly in the form of debris waste (50%) and shielding (31%). The remaining contributors (1997 - 2001) are SNF, Solid Waste, and Facilities Transitions.



Hazardous Constituents (HCs)

RH_TRU(M) Waste Life-Cycle Volumes by Hazardous Constituent

The total baseline volume of waste is approximately 1,550 m³. The minimum expected volume is approximately 690 m³, and the maximum expected volume is 3,100 m³. The minimum, baseline, and maximum waste forecast volumes are distributed as follows:



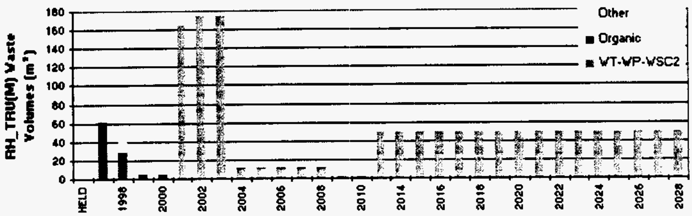
(In descending order, by Physical Waste Form volume)

RH-TRU(M) Waste Life Cycle: Hazardous Constituents	Minimum	Baseline	Maximum
WT-WP-WSC2	600	1,360	2,230
Organic	70	110	230
Other	20	80	630
Total	*700*	*1,550*	*3,100*

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.

RH_TRU(M) Waste Annual Baseline Volumes by Hazardous Constituent

The graph shows the RH_TRUM hazardous constituent volume from 1997 through 2028. TWRS accounts for 94% of this volume, nearly all in the form of Washington State regulated waste. The second most significant contributor (4%) is Pacific Northwest National Laboratory (1997 - 2010) whose waste consists primarily of mixed corrosive, metals without mercury, toxic organics, state regulated (52%), and metals without mercury (23%). The remaining contributors (1997 - 2001) are Solid Waste and Facility Transitions.



Summary Tables (Volumes in m³)

Physical Waste Forms (PWFs)

RH_TRU(M) Waste Forecast by Physical Waste Form

(in descending order by Physical Waste Form volumes)

RH_TRU(M) Forecast: Physical Waste Form	FY97.1 Forecast (m³)	% of Total
Debris Wastes	1,480	89%
Shielding	100	6%
Org Homo Sol	50	3%
Inorg Homo Sol	40	2%
Total	*1,670*	*100%*

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.

RH_TRU(M) Waste Life-Cycle Baseline Volumes by Physical Waste Form (m³)

(in descending order by Physical Waste Form volumes)

RH_TRU(M) Waste Physical Waste Forms: Program	Debris Wastes	Shielding	Org Homo Sol	Inorg Homo Sol	Total
TWRS	1,400	50	5	0	1,450
PNNL	60	40	10	10	110
Spent Nuclear Fuel	10	20	30	0	60
Solid Waste	0	1	0	30	30
Facility Transitions	10	0	0	2	10
Total	1,480	100	50	40	1,670

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.

Hazardous Constituents (HCs)

RH_TRU(M) Waste Forecast by Hazardous Constituent Volumes (m³)

(in descending order by Hazardous Constituent volumes)

RH_TRU(M) Waste Forecast: Hazardous Constituent	FY97.1 Forecast (m³)	Percent
WT-WP-WSC2	1,360	88%
Organic	110	7%
Metals wo Hg	40	3%
Corrosive + Metal wo Hg + Organic + WT-WP-WSC2	30	2%
Corrosive	5	< 1%
Total	1,550	100%

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.

RH_TRU(M) Waste Life-Cycle Baseline Volumes by Hazardous Constituent Volumes (m³)

(in descending order by Hazardous Constituent volumes)

RH_TRU(M) Hazardous Constituents: Program	WT-WP-WSC2	Organic	Metals wo Hg	Corrosive + Metal wo Hg + Organic + WT-WP-WSC2	Corrosive	Total
TWRS	1,360	80	9	0	0	1,450
PNNL	0	10	10	30	5	70
Solid Waste	0	10	10	0	0	30
Facility Transitions	0	0	5	0	0	5
Total	1,360	110	40	30	5	1,550

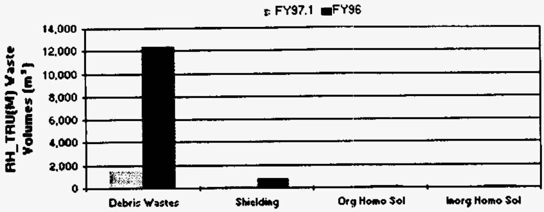
Sum of totals may not add due to rounding: numbers over 10 m³ are rounded to the nearest 10 m³, numbers less than 10 m³ are rounded to integers, non-zero numbers less than 1 are rounded to 1.

Comparison to Previous Baseline(s)

The FY97.1 forecast of 1,670 m³ of RH_TRU(M) shows an 87% decrease from the FY96 forecast of 13,350 m³ due almost entirely to forecast reductions from TWRS. The FY97.1 forecast is 0.60% higher than the FY97.0 forecast of 1,660 m³.

RH_TRU(M) Waste Comparison to Previous Baseline(s) by Physical Waste Form

The FY97.1 forecast shows 89% debris waste and 6% shielding. This is about the same as the FY96 forecast of 92% debris waste and 6% shielding.



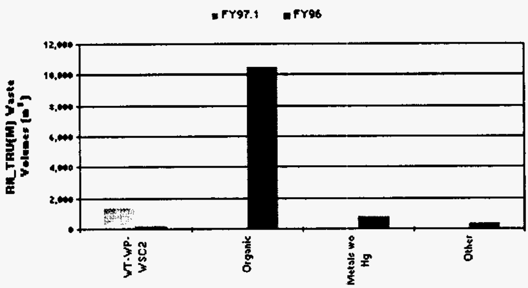
(in descending order by Physical Waste Form volumes)

RH_TRU(M) Waste Comparison: Physical Waste Form	FY97.1 Forecast (m³)	FY96 Forecast (m³)
Debris Wastes	1,480	12,340
Shielding	100	820
Org Homo Sol	50	80
Inorg Homo Sol	40	110
Total	*1,670*	*13,350*

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.

RH_TRU(M) Waste Comparison to Previous Baseline(s) by Hazardous Constituent

The FY97.1 forecast of 1,550 m³ of RH_TRUM hazardous constituent volume shows an 87% decrease from the FY96 forecast of 11,770 m³, due almost entirely to forecast reductions from TWRS. The FY97.1 forecast shows 88% Washington State regulated waste and 7% toxic organics in contrast to the FY96 forecast of 89% toxic organics and 7% metals without mercury.



(in descending order by Hazardous Constituent volumes)

RH_TRU(M) Waste Comparison Hazardous Constituent	FY97.1 Forecast (m³)	FY96 Forecast (m³)
WT-WP-WSC2	1,360	190
Organic	110	10,440
Metals wo Hg	40	810
Other	35	330
Total	*1,550*	*11,770*

Sum of totals may not add due to rounding: numbers over 10 m³ are rounded to the nearest 10 m³, numbers less

than 10 m^3 are rounded to integers, non-zero numbers less than 1 are rounded to 1.

CHARACTERISTICS:
CH_LLMW · RH_LLMW · CH_TRU(M) · *RH_TRU(M)* · GTC III · LLW · HAZ

CONTAINERS:
CH_LLMW · RH_LLMW · CH_TRU(M) · RH_TRU(M) · GTC III · LLW · HAZ

WASTE CLASSES:
CH_LLMW · RH_LLMW · CH_TRU(M) · RH_TRU(M) · GTC III · LLW · HAZ

PROGRAMS:
Analytical Services · EM-40 · Facility Transitions · Landlord · Liquid Effluent · NP · Offsite · PNNL · RCRA · Solid Waste · SNF · TWRS

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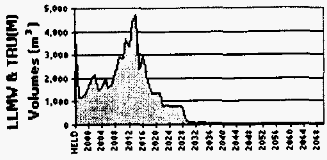


SWIFT Report: FY1997 to FY2070, rev. 1

Hanford → (Programs) → (Generators) → (Containers)
→ GTC III → Characteristics
→ (Reports)
→ (Tools)

Site Rev. date: 12/31/96

Data version: 97.1

Data currency: 10/25/96

GTC III Characteristics

Contents

Highlights

- No LLW or LLMW greater-than-class III (GTCIII) is forecast for shipment to the Hanford SW Project by onsite and offsite generators.
- This forecast shows a significant reduction from the FY96 forecast of 990 m³ (640 m³ of LLMW_GTCIII and 350 m³ of LLW_GTCIII).

Summary Table (Volumes in m³)

[Not applicable]

Comparison to Previous Baseline(s)

The FY97 forecast of no GTCIII waste shows a significant reduction from the FY96 forecast of 990 m³. This reduction arises because the 2 generators that reported GTCIII waste last year – DST Retrieval and PNNL – have both changed their planning assumptions for the current year's forecast. DST Retrieval is using a new baseline for waste forecasts based on the experience of Project W-151. PNNL has determined that they would include in their forecast only waste for which a disposal pathway exists. As a result, no GTCIII waste has been forecast for that program. No GTC III was reported for FY97.1.

Physical Waste Forms (PWFs)

(In descending order, by Physical Waste Form volume)

GTCIII Waste Comparison: Physical Waste Form	FY97.1 Forecast (m^3)	FY96 Forecast (m^3)
Inorg Homo Sol	0	368
Debris Wastes	0	360
Shielding	0	90
Special Wastes	0	160
Org Homo Sol	0	6
Total	***0***	***980***

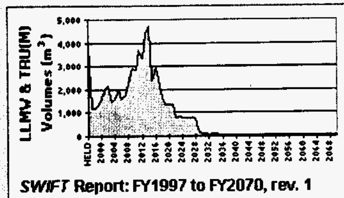
Sum of totals may not add due to rounding: numbers over 10 m^3 are rounded to the nearest 10 m^3, numbers less than 10 m^3 are rounded to integers, non-zero numbers less than 1 are rounded to 1.

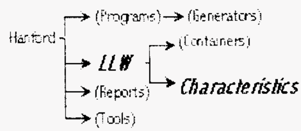
Hazardous Constituents (HCs)

(In descending order, by Hazardous Constituent volume)

GTCIII Comparison Hazardous Constituent	FY97.1 Forecast (m^3)	FY96 Forecast (m^3)
Metals wo Hg + WT-WP-WSC2	0	368
Metals wo Hg	0	158
Organic	0	112
Total	***0***	***640***

Sum of totals may not add due to rounding: numbers over 10 m^3 are rounded to the nearest 10 m^3, numbers less than 10 m^3 are rounded to integers, non-zero numbers less than 1 are rounded to 1.





Site Rev. date: 12/31/96

Data version: 97.1

Data currency: 10/25/96

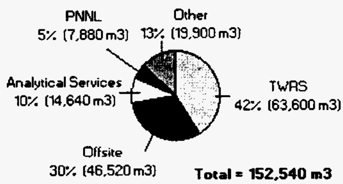
LLW Characteristics

Contents

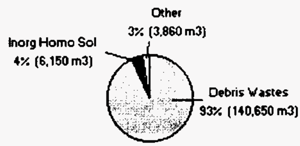
Highlights

- A total of 152,540 m³ of LLW is forecast for shipment to the Hanford Waste Management Project by onsite and offsite generators. Of this waste, 92% will be debris, 4% will be inorganic homogenous solids, and 3% will be other physical waste forms.

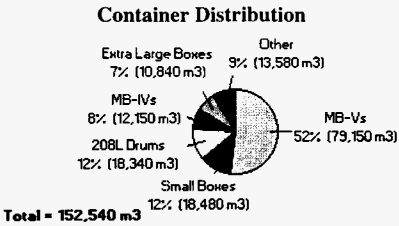
Program Distribution



Physical Waste Form Distribution



Total = 152,540 m3



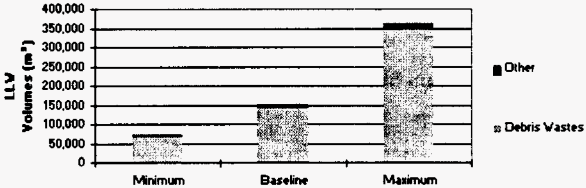
Sum of totals may not add due to rounding: numbers over 10 m³ are rounded to the nearest 10 m³, numbers less than 10 m³ are rounded to integers, non-zero numbers less than 1 are rounded to 1.

Annual LLW Characteristics

Physical Waste Forms (PWFs)

LLW Life Cycle Volumes by Physical Waste Form

The total baseline volume of waste is approximately 152,540 m³. The minimum expected volume is approximately 71,220 m³, and the maximum expected volume is 361,960 m³. The minimum, baseline, and maximum waste forecast volumes are distributed as follows:



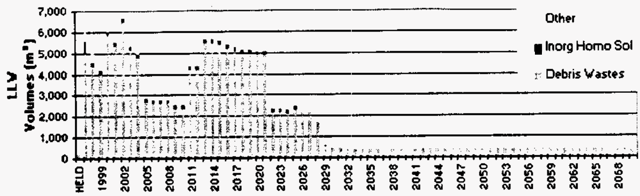
(In descending order, by Physical Waste Form volume)

LLW Life Cycle: Physical Waste Form	Minimum	Baseline	Maximum
Debris Wastes	64,820	140,650	343,410
Other	6,400	11,890	18,550
Total	*71,220*	*152,540*	*361,960*

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.

LLW Annual Baseline Volumes by Physical Waste Form

The graph shows the LLW volume for 1997 through 2070. TWRS (1997 - 2002) accounts for 42% of the LLW; more than 99% of TWRS waste is debris waste. Offsite (1997 - 2070) contributes 30% of the LLW; 91% of Offsite waste is debris waste. The third major contributor to LLW is Analytical Laboratories (1997 - 2070), which contributes 10% of the LLW volume. The remaining contributors, comprising 18% of the LLW volume, include Liquid Effluents, Non-programmatic, RCRA, SNF, Solid Waste, and Facilities Transistions.



Hazardous Constituents (HCs)

LLW Life-Cycle Volumes by Hazardous Constituent

Not Applicable.

LLW Annual Baseline Volumes by Hazardous Constituent

Not Applicable.

Summary Tables (Volumes in m³)

Physical Waste Forms (PWFs)

LLW Forecast by Physical Waste Form

(In descending order, by Physical Waste Form volume)

LLV Forecast: Phsical Vaste Form	FY97.1 Forecast (m³)	Percent
Debris Wastes	140,650	92%
Inorg Homo Sol	6,150	4%
Soil Gravel	3,860	3%
Shielding	900	1%
Org Homo Sol	800	1%
Lab Packs	190	< 1%
Total	***152,548***	***100%***

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.

LLW Life-Cycle Baseline Volumes by Physical Waste Form (m³)

(In descending order, by Physical Waste Form volume)

LLW Physical Waste Forms: Program	Debris Wastes	Inorg Homo Sol	Soil Gravel	Shielding	Org Homo Sol	Other	*Total*
TWRS	63,560	20	0	0	20	0	***63,600***
Offsite	42,370	870	2,320	200	570	180	***46,520***
Analytical Services	13,530	0	1,110	0	0	0	***14,640***
PNNL	7,880	0	0	0	0	0	***7,880***
Facility Transitions	6,260	10	100	80	10	1	***6,470***
Liquid Effluent	350	5,050	10	0	80	0	***5,490***
Solid Waste	3,090	180	150	0	80	0	***3,500***
Non-Programmatic	2,230	10	70	4	10	2	***2,330***
Spent Nuclear Fuel	1,350	0	0	620	20	0	***1,990***
RCRA Monitoring	30	0	100	0	0	0	***130***
Total	***140,650***	***6,150***	***3,860***	***900***	***800***	***190***	***152,540***

Sum of totals may not add due to rounding: numbers over 10 m^3 are rounded to the nearest 10 m^3, numbers less than 10 m^3 are rounded to integers, non-zero numbers less than 1 are rounded to 1.

Hazardous Constituents (HCs)

LLW Forecast by Hazardous Constituent Volumes (m^3)

Not Applicable.

LLW Life-Cycle Baseline Volumes by Hazardous Constituent Volumes (m^3)

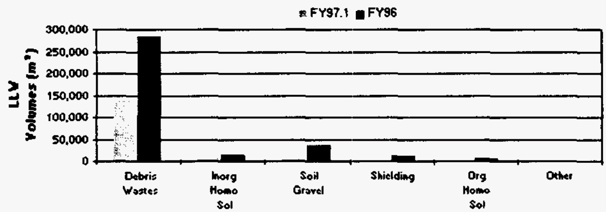
Not Applicable.

Comparison to Previous Baseline(s)

The FY97.1 forecast of 152,540 m^3 shows a 57% decrease from the FY96 forecast of 353,160 m^3. This decrease reflects the significant waste volume reductions from Offsite, Pacific Northwest National Laboratory, and RCRA programs. The LLW volume reductions from these 3 programs account for almost the entire reduction of LLW volume for Hanford. The FY97.1 forecast (152,540 m^3) shows a 0.24% increase from the FY97.0 forecast of 152,180 m^3.

LLW Comparison to Previous Baseline(s) by Physical Waste Form

The percentage composition for FY97.1 shows that 92% will be debris waste and 4% will be inorganic homogeneous solids. By comparison, the FY96 forecast shows 81% debris waste, 10% soil and gravel, and 4% inorganic homogeneous solids.



(In descending order, by Physical Waste Form volume)

LLW Comparison: Physical Waste Form	FY97.1 Forecast (m^3)	FY96 Forecast (m^3)
Debris Wastes	140,650	285,670
Inorg Homo Sol	6,150	13,850
Soil Gravel	3,860	37,470
Shielding	900	11,290
Org Homo Sol	800	5,160
Other	190	380
Total	*152,548*	*353,160*

Sum of totals may not add due to rounding: numbers over 10 m^3 are rounded to the nearest 10 m^3, numbers less than 10 m^3 are rounded to integers, non-zero numbers less than 1 are rounded to 1.

LLW Comparison to Previous Baseline(s) by Hazardous Constituent

Not Applicable.

CHARACTERISTICS:
CH_LLMW · RH_LLMW · CH_TRU(M) · RH_TRU(M) · GTC III · *LLW* · HAZ

CONTAINERS:
CH_LLMW · RH_LLMW · CH_TRU(M) · RH_TRU(M) · GTC III · LLW · HAZ

WASTE CLASSES:
CH_LLMW · RH_LLMW · CH_TRU(M) · RH_TRU(M) · GTC III · LLW · HAZ

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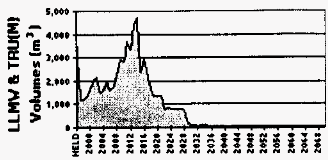


SWIFT Report: FY1997 to FY2070, rev. 1

Hanford → (Programs) → (Generators); → HAZ → (Containers), → Characteristics; → (Reports); → (Tools)

Site Rev. date: 12/31/96

Data version: 97.1

Data currency: 10/25/96

Hazardous Waste (HAZ) Characteristics

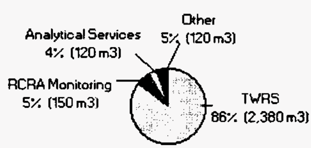
Contents

Highlights

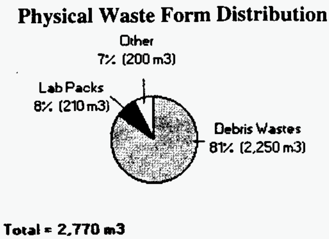
- A total of 2,770m³ of hazardous waste is forecast for shipment to the Hanford Waste Management Project by onsite and offsite generators. Of this waste, 81% will be debris wastes, 8% will be lab packs, 4% will be soil and gravel, 3% will be organic homogeneous solids, and 4% will be other physical waste forms.

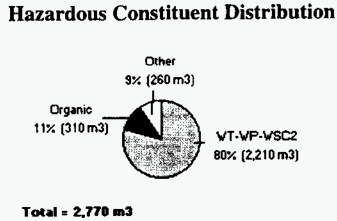
- The hazardous constituent volume will consist of containers holding state regulated material (80%); toxic organic compounds (11%); combinations of ignitable, corrosive, and reactive compounds, metals without mercury, toxic organic compounds, and state regulated materials (3%); metals without mercury (2%); and other hazardous constituents (4%).

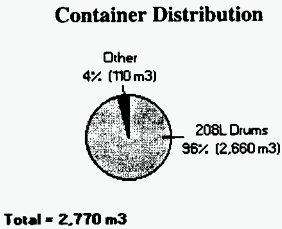
Program Distribution



Total = 2,770 m3







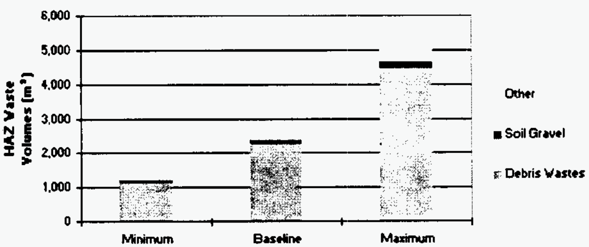
Sum of totals may not add due to rounding: numbers over 10 m³ are rounded to the nearest 10 m³, numbers less than 10 m³ are rounded to integers, non-zero numbers less than 1 are rounded to 1.

Annual HAZ Waste Characteristics

Physical Waste Forms (PWFs)

HAZ Waste Life Cycle Volumes by Physical Waste Form

The total baseline volume of waste is approximately 2,770 m³. The minimum expected volume is approximately 1,430 m³, and the maximum expected volume is 5,300 m³. The minimum, baseline, and maximum waste forecast volumes are distributed as follows:



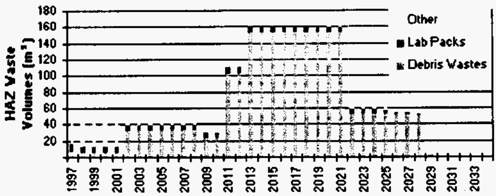
(in descending order by Physical Waste Form volumes)

HAZ Waste Life Cycle: Physical Waste Form	Minimum	Baseline	Maximum
Debris Wastes	1,130	2,250	4,460
Lab Packs	130	210	330
Other	170	320	510
Total	1,430	2,770	5,300

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.

HAZ Waste Annual Baseline Volumes by Physical Waste Form

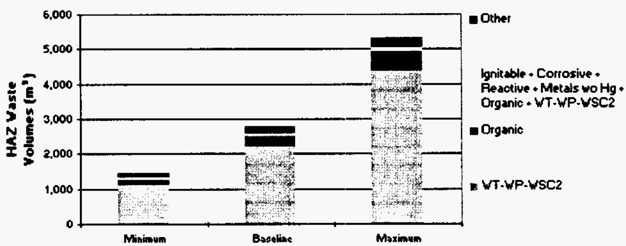
The graph shows the hazardous volume for 1997 through 2034. About 86% of the waste is generated by TWRS, 5% by RCRA and 4% by Analytical Laboratories. Waste generation will peak in 2013-2021, due to waste (98% debris waste) associated with the retrieval of the long-length contaminated equipment from TWRS.



Hazardous Constituents (HCs)

HAZ Waste Life-Cycle Volumes by Hazardous Constituent

The total baseline volume of waste is approximately 2,770 m³. The minimum expected volume is approximately 1,430 m³, and the maximum expected volume is 5,300 m³. The minimum, baseline, and maximum waste forecast volumes are distributed as follows:



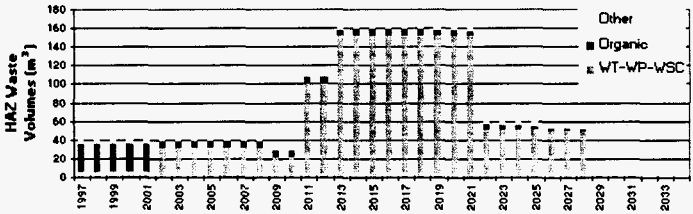
(in descending order by Hazardous Constituent volumes)

HAZ Waste Life Cycle: Hazardous Constituents	Minimum	Baseline	Maximum
WT-WP-WSC2	1,110	2,210	4,380
Organic	140	310	560
Ignitable • Corrosive • Reactive • Metals wo Hg • Organic • WT-WP-WSC2	80	80	100
Other	100	170	270
Total	***1,430***	***2,770***	***5,300***

Sum of totals may not add due to rounding: numbers over 10 m^3 are rounded to the nearest 10 m^3, numbers less than 10 m^3 are rounded to integers, non-zero numbers less than 1 are rounded to 1.

HAZ Waste Annual Baseline Volumes by Hazardous Constituent

The graph shows the hazardous waste volume for 1997 through 2034. About 86% of the waste is generated by TWRS, 5% by RCRA and 4% by Analytical Laboratories. Waste generation will peak in 2013-2021, due to waste (90% Washington State regulated waste) associated with the retrieval of the long-length contaminated equipment from TWRS.



Summary Tables (Volumes in m^3)

Physical Waste Forms (PWFs)

HAZ Waste Forecast by Physical Waste Form Volumes

(in descending order by Physical Waste Form volumes)

HAZ Waste Forecast: Physical Waste Form	FY97.1 Forecast (m^3)	Percent
Debris Wastes	2,250	81%
Lab Packs	210	8%
Soil Gravel	110	4%
Org Homo Sol	90	3%
Inorg Homo Sol	50	2%
Other	60	2%
Total	***2,770***	***100.0%***

Sum of totals may not add due to rounding: numbers over 10 m^3 are rounded to the nearest 10 m^3, numbers less than 10 m^3 are rounded to integers, non-zero numbers less than 1 are rounded to 1.

HAZ Waste Life-Cycle Baseline Physical Waste Form Volumes (m^3)

(in descending order by Physical Waste Form volumes)

HAZ Waste Physical Waste Forms: Program	Debris Wastes	Lab Packs	Soil Gravel	Org Homo Sol	Inorg Homo Sol	Other	*Total*
TWRS	2,200	80	0	60	20	20	*2,380*
RCRA Monitoring	10	3	110	10	0	7	*150*
Analytical Services	0	110	0	0	0	6	*120*
Liquid Effluent	10	10	1	20	20	10	*80*
Facility Transitions	1	3	0	0	0	10	*10*
Solid Waste	20	0	2	0	6	2	*30*
Total	*2,250*	*210*	*110*	*90*	*50*	*60*	*2,770*

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.

Hazardous Constituents (HCs)

HAZ Waste Forecast by Hazardous Constituent Volumes

(in descending order by Hazardous Constituent volumes)

HAZ Waste Forecast: Hazardous Constituent	FY97.1 Forecast (m³)	Percent
WT-WP-WSC2	2,210	80%
Organic	310	11%
Ignitable + Corrosive +Reactive + Metals wo Hg+ Organic + WT-WP-	80	3%
Metals wo Hg	50	2%
Corrosive + WT-WP-WSC2	40	1%
Other	119	4%
Total	*2,770*	*100%*

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.

HAZ Waste Life-Cycle Baseline Hazardous Constituent Volumes (m³)

(in descending order by Hazardous Constituent volumes)

HAZ Waste Physical Waste Forms: Program	WT-WP-WSC2	Organic	Ignitable + Corrosive + Reactive + Metal wo Hg + WT-WP-WSC2	Metals wo Hg	Corrosive + WT-WP-WSC2	Other	*Total*
TWRS	2,150	190	0	30	0	9	*2,380*
RCRA Monitoring	20	120	0	7	0	0	*150*
Analytical Services	30	0	0	0	40	40	*120*
Liquid Effluent	0	0	80	0	0	0	*80*
Solid Waste	4	1	0	10	0	20	*30*
Facility Transitions	0	1	0	2	0	10	*10*
Total	*2,210*	*310*	*80*	*50*	*40*	*80*	*2,770*

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.

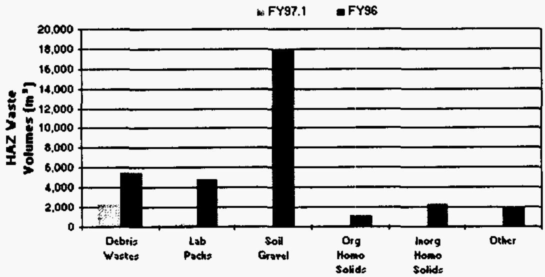
Comparison to Previous Baseline(s)

- The FY97.1 forecast of 2,770 m³ of hazardous waste shows a 91.8% decrease from the FY96 forecast of 33,830 m³. The reason for the enormous change between the two forecasts is that the Waste Management Program is no longer the central collection point for hazardous waste generated on the Hanford Site. Many generators have elected to send their hazardous waste directly to other vendors for waste management. Only those generators who plan to have the Waste Management Program manage their waste are included in the FY 97 forecast.

- There was no change between the FY97.1 forecast and the FY97.0 forecast.

HAZ Waste Comparison to Previous Baseline(s) by Physical Waste Form

For the FY97.1 forecast the volume percent of the three most significant physical waste forms are: debris waste (81%), lab packs (8%) and soil and gravel (4%). For the FY96 forecast the percentages are: soil and gravel (53%), debris waste (16%), and lab packs (14%).



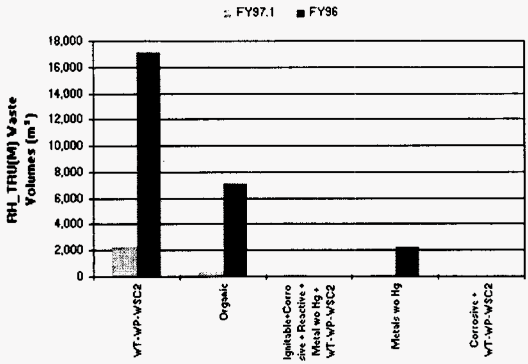
(in descending order by Physical Waste Form volumes)

HAZ Comparison: Physical Waste Form	FY97.1 Forecast (m^3)	FY96 Forecast (m^3)
Debris Wastes	2,250	5,510
Lab Packs	210	4,840
Soil Gravel	110	18,020
Org Homo Solids	90	1,080
Inorg Homo Solids	50	2,310
Other	60	2,070
Total	***2,770***	***33,830***

Sum of totals may not add due to rounding: numbers over 10 m^3 are rounded to the nearest 10 m^3, numbers less than 10 m^3 are rounded to integers, non-zero numbers less than 1 are rounded to 1.

HAZ Waste Comparison to Previous Baseline(s) by Hazardous Constituent

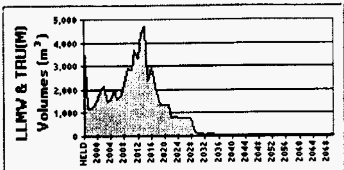
For the FY 97.1 forecast the volume percent of the three most significant hazardous waste constituents are: Washington State regulated (80%), toxic organics (11%), and combinations of ignitable, corrosive, and reactive compounds, metals without mercury, toxic organic compounds, and state regulated materials (3%). For the FY96 forecast the percentages are: Washington State regulated waste (51%), toxic organics (21%), and metals without mercury (7%).



(in descending order by Hazardous Constituent volumes)

Hazardous Waste Comparison **Hazardous Constituent**	**FY97.1 Forecast (m³)**	**FY96 Forecast (m³)**
WT-WP-WSC2	2,210	17,110
Organic	310	7,060
Ignitable + Corrosive + Reactive + Metals wo Hg + Organic + WT-WP-WSC2	80	0
Metals wo Hg	50	2,270
Corrosive + WT-WP-WSC2	40	130
Other	80	7,270
Total	***2,770***	***33,830***

Sum of totals may not add due to rounding: numbers over 10 m^3 are rounded to the nearest 10 m^3, numbers less than 10 m^3 are rounded to integers, non-zero numbers less than 1 are rounded to 1.



SWIFT Report: FY1997 to FY2070, rev. 1

Hanford → (Programs) → (Generators)
→ BH_LLMW → (Containers)
→ (Characteristics)
→ (Reports)
→ *Glossary*

Site Rev. date: *12/31/96*

Data version: *97.1*

Data currency: *10/25/96*

Glossary

- » Abbreviations
- » Waste Class Naming Conventions
- » 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 Incorporated
BWHC	Babcock & Wilcox Hanford Company

- C -

CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act
CDR	Conceptual Design Report
CH	contact-handled
Cs	cesium
CWC	Central Waste Complex

- D -

D&D	decontamination and decommissioning
DESH	Duke Engineering & Services Hanford
DOE	U.S. Department of Energy
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

ETF	Effluent Treatment Facility

- F -

FFTF	Fast Flux Test Facility
FMEF	Fuels Material and Examination Facility
FY	fiscal year
FY96	Dataset collected 6/30/95
FY97.0	Dataset collected 6/30/96
FY97.1	Dataset revisions collected 10/30/96

- G -

GTCIII	greater than Category III

- H -

HAZ	Hazardous Waste
HC	Hazardous Constituent
HELD	waste that is expected to be shipped to CWC, but that does not have a shipping schedule
HEPA	High Efficiency Particulate Air (filter)
Hg	Mercury
HLVP	High-Level Vitrification Project
HLW	high-level waste
Homo	homogeneous
Inorg	inorganic

- I -

IX	ion exchange

- L -

LBL	Lawrence Berkeley Laboratory
LEC	long-length equipment container
LERF	Liquid Effluent Retention Facility
LLBG	Low-Level Burial Ground
LLE	long-length contaminated equipment
LLMW	low-level mixed waste
LLVP	Low-Level Vitrification Project
LLW	low-level waste
LMHC	Lockheed Martin Hanford Company

- M -

M&I	maintenance and integration
MB-	metal box
mrem	milli-rem

MUSTs	miscellaneous underground storage tanks
MYPP	Multi-Year Program Plan
MYWP	Multi-Year Work Plan

- N -

nCi	nanocurie
NA	Not Available
NHC	Numatec Hanford Company
NP	Non Programmatic

- O -

Org	organic

- P -

PCB	polychlorinated biphenyl
PFP	Plutonium Finishing Plant
PHMC	Project Hanford Management Contract
PNNL	Pacific Northwest National Laboratories
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
RFSH	Rust Federal Services of Hanford
RH	remote-handled

- S -

SNF	spent nuclear fuel (also refers to the Spent Nuclear Fuel program)
Sol	solid
Sr	strontium
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; Solid Waste Information Forecasting Tool
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 *without Mercury*)
WRAP I	Waste Receiving and Processing Facility
WSCF	Waste Sampling and Characterization Facility
WT-WP-WSC2	Washington State Regulated hazardous constituents

Waste Class Naming Conventions

Solid waste can be characterized into five classes, excluding LLW and 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 Waste Category Definitions

	CH_ LLMW	RH_ LLMW	CH_ TRU(M)	RH_ TRU(M)	LLMW_ GTCIII
Dose rate	<= 200 mrem/h	> 200 mrem/h	<= 200 mrem/h	> 200 mrem/h	Varies
Dangerous per WAC 173-303	Yes	Yes	Yes (TRU(M)) No (TRU)	Yes (TRU(M)) No (TRU)	Yes
> 100 nCi/g(b) alpha-emitting isotopes (atomic numbers > 92 & half-lives > 20 years)	No	No	Yes	Yes	No

(< ... less than   > ... greater than   = ... equal)

Contact-handled low-level mixed waste (CH_LLMW)

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 low-level mixed waste (RH_LLMW)

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.

Low-level mixed waste greater than Class III (LLMW_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.

In addition to the above waste categories, another key definition concerns **Held waste**. Held waste is existing generated waste with no current shipping schedule.

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 Homogeneous Solids: Material that has an inorganic matrix or content, and does not meet the criteria for debris.

Organic Homogeneous 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.

Labpacks: Various quantities of compatible waste within the same Department of Transportation hazard class, packaged in vessels such as cans or bottles.

Soils/Gravel: Soil or gravel contaminated with hazardous and/or radioactive materials.

Shielding: Three types of shielding include steel, lead, and concrete. It is assumed that, if shielding is required, then 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.

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.

Hazardous Constituents (HCs)

Hazardous constituents as defined by the Resource Conservation and Recovery Act (RCRA) are an important characteristic of the waste that will be generated. These hazardous constituents can be grouped into eight main categories that may be individual or mixed. Several hazardous constituents might be present in a particular waste form and require definition by waste volume percentages as mixed hazardous constituents (e.g., if a 208-liter drum contains both ignitables and corrosives, then the package is 100% ignitables and corrosives). The relevant hazardous constituent 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 Metals (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.

Metals Without Mercury (RCRA codes: D004-D011): Toxic metals that are not contaminated with mercury.

Metals With Mercury (RCRA codes: D009, P065, P092, and U151): Toxic metals that are specifically contaminated with mercury.

Toxic Organics (RCRA codes: D018-D043): Toxic organic compounds.

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 Definitions

For the 1997 forecast, 12 different container types have been reported for solid waste shipment to Waste Management during its life cycle. 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.

208-liter drum: This is a standard-size drum equal to 55 U.S. gallons.

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.

Other drums: This category represents various container sizes used less often than the standard drums, such as 57-liter drums, 76-liter drums, or 416-liter drums.

Boxes

Extra-large box: This shipping container is defined by an external volume greater than 28.3 m^3 (1,000 ft^3). Boxes of this size are too big to be accepted at the STP treatment facility.

Large box: The size of this container is defined as greater than 16.3 m^3 and less than 28.3 m^3 in external volume (576-1,000 ft^3). This size is too large to be accepted at the STP facility.

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_LLMW.

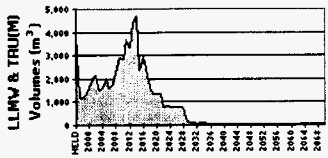
MB-IV: This metal box measures 1.95 m long by 1.32 m wide by 1.11 m high.

MB-V: Made of either metal or plywood, this box measures 2.43 m long by 1.22 m wide by 1.33 m high.

Medium box: Any size in between an external volume of 3.6 and 16.3 m^3 (128-576 ft^3) classifies as a medium box. All Medium boxes can be handled by STP treatment facility.

Small box: A small box has an external volume less than 3.6 m^3 (128 ft^3).

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).



SWIFT **Report: FY1997 to FY2070, rev. 1**

Hanford → (Programs) → (Generators)
→ (Waste Classes) → (Containers)
→ (Characteristics)
→ (Reports)
→ Tools → *Help*

Site Rev. date: *12/31/96*

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Help!

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
- Generator life cycle phases

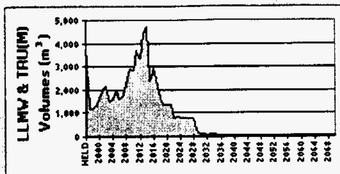
HELP:
Help Home · SWIFT Report Web Site Overview · Forecasting Process · Using Netscape · Netscape Bookmarks · Percentages · Rounding · Min/Max · Waste Class Naming · Waste Categories · Container Specifications · Generator Life Cycles

PROGRAMS:
Analytical Services · EM-40 · Facility Transitions · Landlord · Liquid Effluent · NP · Offsite · PNNL · RCRA · Solid Waste · SNF · TWRS

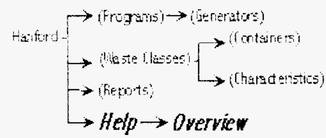
CHARACTERISTICS:	CONTAINERS:
CH_LLMW · RH_LLMW · CH_TRU(M) · RH_TRU(M) · GTC III · LLW · HAZ	CH_LLMW · RH_LLMW · CH_TRU(M) · RH_TRU(M) · GTC III · LLW · HAZ

WASTE CLASSES:
CH_LLMW · RH_LLMW · CH_TRU(M) · RH_TRU(M) · GTC III · LLW · HAZ

Home · Contents · Web Site Map · Glossary · *Help* · Reports · Data Requests · Feedback Form



SWIFT Report: FY1997 to FY2070, rev. 1



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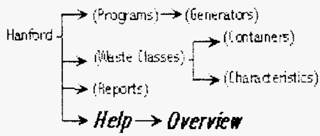
10/25/96

Help!

SWIFT Report Web Site Overview

This site has 3 levels of information about forecast LLMW and TRU(M) solid waste to be managed at the Central Waste Complex (CWC). Each level is successively more detailed. The block diagram shows the logical construction of the site, starting with the least detailed (broadest) view of the data:



The Site Map shows more details about this organization.

The general format for each section is:

- Header (Logo, locator, 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—a time series line graph showing volumes for LLMW and TRU(M) waste in the current forecast

- Locator—a graphical view of your current location in the web site
- 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 **Contents section** provides 1) an overview of what's at the current location, and 2) links to specific information in the location.

The **Highlights section** is a brief, bulleted, overview of key LLMW 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 LLMW 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 LLW and HAZ waste in the current forecast. Differences in current and baseline LLW forecasts are identified and described.

The **Tool bars** provide easy movement between and among Programs, waste class summary data, and Generator information. The bottom bar provides quick access to the site's tools, which include:

- **Home**—takes you back to the Home Page.
- **Contents**—loads a list of the site's contents, all of which are linked for easy access.
- **Web Site Map**—provides a graphical overview of the main structure and contents of the site.
- **Glossary**—provides definitions for acronyms used in the site.
- **Help**—gets you to the Help contents list.
- **Reports**—moves to the list of reports available on the site; click on the report name to load it.
- **Data Requests**—loads a form for requesting filtered or sorted views of the data in the forecast.
- **Feedback Form**—is your chance to tell us what you'd like to have included in the site, and any comments or suggestions you have.

Program areas include a **Summary Table** of the totals for LLMW 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). They have a note mentioning this under the Data link.

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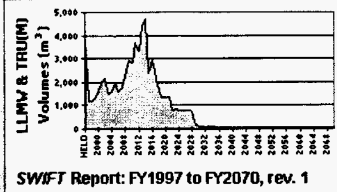

Hanford → (Programs) → (Generators)
→ (Waste Classes) → (Containers)
→ (Characteristics)
→ (Reports)
→ *Help* → *Forecasting Process*

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Help!

The Forecasting Process

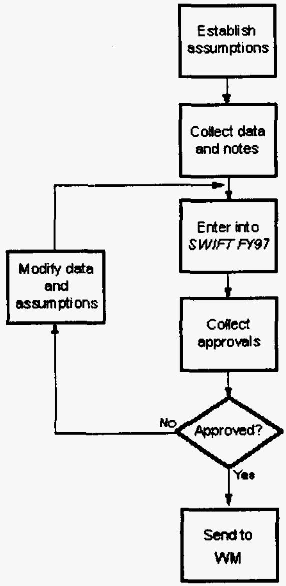
The forecasting process can be partitioned into the following steps:

- *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.

- *Collecting forecast data* – Once the assumptions are clear, the waste generator collects data using those assumptions.

- *Setting up a forecast file* – At this step, the waste generator begins to enter information into *SWIFT FY97*, 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 "mixed" hazardous constituents will be forecast.

- *Entering 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 physical form of the waste, (3) the hazardous constituents 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.



HELP: Help Home · SWIFT Report Web Site Overview · *Forecasting Process* · Using Netscape · Netscape Bookmarks · Percentages · Rounding · Min/Max · Waste Class Naming · Waste Categories · Container Specifications · Generator Life Cycles
PROGRAMS: Analytical Services · EM-40 · Facility Transitions · Landlord · Liquid Effluent · NP · Offsite · PNNL · RCRA · Solid Waste · SNF · TWRS
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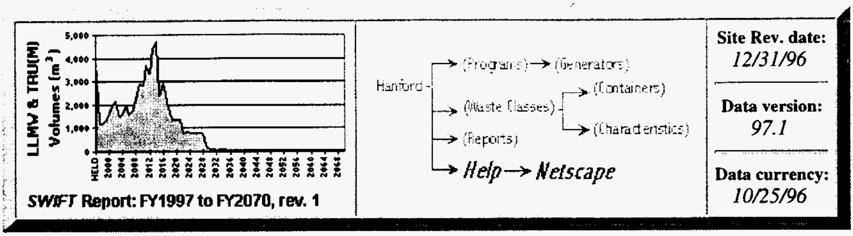


Help!

Using Netscape

Up to our Knees in Solid Waste

The Internet — is it scary? You bet it is. No one even knows how big it is, or what's in it. And why would you want to go there? For those of you who are still Internet-impaired, this page will help you navigate your way through this website and, incidentially, through the World Wide Web in general.

For this website, we've found it is **best viewed with Netscape** rather than Microsoft Browser, which skews the tables. Speaking of tables, if you print out a page and the table has the right edge missing, there's a way to fix that:

Step 1: While in Netscape, go to **Options**. Choose **General Preferences**. Click on the Fonts tab. You'll see two boxes with **Choose Font...** on each one. Click on the top one, and make sure the font size selected is **10**. Click OK. Now go *back* to **Options**, and select **Save Options**.

Step 2: When you print a page in Netscape, tell your printer to scale down to 90%. You normally do that by clicking on Setup, Options, looking for a place which will allow you to scale your print job. There's more on printing in Netscape below.

Have Mouse, Will Travel

Navigating around a website or around the Web is very simple. At the top of the screen is the comfortingly 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, whistles, bells, and periods (a period is called a "dot"). If anything is out of place, you'll go nowhere. If someone tells you of a cool 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 or something. Don't take the Web at its word; it may be lying to 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 toolbar at the bottom of every "page" you visit, with links to every other page. 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 well, 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).]

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 that will bring you home faster than Dorothy clicking her heels together. If you pass a spot, and want to get back to it, click on **Back**. To then return in a forward direction (you guessed it) click on **Forward**. This is easy!

This is Cool! How Can I Save It?

Now you've come to a site that has some text you'd like to keep. Go to **File**, and **Save As**, and do it in the good old fashioned Windows way.

If you want to print, you can just go to **File** and **Print**, and it will print the whole website out 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 beings. Don't worry. Here's the best way I've found to print a specific page in a long Netscape document:

1. Go to **File**
2. Go to **Print Preview**
3. *After* the document loads, click on **Next Page** to scroll through and find which pages you wish to print.
4. Click on **Print**
5. Deselect **All**, and select **Pages**
6. Type in numbers at **From:** and **To:** (for instance, From: 3 To: 3)
7. Make any Setup changes you need to
8. Click on **Print**

I Gotta Remember This Site!

Don't worry, you don't have to have a good memory to return to your favorite sites. When you find yourself someplace where you think you'll want to return, simply click on **Bookmarks** in the Menu bar. Click on **Add Bookmark**. That's all there is to it. Now to return to that site later, just go to **Bookmarks**, and click on the one you want. If you find you have a zillion bookmarks, there are ways to make headings and arrange them. To read more about bookmarks, click here.

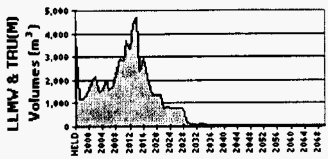
It's Fun... Really It Is!

At the beginning of this epic, the question was raised "why would you want to go there?" The Web has sites of interest for just about everyone. If you're interested in a particular area of the government, want to check up on the competition, enjoy strolling through a museum, or just want a good belly laugh, the Web has something for you. Wherever you go, click on links and see where they take you. (Often not where you originally intended to go!)

Give It a Try!

THIS [illegible] LLY

[illegible] ANK [illegible]



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→ *Help → Bookmarks*

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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 surfin' the Net, and come to a really cool site you know you'll want to visit again, making a bookmark is how you can do so (without writing down those ridiculous site addresses, or having a phenomenal memory). It's easy!

How To

When you get to a site you like, click on **Bookmarks**. Then click on **Add Bookmark**. Then at some unforeseen future date, you can click on Bookmarks, click on the name of the site, and it will take you there! What could be simpler?

Going Overboard

Okay, so now you have eight billion bookmarks — so many you can't see them all, much less find the one you want. What to do? Divide them up into categories, with headers. It's easy, too.

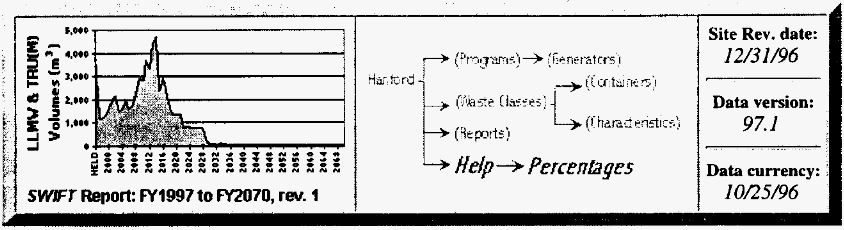
How To II

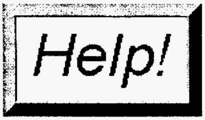
Click on **Window**, and **Bookmarks**. Click on one of your bookmarks. Now click on **Item**, and select **New Folder** This is actually a folder for a group of bookmarks. In the dialog box, where it says "Name", it says New Folder. Type in the name you want. Click OK. You can now click on it and drag 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. Click on one, and voila!

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. The solution is simple. 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 accidently do this in the location section! (Like I did.) Go through your bookmarks and give them short names you find useful.

You see, I told you it was easy!





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 FY96 Forecast. The formula is:

Change = 100 * (FY97 volume - Baseline volume / Baseline volume)

If the change is positive (> 0) then there is an increase in the particular waste class forecast; if the change is negative, there is a decrease.

For example:

Baseline forecast of LLMW: 340 m³
FY97 forecast of LLMW: 500 m³
Change = 100 * (500 - 340) / 340 or + 47% ... a 47% increase, which seems reasonable.

If the FY97 forecast of LLMW is 200 m³, the change is:
Change = 100 * (200-340)/340 or -41.1 ... a 41% decrease.

If the FY97 forecast of LLMW is 20 m³, the change is:
Change = 100 * (20-340)/340 or -94.1 ... a 94% decrease.

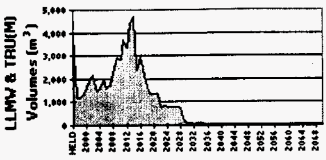
This can be disconcerting if the changes are major:

Baseline forecast of LLMW: 2 m³
FY97 forecast of LLMW: 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 LLMW: 4,000 m³
FY97 forecast of LLMW: 2 m³

Change = 100 * (2-4000)/4000 or -99.95 ... or nearly 100% decrease



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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:

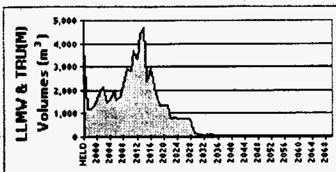
Detailed Generator Data

Data > 1 m³ Detailed generator data are rounded to the nearest cubic meter of waste, except where < 1 m³ was forecast.

Data < 1 m³ Data between 0 and 1 show the integer 1 in tables to serve as a place holder; totals are calculated by summing the actual values and then rounding. For example, if a generator has 0.0026 m³ of CH_TRUM waste every year for 5 years, each of the five years on a table will show a 1 in the CH_TRUM column, and the total for the five years will also be 1.

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 as 1 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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Min/Max Ranges

Because of the uncertainties inherent in long-term forecasts, SWIFT FY97 allows 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 FY97 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 LLMW and TRU(M) waste, using the following formulas:

Minimum % = 100 * (Sum of minimum LLMW and TRU(M) volumes) / (Sum of LLMW and TRU(M) volumes)

Maximum % = 100 * (Sum of maximum LLMW and TRU(M) volumes) / (Sum of LLMW and TRU(M) volumes)

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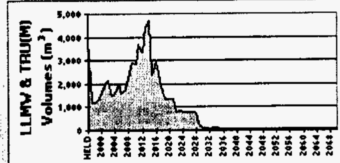

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Waste Class Naming Conventions

Solid waste can be characterized into five classes, excluding LLW and 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_ LLMW	RH_ LLMW	CH_ TRU(M)	RH_ TRU(M)	LLMW_ GTCIII
Dose rate	<= 200 mrem/h	> 200 mrem/h	<= 200 mrem/h	> 200 mrem/h	Varies
Dangerous per WAC 173-303	Yes	Yes	Yes (TRU(M)) No (TRU)	Yes (TRU(M)) No (TRU)	Yes
> 100 nCi/g(b) alpha-emitting isotopes (atomic numbers > 92 & half-lives > 20 years)	No	No	Yes	Yes	No

(< ... less than > ... greater than = ... equal)

Contact-handled low-level mixed waste (CH_LLMW)

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 low-level mixed waste (RH_LLMW)

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))

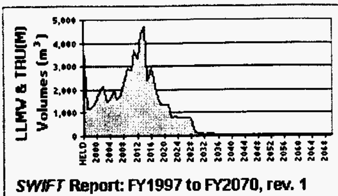
This waste has a dose rate greater than 200 mrem/h at contact with the waste container. At the time of assay, this waste contains more than 100 nCi/g of alpha-emitting isotopes with atomic numbers greater than 92 and half-lives greater than 20 years. TRUM waste is TRU waste that is also dangerous (hazardous) waste as defined in WAC 173-303.

Low-level mixed waste greater than Class III (LLMW_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.

In addition to the above waste categories, another key definition concerns **Held waste**. Held waste is existing generated waste with no current shipping schedule.



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Determining the Waste Category

Help!

As shown in the table, LLW and LLMW 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/m³	Category III limit Ci/m³
^{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*
^{36}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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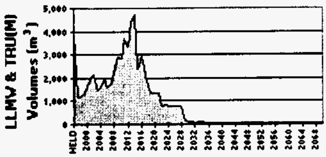

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Container Specifications

The Following tables were provided to the waste generator for calculating external volumes of waste.

Standard drums

designation*	external diameter (m)	external height (m)	external 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

		external				internal
name		**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

			external	
designation	**alias**	**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

			external	
designation	**alias**	**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 width (m)	height (m)	volume (m^3)	internal volume (m^3)
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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CHARACTERISTICS:
CH_LLMW · RH_LLMW · CH_TRU(M) · RH_TRU(M) · GTC III · LLW · HAZ

CONTAINERS:
CH_LLMW · RH_LLMW · CH_TRU(M) · RH_TRU(M) · GTC III · LLW · HAZ

WASTE CLASSES:
CH_LLMW · RH_LLMW · CH_TRU(M) · RH_TRU(M) · GTC III · LLW · HAZ

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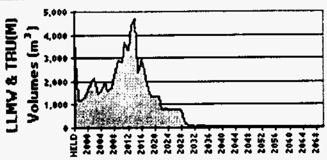

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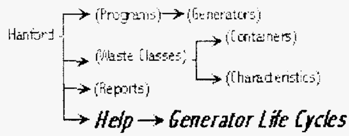

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Help!

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 Effluents transitions into a deactivation mode, then responsibility for the facility would generally be transferred from Liquid Effluents to the Facility Transitions program.

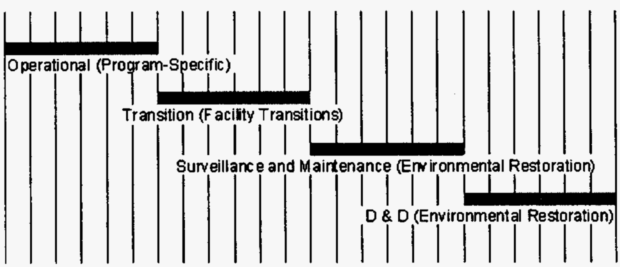


Figure 1.1: Waste Generator Life-Cycle Phases

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)

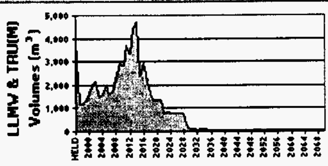
This phase is distinguished by specific deactivation activities to eventually turn over the facility to the D&D program. Facilities in the deactivation phase are generally the responsibility of the Facility Transitions program.

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 (managed by Bechtel).



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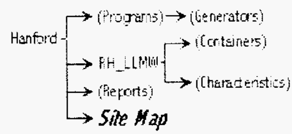

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**Generator detail pages are linked to their programs. The top bar on the Toolbar at the bottom of a program page lists all generators for that program.*

PROGRAMS:
Analytical Services · EM-40 · Landlord · Facility Transitions · Liquid Effluent · NP · Offsite · PNNL · RCRA · Solid Waste · SNF · TWRS

CHARACTERISTICS:
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WASTE CLASSES:
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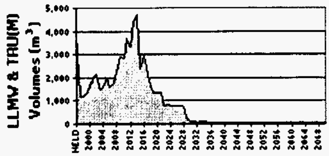

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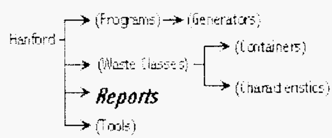

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- LLMW and TRU(M) Solid Waste Generators: by Volume
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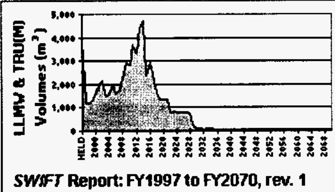

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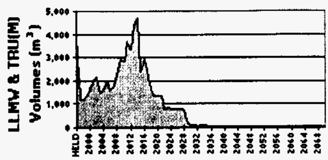
Report - Solid Waste Generators by Volume

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.

Program	Waste Generator	End of Life Cycle	CH_LLMW	RH_LLMW	CH_TRU(M)	RH_TRU(M)	Total
	Hanford Totals	**2070**	**30,440**	**29,220**	**6,310**	**1,670**	**67,630**
TWRS	SST Long Length Equipment	2017	-	22,520	490	490	23,500
TWRS	High Level Vitrification Project	2028	5,220	-	870	870	6,960
TWRS	Low Level Vitrification Project	2021	5,120	-	-	-	5,120
TWRS	SST/DST Tank Farm Operations	2032	3,760	940	-	-	4,700
TWRS	DST Retrieval Systems (10 tanks)	2028	870	3,050	-	90	4,010
Non-Programmatic	Stored Equipment	HELD	4,000	-	-	-	4,000
Facility Transitions	2345Z Plutonium Finishing Plant	2034	710	-	3,050	-	3,760
Analytical Services	222S Analytical Laboratory	2070	3,570	-	20	-	3,590
TWRS	W343 DST Retrieval (17 Tanks)	2021	1,480	1,760	-	-	3,240
Liquid Effluent	C018H-200 Area Effluent Treatment	2034	2,540	-	-	-	2,540
TWRS	SST Retrieval (149 tanks)	2017	890	390	-	-	1,280
TWRS	Tank Farm Restoration	2005	880	380	-	-	1,260
PNNL	Pacific Northwest National Laboratories	2010	490	50	240	110	900
Non-Programmatic	300 Area Facilities Non-Transition	2015	60	-	730	-	790
Solid Waste	221T/2706T T Plant Operations	2027	220	60	-	30	300
EM-40 (Environmental	Surplus Facilities	2001	10	-	230	-	240
Non-Programmatic	REDOX Non-Transition	2029	2	-	210	-	210
Non-Programmatic	PUREX Non-Transition	2027	50	-	110	-	150
Non-Programmatic	PFP Non-Transition	2037	80	-	60	-	130
Solid Waste	W026-Waste Receiving And Processing (WRAP1)	2070	80	-	-	-	80
Facility Transitions	303K Fuels Fabrication Transition	1998	-	70	-	-	70
Non-Programmatic	400 Area Facilities Non-Transition	2023	-	-	70	-	70
Spent Nuclear Fuel	100K K-Basin Operations	2000	5	-	-	60	70
Non-Programmatic	B Plant Non-Transition	2025	-	-	60	-	60
Offsite	Princeton Plasma Physics Laboratory	2025	60	-	-	-	60
RCRA Monitoring	Well Drilling	2001	60	-	-	-	60
Facility Transitions	327 Building	2,004	4	-	60	-	60
Offsite	Rockwell-Canoga Park	1,997	50	-	-	-	50
Non-Programmatic	T Plant Non-Transition	2033	-	-	40	-	40
TWRS	Tank Farm Ventilation Upgrade	1997	40	-	-	-	40
Analytical Services	6266 Waste Sampling/Characterization Facility	2025	30	-	-	-	30
Facility Transitions	Waste Encapsulation/Storage Facility	2025	30	-	-	-	30
Non-Programmatic	Site Support Non-Transition	2031	-	-	30	-	30
Offsite	Puget Sound Naval Shipyards	2001	30	-	-	-	30

Facility Transitions	324 Building	2001	20	-	4	10	30
Offsite	Knolls Atomic Power-Laboratory	2001	10	5	-	-	20
Offsite	Paducah Energy Systems	1,998	20	-	-	-	20
Solid Waste	Central Waste Complex	2070	20	-	-	-	20
Spent Nuclear Fuel	K-Basin Fuel Sampling Project	2000	-	-	20	-	20
Facility Transitions	202A Purex Operations	1997	10	-	-	-	10
Non-Programmatic	U Plant Non-Transition	2035	2	-	10	-	10
Offsite	General Atomics	1999	7	-	-	-	7
Offsite	University of Utah	1997	7	-	-	-	7
Offsite	Battelle Columbus Laboratories	2003	8	-	-	-	8
Offsite	Pearl Harbor Naval Shipyards	2001	5	-	-	-	5
TWRS	Cross-Site Transfer System	1997	5	-	-	-	5
Facility Transitions	225B B Plant	1998	2	-	-	-	2
Solid Waste	224T TRU Storage & Assay Facility	1998	2	-	-	-	2
Facility Transitions	309 PRTR Vault Waste (Ion Exchange	1998	1	-	1	-	1
Facility Transitions	335 Sodium Test Facility	1999	1	-	-	-	1
Facility Transitions	FFTF Transition Project	2001	1	-	-	-	1
Offsite	Ames Laboratory-Ames, Iowa	2070	-	-	1	-	1
Offsite	Lawrence Berkeley Laboratory	2030	-	-	1	-	1
Offsite	Portsmouth Naval Shipyards	2001	1	-	-	-	1
Liquid Effluent	300 Area/Treated Effluent Disposal Facilities	2025	-	-	-	-	-
Offsite	Argonne National Laboratory-East*	2070	-	-	-	-	-
Offsite	Bates Accelerator-Massachusetts*	2030	-	-	-	-	-
Offsite	Bettis Atomic Power-Laboratory*	2009	-	-	-	-	-
Offsite	Bettis Atomic Power-Shipyards*	2012	-	-	-	-	-
Offsite	Brookhaven National Laboratory*	2016	-	-	-	-	-
Offsite	Fermi National Accelerator Laboratory*	2027	-	-	-	-	-
Offsite	Knolls Atomic Power-Shipyards*	2004	-	-	-	-	-
Offsite	Portsmouth Energy Systems*	1997	-	-	-	-	-
Offsite	Rocky Flats*	2000	-	-	-	-	-
Offsite	Stanford Linear Accelerator Center*	2070	-	-	-	-	-
Offsite	University of California-Davis*	2003	-	-	-	-	-
Solid Waste	218E/W Low Level Burial Grounds*	2070	-	-	-	-	-

** Forecast only LLW and/or HAZ waste*



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Report - Solid Waste Generators by Program and 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.

Hanford	**CH_ LLMW**	**RH_ LLMW**	**CH_ TRU(M)**	**RH_ TRU(M)**	**Total LLMW_ TRU(M)**
Total	*30,440*	*29,220*	*6,310*	*1,670*	*67,630*
Analytical Services	**CH_ LLMW**	**RH_ LLMW**	**CH_ TRU(M)**	**RH_ TRU(M)**	**Total LLMW_ TRU(M)**
Total	*3,600*	-	*20*	-	*3,610*
222S Analytical Laboratory	3,570	-	20	-	3,590
6266 Waste Sampling/Characterization Facility	30	-	-	-	30
EM-40 (Environmental Restoration)	**CH_ LLMW**	**RH_ LLMW**	**CH_ TRU(M)**	**RH_ TRU(M)**	**Total LLMW_ TRU(M)**
Total	*10*	-	*230*	-	*240*
Facility Transitions	**CH_ LLMW**	**RH_ LLMW**	**CH_ TRU(M)**	**RH_ TRU(M)**	**Total LLMW_ TRU(M)**
Total	*770*	*70*	*3,110*	*10*	*3,970*
2345Z Plutonium Finishing Plant	710	-	3,050	-	3,760
303K Fuels Fabrication Transition	-	70	-	-	70
327 Building	4	-	60	-	60
324 Building	20	-	4	10	30
Waste Encapsulation/ Storage Facility	30	-	-	-	30
202A Purex Operations	10	-	-	-	10
225B B Plant	2	-	-	-	2
FFTF Transition Project	1	-	-	-	1
335 Sodium Test Facility	1	-	-	-	1
309 PRTR Vault Waste (Ion Exchange Mod)	1	-	1	-	1
Liquid Effluent	**CH_ LLMW**	**RH_ LLMW**	**CH_ TRU(M)**	**RH_ TRU(M)**	**Total LLMW_ TRU(M)**
Total	*2,540*	-	-	-	*2,540*
C018H-200 Area Effluent Treatment Facility	2,540	-	-	-	2,540
300 Area/Treated Effluent Disposal Facilities*	-	-	-	-	-
Non-Programmatic	**CH_ LLMW**	**RH_ LLMW**	**CH_ TRU(M)**	**RH_ TRU(M)**	**Total LLMW_ TRU(M)**

Total	*4,190*	-	*1,320*	-	*5,510*
Stored Equipment	4,000	-	-	-	4,000
300 Area Facilities Non-Transition	60	-	730	-	790
REDOX Non-Transition	2	-	210	-	210
PUREX Non-Transition	50	-	110	-	150
PFP Non-Transition	80	-	60	-	130
400 Area Facilities Non-Transition	-	-	70	-	70
B Plant Non-Transition	-	-	60	-	60
T Plant Non-Transition	-	-	40	-	40
Site Support Non-Transition	-	-	30	-	30
U Plant Non-Transition	3	-	10	-	10
Offsite	**CH_ LLMW**	**RH_ LLMW**	**CH_ TRU(M)**	**RH_ TRU(M)**	**Total LLMW_ TRU(M)**
Total	*200*	*5*	*2*	-	*210*
Princeton Plasma Physics Laboratory	60	-	-	-	60
Rockwell-Canoga Park	50	-	-	-	50
Puget Sound Naval Shipyards	30	-	-	-	30
Paducah Energy Systems	20	-	-	-	20
Knolls Atomic Power-Laboratory	10	5	-	-	20
Battelle Columbus Laboratories	8	-	-	-	8
University of Utah	7	-	-	-	7
General Atomics	7	-	-	-	7
Pearl Harbor Naval Shipyards	5	-	-	-	5
Ames Laboratory-Ames, Iowa	-	-	<1	-	<1
Portsmouth Naval Shipyards	1	-	-	-	1
Lawrence Berkeley Laboratory	-	-	1	-	1
Fermi National Accelerator Laboratory*	-	-	-	-	-
University of California-Davis*	-	-	-	-	-
Argonne National Laboratory-East*	-	-	-	-	-
Bates Accelerator-Massachusetts*	-	-	-	-	-
Bettis Atomic Power-Laboratory*	-	-	-	-	-
Bettis Atomic Power-Shipyards*	-	-	-	-	-
Knolls Atomic Power-Shipyards*	-	-	-	-	-
Brookhaven National Laboratory*	-	-	-	-	-
Stanford Linear Accelerator Center*	-	-	-	-	-
Rocky Flats Remediation Services*	-	-	-	-	-
Portsmouth Energy Systems*	-	-	-	-	-

PNNL	CH_ LLMW	RH_ LLMW	CH_ TRU(M)	RH_ TRU(M)	Total LLMW_ TRU(M)
Total	*490*	*50*	*240*	*110*	*900*

RCRA Monitoring	CH_ LLMW	RH_ LLMW	CH_ TRU(M)	RH_ TRU(M)	Total LLMW_ TRU(M)
Total	*60*	-	-	-	*60*

Solid Waste	CH_ LLMW	RH_ LLMW	CH_ TRU(M)	RH_ TRU(M)	Total LLMW_ TRU(M)
Total	*310*	*60*	-	*30*	*400*
221T/2706T T Plant Operations	220	60	-	30	300
W026-Waste Receiving And Processing	80	-	-	-	80
Central Waste Complex	20	-	-	-	20
224T TRU Storage & Assay Facility	2	-	-	-	2
218E/W Low Level Burial Grounds*	-	-	-	-	-

Spent Nuclear Fuel	CH_ LLMW	RH_ LLMW	CH_ TRU(M)	RH_ TRU(M)	Total LLMW_ TRU(M)
Total	*5*	-	*20*	*60*	*80*
100K K-Basin Operations	5	-	-	60	70
K-Basin Fuel Sampling Project	-	-	20	-	20

TWRS	CH_ LLMW	RH_ LLMW	CH_ TRU(M)	RH_ TRU(M)	Total LLMW_ TRU(M)
Total	*18,260*	*29,040*	*1,360*	*1,450*	*50,120*
SST Long Length Equipment	-	22,520	490	490	23,500
High Level Vitrification Project	5,220	-	870	870	6,960
Low Level Vitrification Project	5,120	-	-	-	5,120
SST/DST Tank Farm Operations	3,760	940	-	-	4,700
DST Retrieval Systems (10 tanks)	870	3,050	-	90	4,010
W343 DST Retrieval (17 Tanks)	1,480	1,760	-	-	3,240
SST Retrieval (149 tanks)	890	390	-	-	1,280
Tank Farm Restoration	880	380	-	-	1,260
Tank Farm Ventilation Upgrade	40	-	-	-	40
Cross-Site Transfer System	5	-	-	-	5

** Forecast only LLW and/or HAZ waste*

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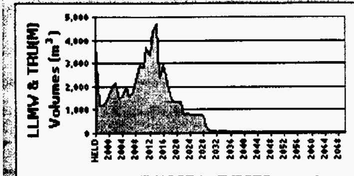

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FY97 Waste Generator List by Hanford Program Area

Programs, Waste Generators, and Old and New Abbreviations

Program	Waste Generator	FY1997.1 Report Abbreviation	FY1997 Report Abbreviation	FY1996 Report Abbreviation	FY1995 Report Abbreviation	FY1994 Report Abbreviation
Analytical Services	222_S Analytical Laboratory	RFSH_ANALYT_LAB	WHC_ANALYT_LAB	WHC_ANALYT_LAB	WHC_ANALYT_LAB	WHC_222S
	6266 Waste Sampling & Characterization Facility	RFSH_WSCF	WHC_WSCF	WHC_WSCF	(na)	(na)
(Environmental Restoration)	Surplus Facilities	BHI_SURPLS_FAC	BHI_SURPLS_FAC	BHI_SURPLS_FAC	WHC_SURPLS_FAC	WHC_SURPLS_FAC
Facilities Transitions	202A Purex Operations	BWHC_PUREX	WHC_PUREX	WHC_PUREX	WHC_PUREX	WHC_202A
	225 B Plant	BWHC_B_PLANT	WHC_B_PLANT	WHC_B_PLANT	WHC_B_PLANT	WHC_225B
	2345Z Plutonium Finishing	BWHC_PFP	WHC_PFP	WHC_PFP	WHC_PFP	WHC_2345Z
	303 K Fuels Fabrication	BWHC_FUEL_TRAN	WHC_FUEL_TRANS	WHC_FUEL_TRANS	WHC_FUEL_TRANS	WHC_303K
	309 PRTR Vault Waste(Ion Exchange Mod)	BWHC_PRTR	WHC_PRTR	WHC_FFTF	(na)	(na)
	335 Sodium Test Facility	BWHC_SODIUM_TEST	WHC_SODIUM_TEST	WHC_FFTF	WHC_SODIUM_TEST	WHC_335
	324 Building (PNNL)	BWHC-324	(From PNNL)	(na)	(na)	(na)
	327 Building (PNNL)	BWHC-327	(From PNNL)	(na)	(na)	(na)
	FFTF Transition Project	BWHC_FFTF	WHC_FFTF	WHC_FFTF	WHC_FFTF_MAIN	WHC_FFTF_MAINT
	Facility	BWHC_WESF	WHC_WESF	(na)	(na)	(na)
Liquid Effluent	300 Area Treated Effluent Disposal Facility (Project	RFSH_300_TEDF	WHC_300_TEDF	WHC_300_TEDF	WHC_300_TEDF	WHC_L045
	C018H-200200 Area Effluent Treatment Facility	RFSH_200_ETF	WHC_200_ETF	WHC_200_ETF	WHC_200_ETF	WHC_PX_C018H
	Waste Neutralization Facility (340/307 Buildings)	(Part of RFSH_300_TEDF)	(Part of WHC_300_TEDF)	WHC_WASTE_NEUT	WHC_WASTE_NEUT	WHC_340
Non-Programmati	300 Area Facilities Non-Transition	NP_300_TR	NP_300_TR	NP_300_TR	(na)	(na)
	400 Area Facilities Non-	NP_400_TR	NP_400_TR	NP_400_TR	(na)	(na)
	B Plant Non-Transition	NP_B_PLANT_TR	NP_B_PLANT_TR	NP_B_PLANT_TR	(na)	(na)
	PFP Non-Transition	NP_PFP_TR	NP_PFP_TR	NP_PFP_TR	(na)	(na)
	PUREX Non-Transition	NP_PUREX_TR	NP_PUREX_TR	NP_PUREX_TR	(na)	(na)
	REDOX Non-Transition	NP_REDOX_TR	NP_REDOX_TR	NP_REDOX_TR	(na)	(na)
	Site Support Non-Transition	NP_SITE_SUP_TR	NP_SITE_SUP_TR	NP_SITE_SUP_TR	(na)	(na)
	Stored Equipment (was Buried Equipment)	WHC_BQUIP	WHC_BQUIP	WHC_BQUIP	WHC_BQUIP	WHC_BQUIP
	T Plant Non-Transition	NP_T_PLANT_TR	NP_T_PLANT_TR	NP_T_PLANT_TR	(na)	(na)
	U Plant Non-Transition	NP_U_PLANT_TR	NP_U_PLANT_TR	NP_U_PLANT_TR	(na)	(na)
Offsite	Ames Laboratory - Ames, Iowa	AMES	AMES	AMES	AMES	AMES
	Argonne National Laboratory -	ANL_E	ANL_E	ANL_E	ANL_E	ANL_E
	Bates Accelerator -	MIT_BATES	MIT_BATES	MIT_BATES	MIT_BATES	MIT_BATES
	Battelle Columbus	BAT_CLBS_LAB	BAT_CLBS_LAB	BAT_CLBS_LAB	BAT_CLBS_LAB	BAT_CLBS_LAB
	Bettis Atomic Power -	BAPL	BAPL	BAPL	BAPL	BAPL
	Bettis Atomic Power -	BAPL_SHIPYDS	BAPL_SHIPYDS	BAPL_SHIPYDS	BAPL_SHIPYDS	BAPL_SHIPYDS
	Brookhaven National	BRKHVN	BRKHVN	BRKHVN	BRKHVN	BRKHVN
	Fermi National Accelerator	FERMI	FERMI	FERMI	FERMI	FERMI
	General Atomics	GEN_ATOM	GEN_ATOM	GEN_ATOM	GEN_ATOM	GEN_ATOM
	Knolls Atomic Power -	KAPL	KAPL	KAPL	KAPL	(na)
	Knolls Atomic Power -	KAPL_SHIPYDS	KAPL_SHIPYDS	KAPL_SHIPYDS	KAPL_SHIPYDS	KAPL_SHIPYDS
	Lawrence Berkeley Laboratory	LBL	LBL	LBL	LBL	LBL
	Paducah Energy Systems	PADUCAH_ES	PADUCAH_ES	PADUCAH_ES	PADUCAH_ES	PADUCAH_ES
	Pearl Harbor Naval Shipyards	PEARL_HARBOR	PEARL_HARBOR	PEARL_HARBOR	(na)	(na)
	Portsmouth Energy Systems	PORTSMOUTH_ES	PORTSMOUTH_ES	PORTSMOUTH_ES	PORTSMOUTH_ES	PORTSMOUTH
	Portsmouth Naval Shipyards	PORTSMOUTH_NS	PORTSMOUTH_NS	PORTSMOUTH_NS	(na)	(na)
	Princeton Plasma Physics	PRINCETON	PRINCETON	PRINCETON	PRINCETON	PRINCETON

	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
	Puget Sound Naval Shipyards	PUGET_SOUND	PUGET_SOUND	PUGET_SOUND	(na)	(na)
	Rockwell - Canoga Park	RKW_CANOGA	RKW_CANOGA	RKW_CANOGA	RKW_CANOGA	RKW_CANOGA
	Rocky Flats Plant	ROCKY_FLATS	ROCKY_FLATS	EG&G	EG&G	EG&G
	Stanford Linear Accelerator	STANFORD	STANFORD	STANFORD	STANFORD	ST/.NFORD
	University of California - Davis	B_LEHR_DAV	B_LEHR_DAV	B_LEHR_DAV	B_LEHR_DAV	B_LEHR_DAV
	University of Utah	U_U	U_U	U_U	U_U	U_U
Pacific Northwest National Laboratories	Pacific Northwest National Laboratories	PNNL	PNNL	PNL	PNL	PNL
	324 Building (PNNL)	(Moved to Facility Transitions)	PNNL-324	(na)	(na)	(na)
	327 Building (PNNL)	(Moved to Facility Transitions)	PNNL-327	(na)	(na)	(na)
RCRA Monitoring	Well Drilling	RFSH_WELL_DRL	WHC_WELL_DRL	WHC_WELL_DRL	WHC_WELL_DRL	WHC_WELL_DRL
Solid Waste	218E/W Low Level Burial	RFSH_LLBG	WHC_LLBG	WHC_LLBG	WHC_LLBG	WHC_LLBG
	221T/2706T T Plant Operations	RFSH_T_PLANT	WHC_T_PLANT	WHC_T_PLANT	WHC_T_PLANT	WHC_T_PLANT
	224 T TRU Storage and Assay Facility (TRUSAF)	RFSH_TRUSAF	WHC_TRUSAF	WHC_TRUSAF	WHC_TRUSAF	WHC_TRUSAF
	Central Waste Complex	RFSH_CWC	WHC_CWC	(na)	(na)	(na)
	W026-Waste Receiving and Processing (WRAP1)	RFSH_WRAP0	WHC_WRAP1	(na)	(na)	(na)
Spent Nuclear Fuel	100K K-Basin Operations	DESH_K_OPER	WHC_K_OPER	WHC_K_OPER	WHC_K_BASIN	WHC_100K
	K-Basin Fuel Sampling Project	DESH_K_PROJECT	WHC_K_PROJECT	WHC_K_PROJECT	WHC_K_PROJECT	(na)
TWRS	Cross-Site Transfer System	NHC_TWP_W058	WHC_TWP_W058	WHC_TWP_W058	WHC_TWP_W058	WHC_TWP_W058
	DST Retrieval Systems (10	NHC_TWP_W211	WHC_TWP_W211	WHC_TWP_W211	WHC_TWP_W211	WHC_TWP_W211
	High Level Vitrification Project	LMHC_HLVP	WHC_HLVP	WHC_HLVP	WHC_HLVP	WHC_HLVP
	Low Level Vitrification Project	LMHC_LLVP	WHC_LLVP	WHC_LLVP	WHC_LLVP	WHC_LLVP
	SST Long Length Equipment	LMHC_SST_LLE	WHC_SST_LLE	WHC_SST_LLE	WHC_SST_LLE	WHC_SST_LLE
	SST Retrieval (149 tanks)	LMHC_SST_RET	WHC_SST_RET	WHC_SST_RET	WHC_SST_RET	WHC_SST_RET
	SST/DST Tank Farm	(tbd)_TF_OPER	WHC_TF_OPER	WHC_TF_OPER	WHC_TF_OPER	WHC_2ETF
	Tank Farm Restoration	LMHC_TWP_W314	WHC_TWP_W314	WHC_TWP_W314	WHC_TWP_W314	WHC_TWP_W314
	Tank Farm Ventilation Upgrade	NHC_TWP_W030	WHC_TWP_W030	WHC_TWP_W030	WHC_TWP_W030	WHC_TWP_W030
	W343 DST Retrieval (17 tanks)	(tbd)_DST_RET	WHC_DST_RET	WHC_DST_RET	WHC_DST_RET	WHC_DST_RET

Legend:

BWHC Babcock & Wilcox Hanford
RFSH Rust Federal Services of
DESH Duke Engineering & Services
NHC Numatec Hanford Company
LMHC Lockheed Martin Hanford
(tbd) to be determined
WHC Westinghouse Hanford
BHI Bectel Hanford
NP Non Programmatic

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